

SMAQMD BACT CLEARINGHOUSE

ACTIVE

CATEGORY Type:

APC - MISCELLANEOUS

BACT Category: SMALL EMITTER BACT (PTE < 10 LB/D)

BACT Determination Number: 322	BACT Determination Date: 11/28/2022
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Equipment Information

Permit Number: 27357
Equipment Description: WATER EVAPORATOR
Unit Size/Rating/Capacity: ≥ 1 to < 2 MMBTU/hr
Equipment Location: ADESA CALIFORNIA, LLC DBA ADESA SACRAMENTO
 8649 KIEFER BLVD SACRAMENTO, CA

BACT Determination Information

District Contact: Quintin Phan Phone No.: (279) 207-1143 email: qphan@airquality.org

ROCs	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
NOx	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
SOx	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
PM10	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
PM2.5	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
CO	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
LEAD	Standard:	No Standard
	Technology Description:	
	Basis:	Achieved in Practice

Comments:



BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION

DETERMINATION NO.:	<u>322</u>
DATE:	<u>8/5/22</u>
ENGINEER:	<u>Quintin Phan</u>

Category/General Equipment Description:	<u>#322 – Car Wash Waste Water Evaporator, Natural Gas or LPG Fueled, Direct-Fired, ≥ 1 to < 2 MMBtu/hr</u>
Equipment Specific Description:	<u>Small Emitter BACT</u>
Equipment Size/Rating:	<u>None</u>
Previous BACT Det. No.:	<u>#248 – Car Wash Waste Water Evaporator, Natural Gas or LPG Fueled, Direct-Fired, ≥ 1 to < 2 MMBtu/hr</u>

There is only one permitted waste water evaporator in the District and it is greater than 1 MMBtu/hr and less than 2 MMBtu/hr (P/O 26248). It is permitted to Adesa – car auction facility and is direct fired (where the products of combustion come into direct contact with the material to be heated). This BACT will only apply to evaporators that process waste water from the washing of cars. Any potential VOC and toxic emissions from the car washing products are minimal, since these operations remove oil and grease from the water prior to being evaporated. Therefore, TBACT will not be addressed by this BACT.

The District's Small Emitter and "Otherwise-Exempt Equipment" BACT Determinations policy states that units which are classified as small emitters (less than 10 lbs/day of VOC, NO_x, SO_x, PM₁₀, or PM_{2.5} and less than 550 lbs/day of CO) and are located at non-major stationary sources are only required to meet BACT standards that have been achieved in practice. Therefore, this BACT determination will only be based on what is achieved in practice and will be only applied to small emitters at non-major sources. BACT will be evaluated on a case-by-case basis for units that do not fit this criteria.

BACT ANALYSIS

A: ACHIEVED IN PRACTICE (Rule 202, §205.1a)

The following control technologies are currently employed as BACT for car wash waste water evaporators greater than or equal to 1 and less than 2 MMBTU/hr by the following air pollution control districts:

US EPA

BACT

Source: [EPA RACT/BACT/LAER Clearinghouse](#)

None

RULE REQUIREMENTS:

None.

California Air Resource Board (CARB)

BACT

Source: [ARB BACT Clearinghouse](#)

None

RULE REQUIREMENTS:

None

Sacramento Metropolitan AQMD

BACT:

Source: [SMAQMD BACT Clearinghouse](#)

For natural gas or LPG fueled car wash water evaporators that are direct fired (where the products of combustion come into direct contact with the material to be heated):	
VOC	No standard
NOx	No standard
SOx	No standard
PM10	No standard
PM2.5	No standard
CO	No standard

RULE REQUIREMENTS:

Rule 419 – NOx from Miscellaneous Combustion Units (10-25-18)

This rule is applicable to units with a rating of ≥ 5 MMBtu/hr that is not located at a major stationary source. Therefore, this rule is not applicable to these types of units.

South Coast AQMD

BACT

Source: [SCAQMD BACT Guidelines for Non-Major Facilities](#)

Note: SCAQMD BACT Guidelines do not contain a specific determination for evaporators in the size range 1 to less than 2 MMBtu/hr, since these units are not required to obtain a written permit, pursuant to SCAQMD Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II.

RULE REQUIREMENTS:

SCAQMD Rule 219 Equipment Not Requiring a Written Permit Pursuant to Regulation II

Boilers, process heaters, or any combustion equipment that has a rated maximum heat input capacity of 2,000,000 Btu per hour (gross) or less and are equipped to be heated exclusively with natural gas, methanol, liquified petroleum gas, or any combination thereof. This exemption does not apply whenever there are emissions other than products of combustion.

Reg XI, Rule 1147 - NOx Reductions from Miscellaneous Sources (5-6-2022)

Table 1 – NOx Emission Limit

Gaseous Fuel-Fired Equipment	Process Temperature	NOx Emission Limit (ppmv corrected to 3% O ₂ , dry unless otherwise specified)
Evaporator, Fryer, Heated Process Tank, or Parts Washer	All	60 ppm or 0.073 lb/MMBtu

This BACT standard is for units less than 2 MMBtu/hr and process car wash waste water. Therefore, the requirements from this rule will not be evaluated for this BACT determination.

San Diego County APCD

BACT

Source: [NSR Requirements for BACT](#)

Note: SDCAPCD BACT Guidelines do not contain a specific determination for evaporators in the size range of 1 to less than 2 MMBtu/hr, since these units are not required to obtain a written permit, pursuant to SDAPCD Regulation II Rule 11 – Exemptions from Rule 10 Permit Requirements.

SDAPCD Rule 11(d)

Any equipment, operation, or process that is listed below in Subsections (d)(1) through (d)(20), and that meets the stated exemption provision, parameter, requirement, or limitation, is exempt from the requirements of Rule 10. (d)(2)(iv) Any boiler, process heater, or steam generator with a manufacturer's maximum gross heat input rating of less than 1 million BTU per hour fired with any fuel, or 2 million BTU per hour or less exclusively with natural gas and/or liquefied petroleum gas.

RULE REQUIREMENTS:

None

Bay Area AQMD

BACT

Source: [BAAQMD BACT/TBACT Workbook](#)

Note: BAAQMD BACT Workbook does not contain a determination for car wash waste water evaporators 1 to less than 2 MMBtu/hr or less fired exclusively on natural gas or LPG, since these units are not required to obtain a written permit, pursuant to BAAQMD Regulation 2, Rule 1 – General Requirements.

BAAQMD Rule 2-1-114 – General Requirements

The following equipment is exempt from the, requirements of Sections 2-1-301 and 302 (requirement to obtain an ATC or PTO): (114.1) Boilers, Heaters, Steam Generators, Duct Burners, and Similar Combustion Equipment:

1.2 Any of the above equipment with less than 10 million BTU per hour rated heat input if fired exclusively with natural gas (including compressed natural gas), liquefied petroleum gas (e.g. propane, butane, isobutane, propylene, butylenes, and their mixtures), or any combination thereof.

RULE REQUIREMENTS:

None

San Joaquin Valley Unified APCD

BACT

Source: [SJVUAPCD BACT Guideline \(Rescinded\)](#)

Note: SJVUAPCD BACT Guidelines do not contain a determination for car wash waste water evaporators 1 to less than 2 MMBtu/hr, since these units are not required to obtain a written permit pursuant to SJVUAPCD Rule 2020 – Exemptions.

SJVUAPCD Rule 2020 §6.0

No Authority to Construct or Permit to Operate shall be required for (§6.1) steam generators, steam super heaters, water boilers, water heaters, steam cleaners, and closed indirect heat transfer systems that have a maximum input heat rating of 5,000,000 Btu per hour (gross) or

less and is equipped to be fired exclusively with (§6.1.1.1) natural gas, ((§6.1.1.2) liquefied petroleum gas, or (§6.1.1.3) any combination for the two.

RULE REQUIREMENTS:

None

The following control technologies have been identified as the most stringent, achieved in practice control technologies:

BEST CONTROL TECHNOLOGIES ACHIEVED		
Pollutant	Standard	Source
VOC	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
NOx	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
SOx	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
PM10	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
PM2.5	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
CO	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD

B. TECHNOLOGICALLY FEASIBLE AND COST EFFECTIVE (Rule 202, §205.1.b.):

The District’s Small Emitter and “Otherwise-Exempt Equipment” BACT Determinations policy (dated 5/16/2019) states that units which are classified as small emitters (less than 10 lbs/day of VOC, NOx, SOx, PM10, or PM2.5 and less than 550 lbs/day of CO) and are located at non-major stationary sources are only required to meet BACT standards that have been achieved in practice. Therefore, this BACT determination will only be based on what is achieved in practice and will only be applied to small emitters at non-major sources. BACT will be evaluated on a case-by-case basis for units that do not fit these criteria.

C. SELECTION OF BACT:

Based on the cost effectiveness determinations, BACT for VOC, NOx, SOx, PM10, PM2.5 and CO will be the most stringent standards of what is currently achieved in practice.

#322 – Car Wash Waste Water Evaporator, Natural Gas or LPG Fueled, Direct-Fired ≥ 1 to < 2 MMBtu/hr		
Pollutant	Standard	Source
VOC	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
NOx	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
SOx	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
PM10	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
PM2.5	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD
CO	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVUAPCD, BAAQMD, SDCAPCD

D. SELECTION OF T-BACT:

Toxics are in the form of VOCs and particulate matter. Since toxic emissions from natural gas or LPG fired car wash waste water evaporators in the 1 to less than 2 MMBtu/hr size range are so small and the cancer risk is not expected to be anywhere close to 1 in a million cases, T-BACT was not evaluated for this determination.

APPROVED BY: *Brian F Krebs* **DATE:** 11-28-2022