

EVALUATION REPORT

PRELIMINARY DECISION ON PROPOSED PERMIT MODIFICATIONS

FOR

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT
1420 DEL MONTE BOULEVARD
MARINA, CALIFORNIA

APPLICATION NUMBERS 14783 - 14786 & TV39-03

PREPARED BY

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AUTHORIZED FOR RELEASE ON:

October 22, 2010

APPROVED BY: _____



Lance Ericksen, Engineering Division Manager

DATE: _____

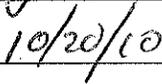


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EVALUATION DATA

Company: Monterey Regional Waste Mgmt District Appl #s: 14783 - 14786 & TV39-03
Address: P.O. Box 1670 UTM Coordinates:
Marina, CA 93933-1670 Horizontal: 609.9
Vertical: 4063.7

Contact Person: Rick Shedden SIC Code: 4911
District Engineer: Mike Sewell SCC Code: 2-01-008-02
Start: 9/15/10
Finish: 10/16/10

Site Location: 14201 Del Monte Blvd
Marina, CA 93933

I. PROJECT DESCRIPTION

The Monterey Regional Waste Management District (MRWMD) has submitted applications to amend their District permits and the Title V permit for their facility.

MRWMD has requested increased CO limits for their landfill gas fired engines. The request to increase the CO limit is due to an increase in CO emissions over time between maintenance activities.

II. APPLICABLE REQUIREMENTS

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III. PROPOSED CHANGES & DISTRICT ANALYSIS

The applicant has proposed the following changes:

1. Revise the CO emission limits on each of the four engines as follows:

Engine #1 - 487 ppm
 Engine#2 - 11.09 lbs/hr and 266.1 lbs/day
 Engine #3 - 11.09 lbs/hr and 266.1 lbs/day
 Engine #4 - 433 ppm

2. Revise the CO limit for all four engines combined as follows:

55.59 lbs/hr and 1,334.2 lbs/day

IV. EQUIPMENT LIST

No change in the listed equipment.

V. AIR QUALITY IMPACT ANALYSIS

In their application, MRWMD did not provide an Air Quality Impact Analysis. Staff preformed a screening model (Screen3) to address the CO impacts of the proposed permit revisions. The modeled project impacts were combined with background concentrations to verify that the project would not contribute to violations of the Ambient Air Quality Standards.

The information has been extracted from the application and the model, modified to the emission rates contained in this evaluation and the scaling factors to convert a maximum hourly concentration into an annual, and 8 hour concentration which are tabulated below. The first table addresses the Air Quality Increment in Area E and the second table is a comparison of the project impacts combined with background concentrations versus the ambient air quality standards.

Increment Analysis - Area E

Pollutant	Maximum Modeled Impact Area E (ug/m ³)	Designated Area E (ug/m ³)	Averaging Period	Below Allowable Increment Consumption
Carbon Monoxide (CO)	19.70	12,000	1-hour	yes

The table above indicate that the project does not exceed the CO air quality increment. Therefore, the project complies with the air quality increment provisions of Rule 207.

Cumulative Impacts Vs. Ambient Air Quality Standards

Pollutant	Avg. Period	Max. Project Impact (ug/m ³)	Bckgnd Conc. (ug/m ³)	Total Impact (ug/m ³)	State Standard (ug/m ³)	Federal Standard (ug/m ³)	Below Applicable Standard(s)
Carbon Monoxide (CO)	1-hour	19.70	4,255	4,275	23,000	40,000	yes
	8-hour	7.89	1,265	1,273	10,000	10,000	yes

This table above identifies that the project emission concentrations when combined with highest background concentrations from calendar years 2006 - 2009 do not exceed the ambient air quality standards for CO. Therefore, the project as proposed complies with the Ambient Air Quality Standard provisions of Rule 207.

Visibility Impacts

A visibility analysis of the project’s gaseous emissions is required under Rule 207. The analysis addresses the contributions of gaseous emissions (primarily NO_x) and particulate (PM₁₀) emissions to visibility impairment on the nearest Class A areas, which are the Ventana Wilderness Area and the Pinnacles National Monument to the south and southeast, respectively. Although the applicant did not submit this analysis, the District has made the determination that this project will have no visibility impacts based upon the VISCREEN modeling that was provided for the Duke Energy modernization project which had emissions increases an order of magnitude larger than this project. The results from the VISCREEN modeling analysis for the Duke project indicated that the project’s visibility impacts would be below the significance criteria for contrast and perception. Therefore, based upon the Duke project modeling, this project’s visibility impacts on these Class A areas are considered insignificant.

218 Title V

The facility presently holds a Title V permit. This permit will be revised to incorporate this new equipment prior to operation.

VI. EMISSIONS CALCULATIONS

Rule 207 Review of New or Modified Sources

Emission calculations for this engine are based upon operations 24 hours per day at maximum rating of 1,986 Bhp and Manufacturer’s emission data except for SO_x and PM₁₀ which are from source test data from a Caterpillar 3516 TA-LE engine rated at 1135 BHP that was operated at the facility. Therefore, maximum daily emissions equate to:

<u>Pollutant</u>	<u>Emission Factor (grams/BHp-Hr)</u>	<u>Emission Rate (Pounds)</u>
NO _x	0.6	63.0
VOC	0.2	21.0

CO	3.0	315.0
SO _x	0.10	10.5
PM ₁₀	0.16	16.8

Facility Wide Emissions Profile

The following table summarizes the total facility emissions after implementation of this project.

<u>Permit</u>	<u>Source</u>	<u>NOX</u>	<u>VOC</u>	<u>CO</u>	<u>TSP</u>	<u>PM₁₀</u>	<u>SOX</u>
13631	Wood Processing				32.0	16.0	
8363A	Gas Dispensing		2.6				
10800A	Eng-Gen Set #2 ¹	81.5	33.4	233.0	12.4	12.4	7.8
12056A	Eng-Gen Set #3 ¹	81.5	33.4	233.0	12.4	12.4	7.8
12815	Eng-Gen Set #1	70.8	70.8	354.1	18.9	18.9	11.8
14005	Eng-Gen Set #4	63.0	21.0	315.0	16.8	16.8	10.5
14783 -86	<u>Engine CO Increase</u>			<u>199.1</u>			
	Total Facility Emissions	296.8	161.2	1334.2	92.5	76.5	37.9

Notes: ¹ - Emissions for PM₁₀, TSP, and SO_x were calculated based upon source test data at the facility.

Net Emissions Increase

The following table summarizes the net emission increase to determine the applicability of offsets. Note that NO_x, VOC and CO for Engine-Generator Sets 1, 2 & 3 are not included in this calculation as these emissions were offset or were exempt from offsets when this equipment was permitted.

<u>Permit</u>	<u>Source</u>	<u>NOX</u>	<u>VOC</u>	<u>CO</u>	<u>TSP</u>	<u>PM₁₀</u>	<u>SOX</u>
13631	Wood Processing				32.0	16.0	
8363A	Gas Dispensing		2.6				
10800A	Eng-Gen Set #2 ¹	----	----	----	12.4	12.4	7.8
12056A	Eng-Gen Set #3 ¹	----	----	----	12.4	12.4	7.8
12057A	Eng-Gen Set #4 ^{1,2}	(81.5)	(33.4)	(233.0)	(12.4)	(12.4)	(7.8)
12815	Eng-Gen Set #1	----	----	----	18.9	18.9	11.8
14005	New Eng-Gen Set #4	63.0	21.0	315.0	16.8	16.8	10.5
14783 -86	<u>Engine CO Increase</u>			<u>199.1</u>			
	Net Emissions Increase	(18.5)	(9.8)	281.1	80.1	64.1	30.1

Notes: ¹ - Emissions for PM₁₀, TSP, and SO_x were calculated based upon source test data at the facility.

² - This engine gen-set removed and replaced with the new unit PTO 14005.

VI. CONCLUSIONS

Compliance Check

207 NSR

Best Available Control Technology (BACT)

The BACT threshold from Section 4.1.1 of the rule, the facilities' "new emissions increase" and the determination as to whether BACT is required is shown in the following table.

Federal BACT Determination

Pollutant	BACT Emission Threshold (Lbs/day)	New Emissions Increase (Lbs/day)	BACT Required?
CO	550	635.2	YES

As can be seen in the table above, this project requires BACT for CO.

For this equipment, the applicant has proposed the following as BACT for CO.

CO BACT Proposal

Pollutant	Applicant's Proposal	BACT as Identified In ARB's June 2001 "Guidance for the Permitting of Electrical Generation Technologies	Additional Discussion Required?
CO	3.6 grams/bhp-hr	2.5 grams/bhp-hr	Yes

Additional discussion -

The applicant has proposed an emission rate of 3.6 g/bhp-hr as BACT for CO. Upon start-up, the engines has no problem meeting the 3.0 g/bhp-hr emission level for CO that was originally contained on their permits. However, after an operational history was established, it was determined that this level would not be achievable throughout the life of the project with reasonable maintenance. The establishment of this higher CO value as BACT is in agreement with the BAAQMD's February 26, 2009 White Paper Revisiting BACT for Lean Burn Landfill Gas Fired Internal Combustion Engines which suggests that 3.6 g/bhp-hr is BACT for CO.

Offsets

Rule 207 provides an exemption from offsetting emission increases if the increases result from the installation of control equipment necessary for compliance with a District, State, or federal emission control requirement. Since this project involved the installation of equipment to control landfill gas emissions as required by the federal New Source Performance Standard for Municipal Solid Waste Landfills, this applications qualifies for the exemption from offsets.

Specifically, District Rule 207, Subsection 1.3.2.1 mandates the following: “The requirements of Sections 4.2 and 5.3 (*federal and State offsetting requirements*) shall not apply for any emissions increase at a source that results from the installation, operation, or other implementation of any emission control device or technique used to comply with a District, State, or federal emission control requirement, including, but not limited to, requirements for the use of reasonable control technology or best retrofit control technology, unless there is a modification that results in an increase in the capacity of the unit being controlled.”

Except for the exemption addressed above, offsets would have been required for an emissions increase of 199.1 lbs/day of CO. Although, it is likely that the facility would have been able to perform modeling that would show that CO offsets were not necessary.

VII. CONCLUSIONS

Compliance Check

200 Permits Required

MRWMD has applied for and will be issued revised Permits to Operate. Therefore, the facility is in compliance with this Rule.

203 Application

MRWMD supplied separate applications for each permit unit and utilized the District’s permit application form as required by this Rule.

205 Provision Of Sampling And Testing Facilities

The present permits do and the revised permits will include conditions establishing sampling facilities as required by this Rule.

206 Standards For Issuing Authorities to Construct and Permits to Operate

The facility is in compliance with the requirements of this Rule..

207 Review Of New Or Modified Sources

Emissions from the facility are proposed to be changed, and the BACT and offset provisions are triggered. Therefore, this project will be public noticed prior to issuance of the permit as required by the Rule.

214 Breakdown Conditions

This is the implementing regulation in which the District has established the criteria for reporting breakdowns. The requirements imposed by this rule will be included on these permits.

218 Title V: Federal Operating Permits

Relaxation of the CO limit testing requirements is considered a “significant permit

modification” and subject to the EPA and Public review prior to issuance. The proposed changes to the Title V permit will public noticed and forwarded to EPA for their review prior to permit issuance.

300 District Fees

Historically, MRWMD has complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

301 Permit Fee Schedules

Prior to District review of these applications, the appropriate fees pursuant to this Rule were received from MRWMD. Therefore, the facility is in compliance with this Rule.

302 Source Testing And Analyses: Fees And Requirements

Historically, MRWMD has complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

305 Fees For Risk Assessments, Risk Notifications, & Risk Reduction Plans & Reports

Historically, MRWMD has complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

306 Asbestos Investigation Fees

Historically, MRWMD has complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

308 Title V: Federal Operating Permit Fees

This is the District's fee rule for Title V. Appropriate conditions are included on the existing Title V permit, and will be included on the revised Title V permit to ensure compliance with the fee provisions contained in this rule.

400 Visible Emissions

The equipment is fired on landfill gas, and therefore should easily comply with the 20% opacity standard from this Rule. Appropriate conditions will be included on the permits to ensure compliance with the requirements of this Rule.

402 Nuisances

With the equipment being fired on landfill gas, nuisance type problems are not expected from this operation. However, appropriate conditions will be included on the permits to ensure compliance with the requirements of this Rule.

403 Particulate Matter

No change in emissions from the facility based upon the proposed changes. Prior evaluations have verified compliance with the requirements of this rule.

404 Sulfur Compound And Nitrogen Oxides

No change in emissions from the facility based upon the proposed changes. Prior evaluations have verified compliance with the requirements of this rule.

412 Sulfur Content Of Fuels

This rule which requires that the sulfur content of any gaseous fuel combusted contain 50 grains or less of sulfur per 100 cubic feet is applicable to this equipment. The sulfur content limits proposed in the application are 0.25 grains per 100 cubic feet of natural gas. This sulfur limit will be included on the permits.

415 Circumvention

The facility is in compliance with the provisions of this Rule.

421 Violations And Determination Of Compliance

This Rule provides standards for compliance determinations required by, or derived from federal law. The facility is in compliance with the requirements of this Rule.

423 New Source Performance Standards (NSPS)

Prior evaluations have verified compliance with the requirements of Subpart A and WWW of this rule.

424 National Emission Standards For Hazardous Air Pollutants (NESHAPS)

40 CFR Part 61, Subpart M - National Emission Standard For Asbestos
The facility on occasion is subject to the requirements of 61.145 - 61.147 (Standards for Demolition and Renovation). Historically, the facility has been in compliance with these requirements and continued compliance is expected.

426 Architectural Coatings

This rule is applicable to all applications of architectural coatings and limits the VOC content of these coatings. Historically, the facility has been in compliance with this Rule and continued compliance is expected.

1003 Air Toxics Emissions Inventory And Risk Assessments

Historically, MRWMD has complied with the requirements of this Rule. The District fully expects continued compliance with the provisions of this Rule.

Conclusions

These proposed permit revisions will not impact the ability of the MRWMD to comply with all applicable rules of the District.

VIII. RECOMMENDATION

Issue a public notice on the preliminary permit decision and release the proposed permits for the required 30 day public comment period. Forward the proposed Title V permit to EPA for their 45-day review. Review and respond to comments prior to issuance of the permits as final documents.

IX. PROPOSED PERMITS

The proposed permits are attached.