

FACILITY PERMIT TO OPERATE TOYON LANDFILL GAS CONVERSION LLC

SECTION I: PLANS AND SCHEDULES

This section lists all plans approved by AQMD for the purposes of meeting the requirements of applicable AQMD rules specified below. The operator shall comply with all conditions specified in the approval of these plans.

Documents pertaining to the plan applications listed below are available for public review at AQMD Headquarters. Any changes to plan applications will require permit modification in accordance with Title V permit revision procedures.

List of approved plans:

Application	Rule
443106	431.1
486798	1110.2
526446	3003

NOTE: This section does not list compliance schedules pursuant to the requirements of Regulation XXX - Title V Permits; Rule 3004(a)(10)(C). For equipment subject to a variance, order for abatement, or alternative operating condition granted pursuant to Rule 518.2, equipment specific conditions are added to the equipment in Section D or H of the permit.



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Facility ID: 142417

Date: Draft

COMPANY NAME: TOYON LANDFILL GAS CONVERSION, LLC

APPLICATION NUMBER: 486798

RULE 1110.2 (f) (1) (D) INSPECTION AND MONITORING (I & M) PLAN FOR THE FACILITY LOCATED AT 5050 MOUNT HOLLYWOOD DRIVE, LOS ANGELES, CA 90602.

Please refer to the application you submitted for the evaluation of your Inspection and Monitoring (I & M) plan under District Rule 1110.2 (f) (1) (D), for the facility described above.

The Rule 1110.2 Inspection & Monitoring plan you submitted has been **CONDITIONALLY APPROVED**. This plan is subject to the following condition:

The operator shall not perform an engine or control system maintenance or tuning within 72 hours prior to performing a portable analyzer test, unless the maintenance or tuning is a result of an unscheduled, required repair.

A copy of your approved plan, together with any addendum, statements or declarations you provided during the evaluation of your plan, is attached. In accordance with Rule 1110.2 (f)(1)(D)(ix), any change in equipment, control equipment, operating conditions or emission limits will require that you submit an application to the District for the revision of your I & M plan.

If you have any questions about this approval, please call Mr. Ray Ronquillo at (909) 396-3049.

Very truly yours,

Charles Tupac, P.E.
Air Quality and Compliance Supervisor
Energy, Public Services, Waste
Management and Terminals Permitting Unit

cc: Enforcement (Approval Letter only)
Enclosure(s)

**TOYON LANDFILL GAS CONVERSION, LLC
TOYON POWER PLANT**

Rule 1110.2 Inspection and Monitoring Plan

1.0 Introduction:

The South Coast Air Quality Management District (SCAQMD) modified Rule 1110.2 in February 2008. This rule applies to Internal Combustion Engines (ICEs) that are rated higher than 500 HP. Several new requirements were promulgated including the requirement for an Inspection and Monitoring (I&M) Plan for ICEs that met certain criteria. ICEs that do not have a continuous emission monitoring system (CEMS) for NO_x and CO are required to implement a SCAQMD approved I&M Plan to assure continued compliance of the engines between the required annual source tests.

The ICEs at Toyon Power Plant are equipped with a NO_x CEMS but do not have a CEMS for CO. Therefore, an I&M Plan focused on CO is required for the site.

Rule 1110.2 requires that an I&M Plan, if required, be submitted to the SCAQMD by August 1, 2008. The approved plan will be effective December 1, 2008. The purpose of this submittal is to submit the I&M Plan required for Toyon Power Plant.

2.0 Facility Description:

Toyon Landfill Gas Conversion LLC's Toyon Power Plant is located at 5050 Mount Hollywood Drive, Los Angeles, California, and is identified by the SCAQMD as Facility ID 142417. There are two landfill gas fired ICEs at this facility. The facility holds a Title V permit issued by SCAQMD. A Title V renewal application has been submitted. The application is pending. The facility is current with its reporting requirements as required by the Title V permit.

3.0 Inspection and Monitoring Plan:

3.1 Engine Parameters affecting CO emissions:

Rule 1110.2 requires identification of engine operating parameters necessary to keep pollutant concentrations within rule limits. CO emissions from ICEs at Toyon Power Plant can be gauged by monitoring engine exhaust O₂ percentage and average cylinder temperature. Both of these parameters are recorded continuously for the engines.

An operating range will be established for engine exhaust O₂ and average cylinder temperature will be established, within which compliance with the CO emission limit has been demonstrated.

3.2 Quarterly Emission Checks:

The Rule requires all lean burn engines equipped with a NO_x CEMS subject to a CO limit more stringent than 2,000 ppmvd perform a quarterly, or every 2,000 hour, CO emissions check. The portable analyzer shall be calibrated, maintained and operated in accordance with manufacturer's specifications and recommendations. The SCAQMD is in the process of preparing a Protocol for Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from the Stationary Engines for ICEs subject to the Rule 1110.2. This Protocol, when available, shall be followed for quarterly emission checks.

At Toyon, an ECOM A+ portable emission analyzer will be used for quarterly emissions monitoring. The specification for this analyzer is presented as Attachment A to this I&M Plan. Further, an experienced, SCAQMD trained operator will perform the emission check each quarter. SCAQMD is in the process of developing a training course for operators for this purpose. Once available, operators in charge of quarterly testing will ensure they get certified by SCAQMD staff for this process.

3.3 Daily Monitoring

Using the existing monitoring systems at the facility, operators will record the following parameters on a daily basis:

1. Engine load;
2. Fuel flow rate;
3. Engine exhaust O₂ and average cylinder temperature;
4. Engine elapsed time meter operating hours; and
5. Operating hours since last CO emission check.

3.4 Procedures for Breakdown/Malfunction Events:

The procedures mentioned in Rule 1110.2 and clarified in the compliance guide will be followed during breakdown and malfunctions. Specifically;

1. For breakdowns resulting in exceedance of permitted CO emission limits or rule violations or for excess CO emissions recorded during routine quarterly emission checks, the operator will attempt to expeditiously resolve the problem with 24 hours, and conduct an emissions check to confirm compliance. If trouble shooting is not successful within 24 hours, the ICE will be shutdown awaiting diagnostics and repair.
2. For malfunctions that do not result in excess CO emissions, the operator will attempt to correct the problem and conduct an emissions check within 48 hours of initial knowledge of the problem using the calibrated portable analyzer mentioned in 3.2 above.

Operators will follow manufacturer recommended procedures during trouble shooting and maintenance of the ICEs.

3.5 Preventative Maintenance

Operators at Toyon Power Plant conduct routine maintenance of the ICEs according to manufacturer's recommendations. In addition to the annual major maintenance of the ICEs, daily, weekly and quarterly maintenance is conducted. The ICEs are maintained constantly to ensure that they function as designed and in compliance with the emission limits dictated by SCAQMD rules and permit limits.

3.6 Reporting Requirements

Rule 1110.2 requires notification of excess emissions within 1 hour of occurrence during normal business hours or within 1 hour of reasonably knowing of the excess emission. The operator will call in the notification of excess CO emissions, if any, to the 1-800-CUT-SMOG line. If the notification window or the notification procedure is modified by SCAQMD in final implementation of Rule 1110.2, the modified procedure will be used. The rule further requires a follow-up report within 7 days of determining the exceedance. This report must detail the reason for the exceedance and the corrective actions implemented to return the ICE to compliance with permit conditions or rule requirements. Toyon Landfill Gas Conversion, LLC will use the form title "Rule 1110.2 Excess Emission Reporting" provided as Attachment B for this purpose.

This rule also requires the submittal of Quarterly Compliance Reports in a format approved by SCAQMD. Such reports are required to be submitted within 15 days of the end of the calendar quarter. Attachment C presents the form developed by SCAQMD for Quarterly Reporting -- Rule 1110.2 -- Quarterly Report for Stationary Engines.

ATTACHMENT A

ECOM-A ANALYZER BROCHURE

ecom



ECOM A-PLUS

Portable Emission Analyzer

- Measures O₂, CO, NO_x, "Low NO_x", SO₂, & Combustibles
- CO₂ Efficiency & Excess Air Calculations
- Stack Temperature and Draft Measurement
- Large backlit LCD display
- On - board impact printer
- Thermoelectric Gas cooler & automatic moisture drain
- In-line flowmeter with 2.5+ lpm pump
- Automatic purge / Sensor overrange protection
- Advanced DAS 2.0 software compatible

Both the EPA / ETV (Environmental Technology Verification) program and the South Coast Air Quality Management District, (SCAQMD) have documented the exceptional performance of the A-PLUS. The unit also meets the criteria of the EPA CTM protocols for portable EC based analyzers and EPA's 40CFR Part 60 Update of Continuous Instrumental Test Methods, Final Rule.

The ECOM A-PLUS portable emission analyzer offers affordable "compliance level" performance in a rugged, easy to use package. The A-PLUS features an advanced Sample Conditioning system, incorporating an optional heated sample line, thermoelectric Peltier Gas Cooler, and peristaltic pump for continuous moisture removal.

The A-PLUS can be fitted with sensors to measure O₂, CO, NO, NO₂, SO₂, and Combustibles, along with gas and ambient temperatures, stack draft & pressure, plus calculations of CO₂, efficiency, dew point and excess air. A special Low NO_x version of the A-PLUS is designed for single digit NO_x measurements with resolution to 0.1 PPM! In addition, the A-PLUS can be fitted with USB for use with ECOM's Advanced DAS Compliance Testing Software for complete emissions analysis.

Housed in a high quality, aluminum reinforced case, the A-PLUS comes complete with a standard sample line and probe, internal battery, AC power cord, thermocouple, spare filters, extra printer paper, quick reference User Card, and Operation Manual.



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MEASUREMENT (KEY)	RANGE	ACCURACY	RESOLUTION	SENSOR LIFE	SENSOR TYPE
Oxygen (O)	0-21% vol.	± 2% Measured	0.1% vol.	2 Years	Electrochemical
Carbon Monoxide (C)	0-4,000 ppm	± 2% Measured	1 ppm	3 Years	Electrochemical
Carbon Monoxide (V)	0-40,000 ppm	± 2% Measured	1 ppm	3 Years	Electrochemical
Nitric Oxide (N)	0-4,000 ppm	± 2% Measured	1 ppm	3 Years	Electrochemical
Nitric Oxide (.N)	0-400 ppm	± 2% Measured	0.1 ppm	3 Years	Electrochemical
Nitrogen Dioxide (X)	0-500 ppm	± 2% Measured	1 ppm	3 Years	Electrochemical
Nitrogen Dioxide (.X)	0-50 ppm	± 2% Measured	0.1 ppm	3 Years	Electrochemical
Sulfur Dioxide (S)	0-5,000 ppm	± 2% Measured	1 ppm	3 Years	Electrochemical
Combustibles (H)	0-6.00 % vol.	± 2% Measured	0.01% vol.	5 Years	Pellister
Gas Temperature	32-1800 F	± 2% Measured	1 deg F	10 Years	NiCrNi
Ambient Temperature	0-250 F	± 2% Measured	1 deg F	10 Years	Semi-conductor
Draft / Pressure	± 40" H ₂ O	± 2% Measured	0.1% H ₂ O	10 Years	DMS
O ₂ Correction	0-20% Oxygen				
Smoke Scale	0-9				
Carbon Dioxide CO ₂	0-CO ₂ max of fuel	Calculated			
Efficiency	0-99.9%	Calculated			
Excess Air (Lambda)	1-infinity	Calculated			

*ACCURACY: When calibrated prior to use per ECOM America, Ltd. specifications.

Physical

Instrument: 16" x 10" x 12" Aluminum Carry Case
 Probe: 13" Length x 3/8" OD Inconel w/ Pistol Grip Handle*
 Sample Line: 15' high-temp flex hose w/thermocouple wire*
 Weight: 28 lbs.

Electrical

AC: 110/220V 50/60Hz (User selectable)
 Batteries: 12V lead-acid, 2-3 hour life
 Pump: Flow rate of 2.5 lpm
 Display: Backlit, adjustable contrast & zoom, displays all parameters simultaneously.

Operating Temperature

Core temperature of the instrument is monitored continuously. Internal Temperature Compensation software assures accurate sensor response over the range of 20°F to 104°F.

*Optional probe & sample line lengths are available.

Customer Service / Technical Support

ECOM America Ltd. has built an outstanding reputation in the industries we serve by providing a high quality product and responsive technical support to our customers. We maintain a large inventory of analyzers and parts to assure fast delivery of new items and quick turnaround on service. Always Expect Responsive Customer Support & Service from ECOM!

Order Information

ECOM A-PLUS

A-PLUS is available with 2-5 sensors. Common configurations include:

2-3 Gas	4 Gas	5 Gas
OC	OCNX	OCVNX
OCN	OCNXH	OCVNXH
		OCN.XH
		OC.N.XS
		OCN.XS
		OCN.XH

Consumables:

Water Trap, Particulate Filters, NO_x/SO_x Filter, Media, Printer Paper / Printer Ribbon

Parts & Accessories:

Transport / Shipping Cases, Refillable Calibration Gas Bottles, Heated Sample Line, Data Acquisition Software



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ATTACHMENT B



Rule 1110.2 – Excess Emission Reporting



Rule 1110.2 – Excess CO Emissions Reporting

TOYON LANDFILL GAS CONVERSION, LLC

This form is used to document excess CO emissions that occur during operation. Upon confirmation of the excess CO emission, call 1-800-CUT-SMOG within 1 hour. Follow-up with this report to the SCAQMD within 7 days of excess emission detection.

1. ICE affected (check all that apply) 2 3

2. Date Excess CO emission occurred: *Date:* *Time:*

3. End of Event: *Date:* *Time:*

4. Duration of Event (hours):

5. SCAQMD notification: *Date* *Time* *Notification No.*

6. Description of Exceedence of CO emissions:

7. Cause/Reason for Exceedence of CO emissions:

8. Name and Title (please print):

9. Signature:

10. Date:

10. Describe actual steps taken to resolve exceedence issue:

01/11/2017

ATTACHMENT C

Rule 1110.2 – Quarterly Report for Stationary Engines



South Coast Air Quality Management District
Rule 1110.2 - Quarterly Report for Stationary Engines

Due 15 days after the end of each calendar quarter (January 15, April 15, July 15, October 15)

Fax to 909-396-3343, or Mail to SCAQMD, Attention: Enforcement, P.O. Box 4941, Diamond Bar, CA 91765-0941

Quarter Ended (mm/dd/yyyy) _____ Report Date _____ Page Number ___ of ___

If there were no reportable incidents, enter "None" in box to right, complete Sections I and IV and submit form.

Section I - Facility Information

Permit Issued to (business name of operator that appears on permit): _____ Valid AQMD Facility ID (available on permit or invoice issued by AQMD): _____

Facility Address: _____
 City: _____ State: CA Zip Code: _____

Mailing Address (if different): _____
 City: _____ State: _____ Zip Code: _____

Name, title and phone number of the person to contact for further information:
 Name _____ Title _____ Phone _____

Section II - Previously Reported Engine Breakdowns and Title V Deviations During the Quarter (Attach additional pages if needed)

Engine Application No.	Type of Incident*	Date of Incident	Date of Written Report

*Enter one of the following: "Breakdown", "Title V Deviation", or "Title V Emergency".

Section III - Other Reportable Incidents During the Quarter (Summarize here; attach additional pages if needed; and complete Section V.)

Engine Application No.	Type of Incident**	Date Operator Learned of Incident

**Enter one of the following: "Air-to-Fuel Ratio Controller Fault or Alarm", "Parameter Out of Range", "Excess Emission Check" or "Other".

Section IV - Certification Statement

I certify under penalty of law that based on information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate and complete.

For Title V Facilities Only: I also certify under penalty of law that I am the responsible official for this facility as defined in AQMD Regulation XXX.

Signature _____ Title _____ Date _____

Type or Print Name _____ Phone _____ Fax _____

Address _____ City _____ State _____ Zip Code _____

Rule 1110.2 Quarterly Report for Stationary Engines

Facility ID: _____ Quarter Ended (mm/dd/yyyy): _____ Page Number ___ of ___

Section V. Information Regarding Incidents Reported in Section III.

Engine Application No.	Engine Description
Type of Incident* _____	
Incident Description _____	
Cause (to extent known) _____	
Corrective Action Taken _____	

Dates and Times of Events

Incident Began (to extent known) _____	Operator Discovered _____		
Corrective Action Started _____	Compliance Achieved _____		
Engine Shutdown _____	Engine Restarted _____		
	O2, % (dry)	NOx, ppmvd @ 15% O2	CO, ppmvd @ 15% O2
Portable Analyzer Data before Corrective Action (if any)	_____	_____	_____
Portable Analyzer Data after Corrective Action	_____	_____	_____

Engine Application No.	Engine Description
Type of Incident* _____	
Incident Description _____	
Cause (to extent known) _____	
Corrective Action Taken _____	

Dates and Times of Events

Incident Began (to extent known) _____	Operator Discovered _____		
Corrective Action Started _____	Compliance Achieved _____		
Engine Shutdown _____	Engine Restarted _____		
	O2, % (dry)	NOx, ppmvd @ 15% O2	CO, ppmvd @ 15% O2
Portable Analyzer Data before Corrective Action (if any)	_____	_____	_____
Portable Analyzer Data after Corrective Action	_____	_____	_____

**Enter one of the following: "Air-to-Fuel Ratio Controller Fault or Alarm", "Parameter Out of Range", "Excess Emission Check" or "Other".

(Attach additional pages if needed.)