

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT E & C DIVISION APPLICATION PROCESSING AND CALCULATIONS	TOTAL PAGES:	PAGE NO.:
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PERMIT TO CONSTRUCT

APPLICANT	DISNEYLAND RESORT
MAILING ADDRESS	1313 HARBOR BLVD ANAHEIM, CA. 92803
EQUIPMENT LOCATION	SAME

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
PROCESS 2: EXTERNAL COMBUSTION, BOILERS, INDUSTRIAL					
BOILER, PRESSURE WASHER TYPE, PORTABLE, DIESEL FUEL, ALKOTA, MODEL NO. 7205, S/N 261420, WITH A 20 HP GASOLINE ICE DRIVING A PUMP, RATED AT 352,800 BTU/HR. A/N 529048	D308			CO: 2000 PPMV (5A) [RULE 407, 4-2-1982]; NOX: 19 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; NOX: 102 LBS/1000 GAL GASOLINE (1) [RULE 2012, 5-6-2005]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	B59.2, C1.16, C1.26, K67.23
BOILER, PRESSURE WASHER TYPE, PORTABLE, DIESEL FUEL, ALKOTA, MODEL NO. 7205, S/N 261421, WITH 20 HP GASOLINE ICE DRIVING A PUMP, RATED AT 352,800 BTU/HR. A/N 529050	D309			CO: 2000 PPMV (5A) [RULE 407, 4-2-1982]; NOX: 19 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; NOX: 102 LBS/1000 GAL GASOLINE (1) [RULE 2012, 5-6-2005]; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	B59.2, C1.16, C1.26, K67.23

A/N 529046

RECLAIM/TITLE V PERMIT REVISION, DE MINIMIS SIGNIFICANT

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BACKGROUND:

These applications were filed on 11/02//2011 as Class I for the installation of two pressure washers. The new pressure washers will replace 2 pressure washers that will be taken out of service (D244 and D245). The pressure washers will be used to clean sidewalks, flat surfaces, etc. The pressure washers are used throughout the resort. The pressure washers are equipped with a small Rule 219 exempt engine used to drive a pump.

In the Facility Permit ID#800189, additions are requested to Section H by adding two pressure washers and the removal of two pressure washers (D244 and D245).

This Title V modification is considered as a “de minimus significant revision” to the Title V permit because the emissions do not exceed the threshold levels described District Rule 3000 (b)(6).

PROCESS DESCRIPTION

This portable high-pressure washer will be used to clean patios and walkways on the lower lot. The burner is used to heat the water and soap to the correct operating temperature. Afterwards, the solution is sprayed through a nozzle at high pressure.

CALCULATIONS

1. Emissions calculations

A. Emissions calculations

Determine emissions from NOx, CO, ROG, SOx and PM

$$R1(LB / HR) = \frac{EF \times GAL USAGE}{1 \times 10^3}$$

Note R1 = R2

Where EF equal lb/MGAL (ref SCAQMD emissions fee form Appendix A, table 1, default emissions factors for external combustion -2003)

The SOx emissions based on 15 ppm Sulfur content in the fuel oil, see attachment for calculation details

Note, if fuel rate is not given, use 135,000 btu/gal to estimate the fuel rate

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E & C DIVISION**APPLICATION PROCESSING AND CALCULATIONS**

B. AEIS and NSR calculations

$$\text{Lb/dy} = \text{lb/hr} * \text{hr/dy}$$

$$\text{30-day ave} = \text{lb/dy} * \text{dy/wk} * 4.33 \text{ wk/month} * 1 \text{ month/30 days}$$

$$\text{lb/yr} = \text{lb/dy} * \text{dy/wk} * \text{wk/yr}$$

2. EMISSIONS CALCULATIONS FROM EACH NEW WASHER- Diesel

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.00345	0.0345	0.03	10.8
NO _x	0.049653	0.4965	0.43	154.9
SO _x	0.000278	0.0028	0.00	0.9
CO	0.013067	0.1307	0.11	40.8
PM=PM ₁₀	0.0052	0.0523	0.05	16.3

See attachment for detailed calculations.

Emission calculations from each new gasoline engine pump associated with the washer using fuel rate of 2.2 gal/hr and emission factors from Form B-1.

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.4532	4.5320	3.92	1414.0
NO _x	0.2244	2.2440	1.94	700.1
SO _x	0.01166	0.1166	0.10	36.4
CO	8.668	86.6800	75.06	27044.2
PM=PM ₁₀	0.0143	0.1430	0.12	44.6

EMISSIONS CALCULATIONS FROM EACH DISCONTINUED WASHER

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.00548	0.0548	0.055	19.9
NO _x	0.08296	0.8296	0.83	302
SO _x	0.0009	0.009	0.009	3.3
CO	0.0207	0.2074	0.207	75.5
PM=PM ₁₀	0.0083	0.083	0.083	30.2

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E & C DIVISION**APPLICATION PROCESSING AND CALCULATIONS**

Emission calculations from each old gasoline engine pump associated with the washer using fuel rate of 2.2 gal/hr and emission factors from Form B-1.

	lb/hr	lb/day	30-dy ave	lb/yr
RHC	0.4532	4.5320	3.92	1414.0
NO _x	0.2244	2.2440	1.94	700.1
SO _x	0.01166	0.1166	0.10	36.4
CO	8.668	86.6800	75.06	27044.2
PM=PM ₁₀	0.0143	0.1430	0.12	44.6

Total emissions increase/decrease from the project- Diesel only (Install 2 new washers and remove 2 old washers).

	New Washers lb/day	Discontinued Washers lb/day	Difference	Emission Increase/Decrease
RHC	0.06	0.1	-0.04	Decrease
NO _x	1.0	1.66	-0.66	Decrease
SO _x	0.0056	0.018	-0.012	Decrease
CO	0.26	0.41	-0.15	Decrease
PM=PM ₁₀	0.1	0.167	-0.067	Decrease

RULES EVALUATION:

Rule 212. The equipment is not located within 1,000 feet of a school, thus Public notice is not required. The total MICR for the pressure washers will be less than one-in-a million. The emissions from the equipment will not exceed the daily maximum specified in subdivision (g) of this Rule. Therefore, a Rule 212 (g) public notice is not required for this project.

Section (c)(3)(A)(i)

A/no.	Device	MICR (Resi.)
529048	D308	7.4 E-08
529050	D309	7.4 E-08

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Section (g)

Item	Net increase in emissions lb/dy	Allow limit-lb/dy	Trigger Public notice
NOx	+0	40	No
ROG	+0	30	No
CO	+0	220	No
PM10	+0	30	No
SOx	+0	60	No

Rule 401: Visible emissions are not expected with proper operation of this equipment.

Rule 402: With proper operation, this equipment is not expected to create a public nuisance.

Rule 431.2 Complies, using low sulfur diesel fuel. Effective 6/1/2004 the applicant is required to purchase ultra low sulfur diesel (15 ppm S)

Rule 1146.1 Does not apply as the units are less than 2 MM btu/hr each.

Rule 1146.2 This rule is only applicable to Natural gas fired boilers. Since these washers are diesel fueled, the rule is not applicable.

Rule 1147: Per section (g) of the rule, the provisions of this rule shall not apply to units located at a RECLAIM facility.

Reg. XIII Compliance with the following sections is anticipated.

1303 (a)-BACT- At 10 hr/dy the max emissions from the boiler will not exceed one pound per day. Therefore, BACT does not apply. A permit condition will be included to limit the operation of the washers to less than 10 hours/day.

1303 (b)(1)- Modeling, Screen Table A-1

Pollutant	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.2	0.05	Yes
CO	11.0	0.02	Yes
PM10	1.2	0.01	Yes

1303 (b)(3)-Offsets, 30 day ave.

Device	ROG	NOx	SOx	CO	PM10
	lb/dy	lb/dy	lb/dy	lb/dy	lb/dy
D308	0.0	0.43	0.16	0.11	0.05
D309	0.0	0.43	0.16	0.11	0.05

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The 30 day ave for ROG, SOx and PM10 are below 0.50 lb/dy, thus Rule 1303 does not apply. The facility is in RECLAIM and the applicant has ample RTCs to cover the NOx emissions

RULE 1401-Complies, risks less than 1 in a million using Tier 2 per permit unit (see calculation sheet for detail calculations), summary is listed below:

Item	Device	MICR	HIA	HIC
529048	D308	7.4 E-08	0.005	0.28
529050	D309	7.4 E-08	0.005	0.28
Compliance		Yes	YES	YES

Reg.2005 Compliance with the following sections is anticipated.

2005 (c)(1) (A)-BACT The max daily NOx limited to one pound per day or less, BACT does not apply

2005 (c)(1)(B)- The operation of the source will not result in a significant increase in the air quality concentration for NO2 as specified in Appendix A.

Pollutant	Emissions rate (lb/hr)		Compliance
	Allowed	calculated	
NOx	0.2	0.05	Yes

2005 (c)(2)-The facility is replacing two pressure washers with new washers that have a lower heat input rate thus resulting in lower NOx emissions.

2012 -See the table below

Equipment	Rule section large source or process unit	Section-emissions factor or concentration limit	type	value
New boilers (space heater and pressure washer)	(e)(1)(A)(iii)	(e)(2)(C)	Emissions factor	19 lb/mgal

Per section (e)(2)(A) there will be timers installed on each equipment.

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REGULATION XXX:

This facility is in the RECLAIM program. The proposed project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a “minor permit revision” for RECLAIM pollutants to the RECLAIM/Title V permit for this facility.

Non-RECLAIM Pollutants or HAPs

Rule 3000(b)(6) defines a “de minimis significant permit revision” as any Title V permit revision where the cumulative emission increases of non-RECLAIM pollutants or HAPs from these permit revisions during the term of the permit are not greater than any of the following emission threshold levels:

Air Contaminant	Daily Maximum (lbs/day)
HAP	30
VOC	30
NO _x *	40
PM ₁₀	30
SO _x *	60
CO	220

* Not applicable if this is a RECLAIM pollutant

To determine if a project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or HAPs, emission increases for non-RECLAIM pollutants or HAPs resulting from all permit revisions that are made after the issuance of the Title V renewal permit shall be accumulated and compared to the above threshold levels. This proposed project is the 6th permit revision to the Title V renewal permit issued to this facility on August 3, 2007. The following table summarizes the cumulative emission increases resulting from all permit revisions since the Title V renewal permit was issued:

Revision	HAP	VOC	NO _x *	PM10	SO _x	CO
Previous Permit Revisions	0	0	0	0	0	0
6th Permit Revision, Installation of new pressure washers & removal of old pressure washers (A/N 529048 & 529050)	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40*	30	60	220

* RECLAIM pollutant, not subject to emission accumulation requirements

Since the cumulative emission increases resulting from all permit revisions are not greater than any of the emission threshold levels, this proposed project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or HAPs.

RECLAIM Pollutants

Rule 3000(b)(12)(A)(v) defines a “minor permit revision” as any Title V permit revision that does not result in an emission increase of RECLAIM pollutants over the facility starting Allocation plus nontradeable Allocations, or higher Allocation amount which has previously undergone a significant permit revision process.

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Since NOx is a RECLAIM pollutant for this facility, a separate analysis shall be made to determine if the proposed permit revision is considered a “minor permit revision” for RECLAIM pollutants. The proposed project is expected to result in NOx emissions reduction. As a result, this proposed project is considered as a “minor permit revision” for RECLAIM pollutants.

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a “de minimis significant permit revision” for non-RECLAIM pollutants or hazardous air pollutants (HAPs), and a “minor permit revision” for RECLAIM pollutants, it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V/RECLAIM permit will be issued to this facility with permit conditions:

PERMIT CONDITIONS

B59.6 THE OPERATOR SHALL ONLY USE THE FOLLOWING MATERIAL(S) IN THIS DEVICE :

diesel fuel or bio-diesel

C1.16 THE OPERATOR SHALL LIMIT THE OPERATING TIME TO NO MORE THAN 10 HOUR(S) IN ANY ONE DAY.

To comply with this condition, the operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the pressure washer.

C1.26 THE OPERATOR SHALL LIMIT THE OPERATING TIME TO NO MORE THAN 260 HOUR(S) IN ANY ONE MONTH.

K67.23 THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

Operating time records as required per conditions C1.16 and C1.26

The records shall be kept for at least five years and made available to District personnel upon request