

CATEGORY:

WATER EVAPORATOR

BACT Size: Small Emitter BACT (PTE < 10 lb/day)

WATER EVAPORATOR

BACT Determination Number: 248	BACT Determination Date: 1/2/2020
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Equipment Information

Permit Number: 26248
Equipment Description: WATER EVAPORATOR
Unit Size/Rating/Capacity: >= 1 MMBt/hr and < 2 MMBtu/hr
Equipment Location: ADESA CALIFORNIA, LLC D/B/A ADESA BRASHER'S
 6233 BLACKTOP RD
 RIO LINDA, CA

BACT Determination Information

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

Comments: This BACT is for natural gas or LPG fueled car wash waste water evaporators that are direct fired (where the products of combustion come into direct contact with the material to be heated).

District Contact: Felix Trujillo Phone No.: (916) 874 - 7357 email: ftrujillo@airquality.org



BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION

DETERMINATION NO.:	248
DATE:	1/2/20
ENGINEER:	Felix Trujillo, Jr.

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

There are only two permitted waste water evaporators in the District and they are greater than 1 MMBtu/hr and less than 2 MMBtu/hr. They are permitted to the same source (Adesa – car auction facility) and are 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:

BACT Determination

Car Wash Waste Water Evaporators ≥ 1 and < 2 MMBTU/hr Direct Fired and Fueled on Natural Gas or LPG

District/ Agency	Best Available Control Technology (BACT)/Requirements
US EPA	<p><u>BACT:</u> Source: EPA RACT/BACT/LAER Clearinghouse</p> <p>None</p> <p><u>RULE REQUIREMENTS:</u> None.</p>
ARB	<p><u>BACT:</u> Source: ARB BACT Clearinghouse</p> <p>None</p> <p><u>RULE REQUIREMENTS:</u> None</p>
SMAQMD	<p><u>BACT:</u> Source: SMAQMD BACT Clearinghouse</p> <p>None</p> <p><u>RULE REQUIREMENTS:</u></p> <p><u>Rule 419 – NOx from Miscellaneous Combustion Units (10-25-18)</u> 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.</p>

District/ Agency	Best Available Control Technology (BACT)/Requirements															
South Coast AQMD	<p>BACT: Source: SCAQMD BACT Guidelines for Non-Major Facilities</p> <p>Note: SCAQMD 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 SCAQMD Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II.</p> <p>RULE REQUIREMENTS:</p> <p><u>SCAQMD Rule 219 Equipment Not Requiring a Written Permit Pursuant to Regulation II</u> 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.</p> <p>SMAQMD submitted a formal records release request (see Appendix A) to the the SCAQMD for a list of Permits to Operate or Authorities to Construct issued for car wash waste water evaporators from 12/5/08 to 10/29/19. No records were found for these types of units. The District contacted SCAQMD staff to determine if there were such units under permits. The staff that works with car wash facilities were not aware of any such units under permits. It will be assumed that SCAQMD exempts evaporators under 2 MMBtu/hr that process car wash waste water.</p> <p><u>Reg XI, Rule 1147 – NOx Reductions from Miscellaneous Sources (7-7-2017)</u></p> <p>Table 1 – NOx Emission Limit for Unit Heat Ratings ≥ 325,000 Btu/hour</p> <table border="1"> <thead> <tr> <th>Equipment Categories</th> <th colspan="3">NOx Emission Limit PPM @ 3% O2, dry or lb/MMBtu Heat Input</th> </tr> <tr> <th rowspan="2">Gaseous Fuel-Fired Equipment</th> <th colspan="3">Process Temperature</th> </tr> <tr> <th>≤ 800 °F</th> <th>> 800 °F and < 1200 °F</th> <th>≥ 1200 °F</th> </tr> </thead> <tbody> <tr> <td>Evaporator, Fryer, Heated Process Tank, or Parts Washer</td> <td>60 ppm or 0.073 lb/mmBtu</td> <td>60 ppm or 0.073 lb/mmBtu</td> <td></td> </tr> </tbody> </table> <p>This 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.</p>	Equipment Categories	NOx Emission Limit PPM @ 3% O2, dry or lb/MMBtu Heat Input			Gaseous Fuel-Fired Equipment	Process Temperature			≤ 800 °F	> 800 °F and < 1200 °F	≥ 1200 °F	Evaporator, Fryer, Heated Process Tank, or Parts Washer	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu	
Equipment Categories	NOx Emission Limit PPM @ 3% O2, dry or lb/MMBtu Heat Input															
Gaseous Fuel-Fired Equipment	Process Temperature															
	≤ 800 °F	> 800 °F and < 1200 °F	≥ 1200 °F													
Evaporator, Fryer, Heated Process Tank, or Parts Washer	60 ppm or 0.073 lb/mmBtu	60 ppm or 0.073 lb/mmBtu														
South Coast AQMD																

District/ Agency	Best Available Control Technology (BACT)/Requirements
San Diego County APCD	<p><u>BACT</u> Source: NSR Requirements for BACT</p> <p>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.</p> <p><u>SDAPCD Rule 11(d)</u> 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)(v) Any boiler, process heater, or steam generator with a manufacturer’s maximum gross heat input rating of less than 5 million BTU per hour fired exclusively with natural gas and/or liquefied petroleum gas.</p> <p><u>RULE REQUIREMENTS:</u></p> <p>None</p>
Bay Area AQMD	<p><u>BACT</u> Source: BAAQMD BACT Workbook</p> <p>Note: BAAQMD BACT Workbook does not contain a determination for car wash waste water evaporators 5 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.</p> <p><u>BAAQMD Rule 2-1-114 – General Requirements</u> 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:</p> <p>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.</p> <p><u>RULE REQUIREMENTS:</u></p> <p>None</p>

District/ Agency	Best Available Control Technology (BACT)/Requirements
San Joaquin Valley APCD	<p>BACT Source: SJVAPCD BACT Guidelines</p> <p>Note: SJVAPCD BACT Guidelines do not contain a determination for car wash waste water evaporators 5 MMBtu/hr or less, since these units are not required to obtain a written permit, pursuant to SJUVAPCD Rule 2020 - Exemptions.</p> <p><u>SJVAPCD Rule 2020 §6.0</u> 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 of the two.</p> <p><u>RULE REQUIREMENTS:</u></p> <p>None</p>

The following control technologies have been identified and are ranked based on stringency:

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

No control technologies have been identified as achieved in practice.

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 above analysis, BACT for VOC, NOx, SOx, PM10, PM2.5 and CO will be the most stringent standards of what is currently achieved in practice.

BACT # 248 FOR CAR WASH WASTE WATER EVAPORATORS ≥ 1 AND < 2 MMBTU/HR FUELED ON NATURAL GAS OR LPG FUEL AND DIRECT FIRED		
Pollutant	Standard	Source
VOC	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDCAPCD
NOx	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDCAPCD
SOx	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDCAPCD
PM10	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDCAPCD
PM2.5	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVAPCD, BAAQMD, SDCAPCD
CO	No standard	EPA, ARB, SMAQMD, SCAQMD, SJVAPCD, 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: 

DATE: 1-2-2020

Appendix A

SCAQMD Public Record Release Request

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax: (909) 396-3330

COMPLETION LETTER

November 05, 2019

FELIX TRUJILLO
SACRAMENTO METROPOLITAN AQMD
777 12TH ST.
SACRAMENTO, CA 95814

Ref: **CONTROL NO. 1399161**
Received 10/29/2019

Re: LIST OF P/O'S & P/C'S FOR CAR WASH WASTE WATER EVAPORATORS, FROM
12/5/08-10/29/19.

After a thorough search of this agency's records:

NO REQUESTED RECORDS WERE FOUND FOR THE ABOVE-REFERENCED FACILITY
OR FACILITY SITE.

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00
a.m. to 4:30 p.m.**

Sincerely,

STACEY WALKOWIAK x2383
For COLLEEN PAINE
Public Records Coordinator

SW