ENGINEERING EVALUATION
AUTHORITY TO CONSTRUCT

Facility Name:	Costco Gasoline (Loc. No. 781)
Application Number:	APCD2023-APP-007994 for a new GDF
Equipment Type:	New (relocated) Gasoline dispensing facility with Phase I and Phase II controls – 26A Installing three new underground gasoline storage tanks, one underground additive tank and thirty-two (32) nozzles
Facility ID:	APCD2023-SITE-04416 existing APCD SITE: APCD1999-SITE-10756 existing APCD PTO: APCD2007-PTO-973230
Equipment Address (New):	1128 Broadway, Chula Vista CA 91911
Equipment Address (Existing):	1190 Broadway, Chula Vista CA 91911
Facility Contact:	Gas Station Supervisor
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X

Allison Weller
Senior Engineer

1.0 BACKGROUND

1.1 Type of Applications –

Costco Gasoline is applying for a permit to construct and operate a new Gasoline Dispensing Facility (GDF) to replace existing GDF at the nearby existing gasoline station as shown in the picture below. The applicant is proposing to install three (3) 40,000-gallon gasoline underground storage tanks (USTs) and one (1) 1500-gallon additive underground storage tank (UST), connecting piping to connect the new USTs, and thirty-two (32) new nozzles to dispense gasoline. The facility will install new Phase I and Phase II systems and utilize an ARID permeator for the emission control of their gasoline dispensing operation. The estimated annual throughput for gasoline at the new location is 84,000,000 gallons and monthly throughput is 7,000,000 gallons.

The facility has an existing permitted gas dispensing operation located at 1190 Broadway, Chula Vista, CA 91911, under permit APCD2007-PTO-973230. The current operating sixteen (16) gasoline nozzles, dispensers and underground storage tanks will be demolished after the new gas dispensing operation is in operation.

Installation, operation, and maintenance conditions will be incorporated into the ATC and PTO to ensure compliance with all requirements, regulations and standards in the applicable CARB Executive Order, relevant Installation, Operation and Maintenance Manual (IOMs) and District Rules and Regulations.

1.2 Permit History –

This is an initial permit application for a new retail gasoline dispensing facility at the Site. The facility has an existing GDF permit with the District at this location. The existing permitted gasoline station is located adjacent to the proposed new GDF within the same property boundary. The facility intends to replace the existing GDF operation with this new proposed gasoline station.

Record ID	Status	Description
APCD2007-PTO-973230	Active	Existing GDF operation
APCD2023-APP-007994	Open	New retail GDF station under current evaluation.

1.3 Facility Description –

This facility is a new retail gasoline dispensing station, which uploads, stores, and dispenses gasoline to mobile vehicles. The owner is intended to replace their existing GDF once the new facility is in operation.

1.4 Other Background Information –

There is no record on permit denial, legal settlement, or nuisance complaint or Notice of Violations associate with this facility and this is not a Title V facility.

2.0 PROCESS DESCRIPTION

2.1 Equipment Description –

Existing equipment description under APCD2007-PTO-973230:
Gasoline Dispensing Facility (Retail)(BACT):
Sixteen (16) nozzles, as listed in Exhibit 1 of the Phase II Executive Order (E.O.) specified below, with three (3) grades per nozzle;
Phase II VRS: Healy Vacuum Assist per ARB E.O. VR-202;
ISD System: Compliant Veeder Root Software Version;
Processor: Permeator AT-150 per ARB E.O. VR-202;
Phase I VRS: Two Point OPW per ARB E.O. VR-102. Alternative additive configuration per Figure 2F.
Tanks: Three (3) 20,000 gallon, gasoline {manifolded underground and aboveground}

Additive Tank: One (1) 1,500 gallon underground Lubrizol GA9058 storage tank (manifolded to the gasoline underground storage tanks), equipped with a submerged drop tube, product dust cap and spill container cover. Additive will be pumped into gasoline USTs through Phase I drop tube.

New equipment description under APCD2023-APP-007994:
Gasoline Dispensing Facility (Retail) (BACT):
Thirty-two (32) nozzles, as listed in Exhibit 1 of the Phase II Executive Order (E.O.) specified below, with two (2) grades per nozzle;
Phase II VRS: Healy Vacuum Assist per ARB E.O. VR-202;
ISD System: Veeder Root Software in compliant version;
Processor: Permeator AT-150 per ARB E.O. VR-202;
Phase I VRS: Two Point OPW per ARB E.O. VR-102.
Alternative additive configuration per ARB E.O. VR-102, figure 2-7,
Tanks: Three (3) 40,000 gallon, gasoline, underground {manifolded underground}

Additive Tank: One (1) 1,500 gallon underground Lubrizol GA9058 storage tank (manifolded to the gasoline underground storage tanks), equipped with a submerged drop tube, product dust cap and spill container cover. Additive will be pumped into gasoline USTs via a stinger with a separate bung entry (not through the Phase I drop tube) into each gasoline UST.

2.2 Process –
This is a retail gasoline dispensing facility installing new dispensing equipment, underground storage tanks and the associated equipment to receive, store, and dispense gasoline.

Additive tank:
This proposed GDF is equipped with an underground storage tank to store a gasoline additive, which will be transferred to the gasoline storage tanks. The additive Lubrisol GA9085 is not defined as volatile organic liquid due to it low Reid Vapor Pressure, and therefore, is not expected to increase VOC emissions, as per the Like Kind Replacement application (APCD2023-APP-007944).

While the additive storage tank by itself would be exempt from permitting requirements per Rule 11(d)(17)(i), states that stationary equipment used to store and/or transfer non-volatile organic liquids are exempt from Rule 10 permitting requirements. The additive tank is dependent on the gasoline dispensing facility and will not be operated without the gasoline service station; therefore, it is part of the gasoline dispensing process and process line, as defined in District Rule 2, therefore needs to be added to the gasoline dispensing facility permit.

2.3 Emissions Controls –

The proposed retail gasoline dispensing facility will be equipped with CARB certified Phase I and Phase II vapor recovery systems. The fuel additive is supposed to enhance fuel efficiency of vehicles.

2.4 Attachments –

Refer to applicable Executive Order and/or Installation, Operation and Maintenance Manual for supporting information.

3.0 EMISSIONS

3.1 Emission Estimate Summary –

Emissions increase from the installation of a new gasoline dispensing facility is expected.

Emission increase estimated for **gasoline dispensing operation as shown in Table 1.**

Table 1: Emissions increase estimated for gasoline dispensing operations.

	Post-Project	Pre-Project	Emission increase	Units
Annual VOC Emissions	43,008.00	0	43,008.00	lbs TOG/year
Annual VOC Emissions (in tons)	21.70	0	21.70	Tons TOG/year
Daily VOC Emissions	117.83	0	117.83	lbs TOG/day
Average Hourly Emissions	6.53	0	6.53	lbs TOG/hour (Avg)
Maximum Hourly Emissions	23.09	0	23.09	lbs TOG/hour loading (Max)

Note: MAX Hourly Emissions are based on the assumption that the worst case scenario for one (1) hour is dispensing gas while the tank is being loaded with gas from a delivery (to full max tank capacity). However, the actual max hourly emissions are expected to be lower. Facilities are not allowed to fill tanks past 90% and most full deliveries are not filling an empty tank (fuel deliveries are typically ordered in advance before tanks run "dry"). Average volume of bulk tank delivery also varies.

Methods for the emission calculations are presented in the calculation section 3.2 and 3.3 of this report.

3.2 Emission Estimate Assumptions –

Calculation Procedure:
The SDCAPCD Emission Calculation Procedures were used to calculate the annual VOC emissions (located at APCD-G11-Underground-Storage-w-Phase-I-and-II-EVR (sdapcd.org)).

Equations:

$$E_a = U_a \times EF_t \times C_i$$
$$E_h = T \times EF_l \times C_i$$

Variables:

E_a	Annual emissions of gasoline vapor (lbs/year)
E_h	Maximum hourly emissions of gasoline vapor (lbs/hour)
U_a	Annual gasoline throughput (gallons/year)
T	Maximum one-hour bulk gasoline delivery
EF_t	Emission factor (combined) for throughput (lbs/gallon)
EF_l	Emission factor for underground tank loading (lbs/gallon)
C_i	Concentration of each listed substance in the gasoline vapor (lbs/lb)

Emission Factors:
The above SDAPCD methodology requires the input of emission factors from CARB's Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities dated December 23, 2013 were used (https://ww3.arb.ca.gov/vapor/gdf-emisfactor/gdfumbrella.pdf), which are shown in Table 2:

Table 2: Gasoline Emission Factors

Sub-Category	Revised (lbs/1000 gal)	Source
	EVR	
Phase I Bulk Transfer Loss	0.15	CARB 2013 Updated Emission Factors Table I-I
Pressure Driven Loss (Breathing Loss)	0.024	CARB 2013 Updated Emission Factors Table I-I
*Phase II fueling	0.089	CARB 2013 Updated Emission Factors Table I-I
Hose Permeation, low perm hose (2017)	0.009	CARB 2013 Updated Emission Factors Table I-I
Spillage	0.24	CARB 2013 Updated Emission Factors Table I-I
Total (lbs/1000 gal)	0.512	

*The Phase II Fueling emission factor for Non-ORVR and ORVR vehicles is based on the "Gasoline Service Station Industrywide Risk Assessment Technical Guidance (Dated: 2/18/2022)." The document suggested the percentage of gasoline dispensed to ORVR

vehicles verses non-ORVR vehicle in 2018 was 83 percent ORVR vehicles and 17 percent non-ORVR vehicles. The weighted average calculation is as follows:

$$(Percent\ Non-ORVR\ \times\ Non-ORVR\ EVR\ Emission\ Factor) + (Percent\ ORVR\ \times ORVR\ EVR\ Emission\ Factor) = Phase\ II\ Fueling\ Emission\ Factor$$

$$\left((1-0.83)\times 0.42\ \frac{lbs}{1000\ gallons}\right) + \left(0.83\times 0.021\ \frac{lbs}{1000\ gallons}\right) = 0.089\ \frac{lbs}{1000\ gallon}$$

3.3 Emission Calculations –

Table 3: Emissions increase from the new installation of the GDF.

Variable	Post-Project	Pre-Project	Increase (post-pre project)	Units	Description
U_A	84,000,000			gallons/year	Annual Gasoline Throughput (increase only)
EF_T	0.512	--	--	lbs/1000 gallons	Total Emission Factor
C_i	1	--	--	lbs/lb	Concentration of VOCs in gasoline vapor
E_A	43,008.00	0	43,008.00	lbs/year	Annual VOC Emissions: Sum of loading loss, breathing loss, refueling and spillage
E_A	21.70	0	21.70	tons/year	Annual VOC Emission: E_A * (1 ton/2000 lbs)
E_D	117.83	0	117.83	lbs/day	Daily VOC Emissions: E_A*(1 year/365 days)
$E_{Haverage}$	6.53	0	6.53	lbs/hour	Loading+breathing Loss + Refueling+ Hose Permeation (per hour)
E_{Hmax}	23.09	0	23.09	lbs/hour	EF loading x tank cap. (gal) + breathing loss lb/ hr + refueling lb/hr + hose permeation lb/ hr + spillage lb/hr

3.4 Attachments –
APCD2023-APP-007994_VR Emission Calculations

4.0 APPLICABLE RULES

4.1 Prohibitory Rules

Rule 50 – Visible Emissions

Requirement	Explanation:	Condition
Visible emissions cannot exceed 20% opacity for more than 3 minutes in any consecutive 60-minute period.	Facility is expected to comply based on similar and exiting operations.	n/a

Rule 61.3 – Transfer of Volatile Organic Compounds into Stationary Storage Tanks

Requirement	Explanation:	Condition
Rule 61.3 outlines the standards and requirements for the transfer of VOCs into stationary storage tanks.	Complies – the equipment related to gasoline is subject to and complies with Rule 61.3.1, which is more stringent than Rule 61.3. The additive tank is not subject to this rule since the additive is not considered a volatile organic liquid.	n/a

Rule 61.3.1 – Transfer of Gasoline into Stationary Underground Storage Tanks

(d) Equipment and Operation Requirements			
Section	**Requirement**	**Explanation:**	**Condition**
(d)(1)	*Non-certified Phase I vapor recovery systems are prohibited from being sold, supplied and installed. Components installed shall be a Phase I vapor recovery system certified by CARB with the identification depicting manufacturer name, model number, and serial number unless exempt by CARB*	Compliance is expected. A CARB certified Phase I EVR system per the VR-102 series is proposed for the gasoline dispensing equipment.	ATC condition(s): 15
(d)(2)	*Post 9/1/2006, all contractors and installers must successfully complete the corresponding manufacturers' training program for installing, modifying or repairing the Phase I vapor recovery system. Documentation*	Compliance is expected. The ATCs and PTO will incorporate conditions regarding the requirement for Phase I equipment certified contractors and installers.	ATC condition(s): Gas: 17

	of successful completion must be available upon District request.		
(d)(3)	*Gas stations shall not be operated unless the following are met:*		
(d)(3)(i)	*Each underground storage tank (UST) is equipped with a CARB certified drop tube.*	The facility is expected to comply. The gasoline tanks will be required to have submerged fill pipes installed that meet the necessary distance requirements (within 6 inches from highest cut to the bottom of the tank). Verification will be conducted during the inspections.	ATC condition(s): Gas:5
(d)(3)(ii)	*Minimum gasoline vapor control efficiency: 98.0% by volume Mass emission factor: Not exceeding 0.15 lbs gasoline vapor per 1,000 gallons of gasoline dispensed.*	Expected to comply, a CARB certified Phase I EVR system is proposed for the gasoline tanks.	ATC condition(s): NA
(d)(3)(iii)	*Phase I vapor recovery system is maintained and operated accordingly to the CARB Executive Order (E.O.) and manufacturer Installation, Operation and Maintenance (IOM) manual. Also free of defects per Title 17.*	The facility is expected to comply. The ATCs and PTOs will incorporate a condition regarding handling repair and defects in equipment.	ATC condition(s): Gas: 23
(d)(3)(iv)	*When required by the applicable CARB Executive Order, the Phase I vapor recovery system is equipped with:*	Expected to comply, a CARB certified Phase I EVR system is proposed for the gasoline tanks. The ATC and PTO will incorporate a condition requiring all components listed in the applicable CARB Executive Order be installed	ATC condition(s):
(d)(3)(iv)(A)	*CARB certified gasoline vapor and liquid anti-rotational couplers or rotatable adaptors. Static rotation shall not exceed 108 pound-inch (9 pound-foot).*		
(d)(3)(iv)(B)	*CARB certified poppeted dry breaks or other CARB certified poppeted fittings on the vapor return coupler that are vapor tight when closed;*		
(d)(3)(iv)(C)	*CARB certified pressure/vacuum (P/V) valve(s) on the stationary*		

	underground storage tank vent pipe(s). The tank vent pipes shall be manifolded when required by the most recent applicable CARB Executive Order;		
(d)(3)(iv)(D)	*CARB certified spill boxes each having an integral drain valve or other devices that are certified by CARB to return spilled gasoline to the stationary underground storage tank. Each spill box shall be maintained free of standing gasoline and free of any debris that may interfere with the seating of the drain valve. Spill boxes used exclusively for Phase I vapor connections shall not have drain valves.*		
(d)(3)(v)	*All components shall be maintained free of liquid leaks and vapor tight unless otherwise specified by CARB.*	The facility is expected to comply. A CARB certified Phase I EVR system is proposed for gasoline equipment which have specified allowable leak rates for certain components. Startup inspection and annual compliance test will be required to ensure compliance.	ATC condition(s): Gas: 20,21,24
(d)(3)(vi)	*The gasoline liquid delivery hose shall only be connected or disconnected when the vapor return hose is connected during gasoline delivery.*	The facility is expected to comply with subsections (d)(3)(vi) and (d)(3)(vii). The ATCs and PTOs will incorporate a condition regarding the proper transfer connections and order during fuel bulk delivery to prevent leakage during a delivery and disconnection.	ATC condition(s): Gas: 21,37
(d)(3)(vii)	*There shall be no liquid leaks of the gasoline delivery hose and vapor return hose during a delivery and disconnection.*		
(e) Inspection and Maintenance Program			
(e)(1)	*Periodic inspections shall be conducted per Table 1 of Rule 61.3.1 and include all components but not limited to:*	The facility is expected to comply. The ATCs and PTOs will incorporate a condition regarding the inspection requirements.	ATC condition(s): 13,26,27,28, 49, 62
(e)(1)(i)	*All stationary UST fill caps and gaskets, to verify the components*		

	are in place and in good condition.		
(e)(1)(ii)	*All stationary UST poppeted dry breaks, gasoline vapor and liquid adaptors, to verify they are operable and sealing properly.*		
(e)(1)(iii)	*All stationary UST spill boxes, to verify there is no standing gasoline or debris in the spill boxes and that drain valves are seating properly*		
(e)(2)	*Annual inspection to ensure compliance with all applicable District rules, regulations and permit conditions.*	The facility is expected to comply. The ATCs and PTOs will incorporate a condition regarding the annual compliance inspection requirements and schedule.	
(e)(2)(i)	*The District permit is current and posted.*		
(e)(2)(ii)	*The facility complies with all permit conditions.*		
(e)(2)(iii)	*The Phase I vapor recovery system is properly installed and complies with the most recent applicable CARB certification procedures and CARB Executive Orders.*		
(e)(2)(iv)	*All stationary USTs have gasoline submerged drop-tubes installed and not damaged. A re-inspection shall be conducted each time specific components are removed or replaced.*		
(e)(2)(v)	*The vent pipes are equipped with the required pressure/vacuum valves and each such valve is properly installed. A re-inspection shall be conducted each time specific components are removed or replaced.*		
(e)(3)	*Maintenance Procedures*	The facility is expected to comply with subsections (e)(3) and (e)(4). The ATCs and PTOs will incorporate a condition regarding maintenance issues and requirements.	
(e)(3)(i)	*Any component not in working order or good condition shall be repaired, replaced or adjust within 7 calendar days to bring the facility into compliance. An additional 7 day extension may be requested.*		

(e)(3)(ii)	*Components having a Title 17 defect shall not be used.*		
(e)(4)	*Any additional alternative maintenance procedures by CARB E.O.s or IOMs.*		
(f) Source Testing			
(f)(1)	*Initial compliance test shall be conducted within 60 calendar dates for new installations or modifications.*	The facility is expected to comply. The ATCs will require an initial startup inspection with applicable testing per the CARB Executive Orders.	ATC condition(s): Gas: 59
(f)(2)	*Annual compliance source test required. Additional tests may be required.*	The facility is expected to comply. The ATCs and PTOs will incorporate a condition regarding the compliance test schedule.	ATC condition(s): Gas: 61
(f)(3)	*Contractors/technicians conducting tests are required to complete the SCAQMD orientation class, alternative District approved classes/training, training/certificates by CARB or the systems manufacturer.*	Compliance with subsections (f)(3), (f)(4) and (f)(5) is expected. The ATCs and PTOs will incorporate conditions regarding certification requirements and testing time frames as required.	ATC condition(s): Gas:17,
(f)(3)(i)	*A copy of a current certificate from the South Coast Air Quality Management District, CARB, system manufacturer and/or from other approved training.*		
(f)(3)(ii)	*Records of equipment calibrations performed as required by the applicable test procedures.*		
(f)(4)	*Tests shall be conducted per the ATC, PTO, and applicable CARB EO and Certification Procedures.*		59
(f)(5)	*Test and/or re-test reports shall be submitted to the owner or operator within 15 calendar days.*		ATC condition(s): Gas: 62
(g) Recordkeeping			
(g)(1)	*Records of inspections performed as required by Section (e) of this rule.*	The facility is expected to comply. The ATCs and PTOs will incorporate a condition regarding the	ATC condition(s): Gas: 26,46
(g)(2)	*Records of all malfunctioning components, including the date(s)*		

	such components were identified and repaired or replaced, and any other records and information required by the most recent applicable CARB Executive Orders.	requirements for recordkeeping as outlined.	
(g)(3)	*Records of initial and periodic compliance source tests, which include at a minimum:*		
(g)(3)(i)	*Date and time of each test;*		
(g)(3)(ii)	*Name, affiliation, address, and phone number of the person(s) who performed the test;*		
(g)(3)(iii)	*For a retest following a failed initial or periodic compliance source test, description of repairs performed;*		
(g)(3)(iv)	*Copies of all test reports, including test equipment calibration date(s), test results and failed test data, in District-approved format and, for a test that fails, a description of the reasons for the test failure.*		
(g)(4)	*Monthly gasoline throughput records.*		ATC condition(s): Gas: 18

Rule 61.4 – Transfer of Volatile Organic Compounds into Vehicle Fuel Tanks

Requirement	Explanation:	Condition
Rule 61.4 outlines the standards and requirements for the transfer of VOCs into stationary storage tanks.	Complies – the equipment related to gasoline is subject to and complies with Rule 61.4.1, which is more stringent than Rule 61.4.	n/a

Rule 61.4.1 – Transfer of Gasoline from stationary underground storage tanks into vehicle fuel tanks

(a) Applicability		
Section	**Requirement**	**Explanation:**
(a)(1)	*Except as otherwise provided in Section (b), this rule is applicable at any gasoline dispensing facility where gasoline is dispensed into motor*	The facility's retail gasoline station is subject to this rule. The capacity of the

	vehicle fuel tanks from any stationary underground storage tank with a capacity of 250 gallons (946 liters) or more…	underground storage tanks is more than 250 gallons of gasoline.

(d) Equipment and Operation Requirements			
Section	**Requirement**	**Explanation:**	**Condition(s)**
(d)(1)	*Non-certified Phase II vapor recovery systems are prohibited from being sold, supplied and installed. Components installed shall be a Phase I vapor recovery system certified by CARB with the identification depicting manufacturer name, model number, and serial number unless exempt by CARB.*	The GDF is expected to comply. A CARB certified Phase II EVR system per the VR-202 series is proposed.	ATC condition(s): 15
(d)(2)	*Post 9/1/2006, all contractors installing, modifying, and repairing Phase II vapor recovery systems must have successfully completed the applicable manufacturer's training program. Documentation of successful complete shall be made available if requested.*	Compliance is expected. The ATC and PTO will incorporate conditions regarding the requirement for Phase II equipment certified contractors and installers.	ATC condition(s): 17
(d)(3)	*Gas stations shall not be operated unless the following are met:*	The facility is expected to comply Phase I EVR System per Executive Order VR-102 series and Phase II EVR System per Executive Order VR-202 series are proposed.	ATC condition(s):
(d)(3)(i)	*A CARB certified Phase II vapor recovery system is installed and compatible with the CARB certified Phase I system at the gas station.*		
(d)(3)(ii)	*By the applicable dates…*		
(d)(3)(ii)(A)	*Summer fuel: a gasoline vapor control efficiency of at least 95% by weight and a mass emission factor not exceeding 0.38 pounds of gasoline vapors per 1,000 gallons of gasoline dispensed.*		
(d)(3)(ii)(B)	*Winter fuel: a gasoline vapor control efficiency of at least 95% by weight and a mass emission factor not exceeding 0.38 pounds*		

	of gasoline vapors per 1,000 gallons of gasoline dispensed.		
(d)(3)(iii)	*The Phase II vapor recovery system is installed, maintained and operated per the applicable CARB certifications, CARB E.O. and manufacturer I.O.M.*		
(d)(3)(iv)	*The Phase II vapor recovery system is free of Title 17 defects.*		ATC condition(s): Gas: 23
(d)(3)(v)	*All applicable Phase II vapor recovery system and components shall be free of leaks and are vapor tight unless an otherwise specified by CARB.*		ATC condition(s): Gas: 20
(d)(3)(vi)	*All liquid removal devices installed shall have a minimum liquid removal rate of 5 mL per gallon of gasoline dispensed unless otherwise specified by CARB.*		ATC condition(s):
(d)(3)(vii)	*The gas station has posted:*		ATC condition(s):
(d)(3)(vii)(A)	*Nozzle operating instructions and a toll-free number to report problems.*		
(d)(3)(vii)(B)	*A warning sign that topping off is prohibited and may cause spillage.*		
(d)(3)(viii)	*The Phase II vapor recovery system is CARB certified and compatible with ORVR.*		ATC condition(s): n/a
(d)(3)(ix)	*Facilities that dispense > 600,000 gallons of gasoline must be equipped with a CARB certified ISD system.*	Complies, Phase II EVR per CARB Executive Order VR-202 series with compatible Veeder-Root ISD Software are proposed by the facility.	ATC condition(s): Gas: 42
(d)(3)(x)	*New or replacement dispensers must be unihose. Existing dispensers can be replaced with the same type of dispensers due to damage, accidents, or vandalism.*	The facility is expected to comply. Verification will occur during the startup inspection.	n/a
(e) Inspection and Maintenance Program			
(e)(1)	*Periodic inspections shall be conducted per Table 1 of Rule 61.4.1 and include all components but not limited to:*	The facility is expected to comply. The ATC and PTO will incorporate a condition regarding the annual	ATC condition(s):

(e)(1)(i)	*Vapor guards (if required) are intact.*	compliance inspection requirements and schedule. This is not a Balance system, and the weekly draining requirement will be phased out, Rule 61.4.1 is pending a Rule update.	
(e)(1)(ii)	*Breakaway couplings have not separated.*		
(e)(1)(iii)	*Nozzle boots are free of holes, slits and rips that are Title 17 defects.*		
(e)(1)(iv)	*Vapor recovery hoses, swivels, nozzles, hold-open latches and faceplates are in good working conditions. Gas station components outside each dispenser are also free of liquid leaks and Title 17 defects.*		
(e)(2)	*Balance system: Weekly draining of any retained gasoline from the coaxial hoses. Volume of gasoline removed shall be recorded.*		ATC condition(s): n/a
(e)(3)	*Dispensing flow rate shall be verified monthly per the CARB E.O. or Title 17 CCR requirements.*		ATC condition(s): 11
(e)(4)	*An annual inspection shall verify and ensure compliance with applicable rules, regulations and permit conditions.*		ATC condition(s): 27
(e)(4)(i)	*District permit and the signs required under subsection (d)(3)(vii) of this rule are current and posted.*		
(e)(4)(ii)	*Gas station complies with all permit conditions.*		
(e)(4)(iii)	*The Phase II vapor recovery system is properly installed and complies the applicable CARB certification procedures and CARB E.O.*		
(e)(4)(iv)	*All connections and fittings inside dispensers are free of liquid leaks.*		
(e)(4)(v)	*Dispenser hoses are compliant with the required lengths and installation arrangements per the applicable CARB E.O.*		
(e)(5)	*Maintenance Procedures*		

(e)(5)(i)	*Any component not in working order or good condition shall be repaired, replaced or adjust within 7 calendar days to bring the facility into compliance. An additional 7 day extension may be requested.*	The facility is expected to comply. The ATC and PTO will incorporate a condition regarding maintenance issues and requirements.	ATC condition(s): Gas: 23
(e)(5)(ii)	*Components having a Title 17 defect shall not be used.*		
(e)(6)	*Any additional alternative maintenance procedures by CARB E.O.s or IOMs.*		
(f) Source Testing			
(f)(1)	*Initial compliance test shall be conducted within 60 calendar dates for new installations or modifications.*	The facility is expected to comply. The applicable tests referenced in Attachment A shall be successfully conducted within 60 days after startup of the equipment authorized herein.	Gas: 17, 58-63
(f)(2)	*Annual compliance source test required. Additional tests may be required.*		
(f)(3)	*Contractors/technicians conducting tests are required to complete the SCAQMD orientation class, alternative District approved classes/training, training/certificates by CARB or the systems manufacturer.*		
(f)(3)(i)	*A copy of a current certificate from the South Coast Air Quality Management District, CARB, system manufacturer and/or from other approved training.*		
(f)(3)(ii)	*Records of equipment calibrations performed as required by the applicable test procedures.*		
(f)(4)	*Tests shall be conducted per the ATC, PTO, and applicable CARB EO and Certification Procedures.*		
(f)(5)	*Test and/or re-test reports shall be submitted to the owner or operator within 15 calendar days.*		
(g) Recordkeeping			

(g)(1)	*Records of inspections performed as required by Section (e) of this rule.*	The facility is expected to comply. The ATC and PTO will incorporate a condition regarding the requirements for recordkeeping as outlined.	
(g)(2)	*Records of all malfunctioning components, including the date(s) such components were identified and repaired or replaced, and any other records and information required by the most recent applicable CARB Executive Orders.*		
(g)(3)	*Records of initial and periodic compliance source tests, which include at a minimum:*		
(g)(3)(i)	*Date and time of each test;*		
(g)(3)(ii)	*Name, affiliation, address, and phone number of the person(s) who performed the test;*		
(g)(3)(iii)	*For a retest following a failed initial or periodic compliance source test, description of repairs performed;*		
(g)(3)(iv)	*Copies of all test reports, including test equipment calibration date(s), test results and failed test data, in District-approved format and, for a test that fails, a description of the reasons for the test failure.*		
(g)(4)	*Monthly gasoline throughput records.*		ATC condition(s): Gas: 18

Rule 61.5 – Visible Emissions Standards for Vapor Control Systems

Requirement	Explanation:	Condition
Rule 61.5 states: *No person shall discharge, or allow to be discharged, into the atmosphere from any vapor control system used to meet the requirements of Rules 61.1, 61.2, 61.3, 61.4 or 61.7, air contaminants in such a manner that the opacity of the emission is:* *(1) Greater than 10% for a period or periods aggregating more than one*	The facility is expected to comply based on facility's ongoing and similar operations.	n/a

(1) minute in any 60 consecutive minutes; or *(2) Greater than 40% at any time.*		

Rule 61.6 – NSPS Requirements for Storage of Volatile Organic Compounds

Requirement	Explanation:	Condition
Any person owning or operating any source subject to the provisions of any federal New Source Performance Standard (NSPS), the enforcement of which has been delegated to the San Diego County Air Pollution Control District must, in addition to complying with Rules 61.1 through 61.5 and 61.7 and 61.8, comply with Regulation X.	Not applicable, this source is not subject to any NSPS.	n/a

Rule 61.7 – Spillage and Leakage of Volatile Organic Compounds

Requirement	Explanation:	Condition
No person shall: *(i) Spill, allow the spillage or cause spillage of such compounds during the disconnection of fittings used for transfer, except for spillage which would normally occur with equipment handled in a manner designed to minimize spillage.* *(ii) Use or allow equipment to be used to transfer fuel unless the equipment is free of defects and properly maintained in a manner designed to minimize spillage, and* *(iii) No person shall allow fugitive liquid leaks along the liquid transfer path, including any storage tank.*	The facility is expected to comply based on similar operations. Conditions will be added to the permit to limit spillage and fugitive liquid leaks. Compliance with Rule 61.7 will be verified during inspections, and performance tests will be required on an annual basis in order to verify the vapor recovery systems comply with Rule 61.7.	ATC condition(s): Gas:20,21

Rule 61.8 – Certification Requirements for Vapor Control Equipment

Requirement	Explanation:	Condition
No person shall install, provide, sell or sell for use within the County of San Diego a gasoline vapor control system or system component subject to the certification requirements of Division 26, Part 4, Chapter 3, Article 5, of the State of California Health and Safety Code unless it has been certified by the California Air Resources Board.	Gas: Complies, Phase I vapor recovery system certified per CARB Executive Order VR-102 series and Phase II vapor recovery system certified per CARB EO VR-202 are proposed for gasoline dispensing equipment.	ATC condition(s): Gas: 12, 15

4.2 New Source Review

Rule 20.1 New Source Review – General Provisions

This application is subject to District NSR rules. This site is considered a non-major stationary source, for each pollutant, as shown in the Table 4, and is therefore subject to District Rule 20.2. Calculation of emissions and determination of applicable requirements is performed in accordance with District Rule(s) 20.1 through 20.3.

Table 4: Classification of Major/PSD Source and Modification New Source Review (NSR) Requirements

	NOx	VOC	PM-10	SOx
Major Source Threshold (ton/year)	*25*	*25*	*100*	*100*
Federal Major Source Threshold (ton/year)	*25**	*25**	*100*	*100*
Major Modification Threshold (ton/year)	*25*	*25*	*15*	*50*
Major?	**No**	**No**	**No**	**No**
Contemporaneous Calculations Performed?	**No**	**No**	**No**	**No**
Major New or Modification?	**No**	**No**	**No**	**No**
PSD Threshold (ton/year)	*250*	*250*	*250*	*250*
PSD Modification Threshold (ton/year)	*40*	*40*	*15*	*40*
PSD New or Modification?	**No**	**No**	**No**	**No**

*based on EPA's ozone nonattainment designation for the San Diego Air Basin in 40 CEF81.305

District Rule 20.2 contains requirements for Best Available Control Technology (BACT), Air Quality Impact Assessment (AQIA), Prevention of Significant Deterioration (PSD) and public notification.

New Source Review Discussion				
Rule/Requirement	**Requirement**	**Applies?**	**Discussion**	**Condition(s)**
Applicability	Rule 20.2 applies to non-major sources.	Yes	This is not a major source, so rule 20.2 applies.	n/a
Type of application	New installation of a gasoline dispensing station		This installation is intended to replace the existing GDF operations at the nearby location.	n/a
Exemptions	No exemptions apply to this equipment		n/a	n/a
20.2(d)(1) - BACT				
BACT - NOx	Installation of BACT is required if emissions of NOx exceed 10 lb/day	No	The potential to emit for this pollutant from this equipment does not exceed this trigger level, so BACT is not required.	n/a
BACT - VOC	Installation of BACT is required if emissions of VOC exceed 10 lb/day	Yes	The potential to emit VOC from the Gasoline operation is 117.83lbs TOG/day. The emission exceeds the 10 lbs/day limit. The facility proposed to install Phase I and Phase II control systems with the new gasoline equipment, which are considered BACT and T-BACT for GDF.	ATC cond:
BACT - PM-10	Installation of BACT is required if emissions of PM-10 exceed 10 lb/day	No	The potential to emit for this pollutant from this equipment does not exceed this trigger level, so BACT is not required.	n/a
BACT - SOx	Installation of BACT is required if emissions of SOx exceed 10 lb/day	No	The potential to emit for this pollutant from this equipment does not exceed this trigger level, so BACT is not required.	n/a
20.2(d)(2) – AQIA				
AQIA - NOx	Required for project emission increases in excess of 25 lb/hr, 250 lb/day or 40 ton/yr	No	The increase in emission of this air contaminant from this project does not exceed any of these	n/a

	of NOx calculated as NO2		levels, and AQIA is not required.	
AQIA - PM-10	Required for project emission increases in excess of 100 lb/day or 15 ton/yr of PM-10	No	The increase in emission of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	n/a
AQIA - SOx	Required for project emission increases in excess of 25 lb/hr, 250 lb/day or 40 ton/yr of SO_x calculated as SO_2	No	The increase in emission of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	n/a
AQIA - CO	Required for project emission increases in excess of 100 lb/hr, 550 lb/day or 1000 ton/yr of CO	No	The increase in emission of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	n/a
20.2(d)(3) - PSD	Applicable to source that may have a significant impact on a class I area	n/a	This is not a PSD source, and emissions are not expected to impact a class I area	n/a
20.2(d)(4) - Public Notice	Requires 30 day public notice if an AQIA was required or if increase in VOC emissions from the project exceed 250 lb/day or 40 ton/year	n/a	AQIA was not required and VOC emission increase from this project does not exceed these levels.	n/a

4.3 Toxic New Source Review- Rule 1200

Rule 1200 applies to any new, relocated or modified emission unit which results in any increase in emissions of one or more toxic air contaminant(s), and for which an Authority to Construct or Permit to Operate is required. This rule requires health risks be reviewed to ensure the risks are below for GDFs:

- *100 in one million for cancer (with T-BACT installed), and that the*
- *health hazard index is less than 10 from chronic non-cancer and acute toxic air contaminants.*

The installation of a new gasoline dispensing facility will increase the annual VOC emissions. Therefore, the emissions increase from a gasoline station is evaluated for the health risk assessment. The proposed gasoline station is equipped with CARB certified Phase I and Phase II EVR system, which are considered T-BACT.

The annual health risk screening ratio result from the De Minimis analysis exceeded the Rule 1200 risk threshold. Therefore, a refined HRA was conducted using the throughput of 84 million gallon gasoline to evaluate the health risk associate with the gasoline dispensing activities. The results indicate the risk levels are all within the Rule 1200.

Estimated Risk Levels:

Maximum Individual Cancer Risk (residential) = 46.22 in one million < Rule 1200 limit of 100 in a million
Chronic Noncancer Health Hazard Index (Worker) = 1.16 < Rule 1200 limit of 10
Acute Health Hazard Index (Worker) = 3.23 < Rule 1200 limit of 10

The GDF is equipped with T-BACT and the associated emissions fall within the aforementioned requirements. Therefore, the GDF is exempt from District Rule 1200 section (d) as allowed by the aforementioned subsection (b)(1)(v)(B).

4.4 AB3205 –

AB3205 requires a public notice prior to issuing an Authority to Construct for equipment emitting hazardous air contaminants at a facility within 1000 feet of a school. The law also requires the District to consider any comments before authorizing construction.

The facility is within 1000 feet of Harborside Elementary School as shown in yellow circle in the aerial photo below. Therefore, AB3205 applies, and school notices will be sent out for public commenting on the projects.

4.5 NESHAPS AND ATCMs –

NESHAP:
CFR Part 63, Subpart CCCCCC, NESHAP for Area Source Categories: Gasoline Dispensing Facilities
This NESHAP is applicable to all gasoline dispensing facilities.
Date of Promulgation: January 1, 2008

NESHAP CCCCCC outlines management practices to minimize emissions/spillage, equipment specifications and notification requirements.

Gasoline station will be equipped with CARB certified Phase I and Phase II EVR system. Therefore, the Gasoline Dispensing Facility is expected to comply with the NESHAP requirements.

NSPS*:* None

ATCM:
Subchapter 7.5, Section 93101 Benzene Airborne Toxic Control Measure – Retail Service Stations

Complies, ARB certified Phase I VRS and a Phase II VRS are installed for the new gasoline related equipment.

CEQA:
CEQA/NEPA requires Federal, state, and local agencies to analyze and disclose the potential environmental impacts of their decisions, and in the case of CEQA, to minimize significant adverse environmental effects to the extent feasible.

In California, CEQA was codified under Division 13 of California's Public Resources Code, in sections 21000 et seq. (Cal. Pub. Resources Code, § 21000 et seq.). The Guidelines for Implementation of the California Environmental Quality Act are in Title 14 of California's Code of Regulations, section 15000 et seq. (Cal. Code Regs., tit. 14, § 15000 et seq.; hereafter CEQA Guidelines).

The post-project potential to emit after adding this GDF at the location is 117.8 pounds of VOC per day, which could trigger CEQA review. To ensure the project is in compliance with CEQA requirements, the District requested the facility to provide CEQA determination from the lead agency (in this case the City of Chula Vista). The Planning Commission of the City of Chula Vista determined this project to be exempt from CEQA. in accordance with CEQA Guidelines Section 15332 of the State CEQA Guidelines.

In an addition, the project being permitted by the District is exempt from the requirements of the California Environmental Quality Act (CEQA) due to its designation as a ministerial action. Pursuant to CEQA Guidelines Section 15268, ministerial projects are not subject to environmental review because they involve decisions that are guided by fixed standards or regulations, with no allowance for discretionary judgment. The scope of this project falls within routine procedures that are strictly governed by established regulation, thereby precluding any need for subjective evaluation or interpretation. Consequently, the project is exempt from CEQA review.

4.6 Attachments –
N/A

4.7 Title V –
The facility is not a Title V facility.

5.0 RECOMMENDATION & CONDITIONS

It is expected that the Gasoline Dispensing Facility shall comply with all the applicable requirements, and it is recommended that Authority to Constructs be issued with standard conditions for gasoline dispensing equipment.

6.0 RECOMMENDED CONDITIONS

The recommended conditions are combined existing PTO permit conditions from APCD2006-PTO-971289 and Standard ATC conditions.

Conditions from the existing PTO permit:

3	PTO Conds	Fuel additive shall be transferred into the gasoline storage tanks as specified in the equipment description of this permit. (Rule 20.2)
4	PTO Conds	Fuel additive shall only be transferred into the gasoline underground storage tanks through an automated pumping system operated in accordance with the Manufacturers' instruction/ operation manual. (Rule 20.2)
5	PTO Conds	All storage tanks containing gasoline or fuel additive shall be equipped with permanent submerged fill pipes, which have a discharge opening entirely submerged when the liquid level is six (6.0) inches above the bottom of the tank.

		The District will accept documentation verifying this requirement from the equipment installation contractor or the performance testing contractor in lieu of witnessed measurements taken during performance tests. (Rule 61.3.1)
6	PTO Conds	The Permeator AT-150 shall constantly log oil level, processor on/off condition, vacuum level and tank pressure. (CARB VR-202 Executive Order and Rule 61.4.1)
7	PTO Conds	The Permeator AT-150 Programmable Logic Controller (PLC, display) shall constantly monitor PLC battery level and circuit continuity. (CARB VR-202 Executive Order and Rule 61.4.1)
8	PTO Conds	Except for testing, repairs, or maintenance activities, the Permeator AT-150 shall be operated at all times with the ball valves in the "open" position. The ball valve handles shall either be locked in place or the handles removed and locked inside the Permeator cabinet. (CARB VR-202 Executive Order and Rule 61.4.1)
9	PTO Conds	No dispensing shall be allowed when the vapor collection pump is disabled for maintenance or for any other reason. Only those nozzles affected by the disabled vapor collection pump are subject to this condition.
10	PTO Conds	The hose assembly shall comply with the hose length specified Phase II Executive Order listed in the equipment description of this permit. (Rule 61.4)
11	PTO Conds	The dispensing rate of every grade point shall be maintained at all times within the range specified in the applicable Executive Order, as required to conduct the Vapor-to-Liquid Ratio (V/L) Test. The permittee shall verify the maximum handheld dispensing flow rate of every grade point on a monthly basis. Attachment E, "Dispensing Flow Rate," or an equivalent form, shall be used for this purpose. Dispensing flow rates records shall be maintained on site for at least three (3) years and made available to the District upon request. (Rules 61.4.1)
62	PTO Conds	In the event of any failed test, which does not constitute a defect, the permittee shall make all necessary repairs, reschedule and retest within seven (7) calendar days of the failed test. In the event of any failed test, which does constitute a defect, the permittee shall remove all of the affected components from service until they are successfully retested. Notice of any retest, including the date, time and nature of repairs made, conducted on a subsequent date after the initial test date shall be provided to the District's Compliance Division in writing (e-mail or facsimile are acceptable) as soon as possible and prior to the retest. All retest results shall be reported completely and accurately and submitted to the District Compliance Division within fifteen (15) calendar days of conducting the retest in a format approved by the District Compliance Division. (Rules 61.3, 61.3.1, 61.4 and 61.4.1)

Added standard ATC Cond sets:

Condition sets	Descriptions
APCD2014-CON-000795	Vapor Recovery-General ATC Conditions 100s
APCD2014-CON-000796	Vapor Recovery-Maintenance ATC Conditions 200s
APCD2014-CON-000797	Vapor Recovery-Piping ATC Conditions 300s
APCD2014-CON-000794	Vapor Recovery-Phase I ATC Conditions 400s
APCD2014-CON-000798	Vapor Recovery-ISD ATC Conditions 600s
APCD2014-CON-000793	Vapor Recovery-Prebackfill ATC Conditions 700s

APCD2014-CON-000799	Vapor Recovery-Annual Testing ATC Conditions 900s

Additional ATC Conds:

1	ATC Conds	New 2	The owner or operator of the existing gasoline dispensing facility under permit APCD2007-PTO-973230 shall cease the existing gasoline operations once the Construction Completion Notice (CCN) for the new gasoline dispensing facility, under permit application APCD2023-APP-007994, has been submitted to and received by the District. At no time shall the existing and the new gasoline dispensing facilities conduct gasoline operations concurrently including storing gasoline or additive, loading gasoline or additive into underground storage tanks, and dispensing gasoline into vehicles. (Rule 1200)

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