

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING & COMPLIANCE OFFICE APPLICATION PROCESSING AND CALCULATIONS	PAGES 7	PAGE 1
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PERMIT TO OPERATE EVALUATION

APPLICANT NAME: Los Angeles Times Communications LLC

MAILING ADDRESS: 202 West 1st Street 1st Floor,
Los Angeles, CA 90012

EQUIPMENT ADDRESS: 2000 East 8th Street
Los Angeles

ID: 124904

EQUIPMENT DESCRIPTION:

APPLICATION NO. 471431

Title V Minor Permit Revision Plan – First Revision

APPLICATION NO. 471432: (PO-Modification to Permit F40301, A/N 386009)

INTERNAL COMBUSTION ENGINE NO. 1, CATERPILLAR, MODEL NO. 3516,
DIESEL-FUELED, TURBOCHARGED, AFTERCOOLED, 16 CYLINDERS, 2151 BHP.
(MODIFICATION TO DISCONNECT SCR)

APPLICATION NO. 471433: (PO-Modification to Permit F40300, A/N 386008)

INTERNAL COMBUSTION ENGINE NO. 2, CATERPILLAR, MODEL NO. 3516,
DIESEL-FUELED, TURBOCHARGED, AFTERCOOLED, 16 CYLINDERS, 2151 BHP.
(MODIFICATION TO DISCONNECT SCR)

APPLICATION NO. 471434: (PO-Modification to Permit F40299, A/N 386007)

INTERNAL COMBUSTION ENGINE NO. 3, CATERPILLAR, MODEL NO. 3516,
DIESEL-FUELED, TURBOCHARGED, AFTERCOOLED, 16 CYLINDERS, 2151 BHP.
(MODIFICATION TO DISCONNECT SCR)

BACKGROUND:

Los Angeles Times submitted three permit applications on 06/29/2007 for Permits to Operate to modify the above-described equipment located in the City of Los Angeles. The company also submitted one Title V plan A/N 471431 for permit revision (first revision

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since the renewal). Under this proposal the applicant is requesting to eliminate the use of selective catalytic reduction (SCR) that is presently serving these internal combustion engines. The SCR units are permitted under A/N 374566 (F35234) and A/N 374567 (F35257). These SCRs are inefficient in controlling NOx emissions from the emergency ICEs which are typically operated in the test mode mostly and for a short period of time during each test run. It is extremely costly for L.A. Times to continue to maintain these inefficient SCRs.

This is an existing facility in Los Angeles. This facility has permits to operate for 6 lithographic printing presses, 5 ICE's, 2 boilers, 2 SCR systems, 1 storage tank and 1 ink dewatering system. This is a Title V facility and currently operates under a Title V renewal facility permit that was issued on May 6, 2006. This is the first permit revision since the renewal of Title V permit. The operating schedule for this facility is 6.5 hrs/day, 7 days/wk, 52 wks/yr. The facility may operate a maximum of 14 hours per day.

Review of the files for this facility reveals that there are no records of nuisance. In addition, there are no complaints on file for this facility and this facility has not received any citations during the last five years. The latest inspection of the facility by the inspector on 6/26/2007 showed that the facility is operating all their equipment in compliance with all District Rules and permit conditions.

PROCESS DESCRIPTION:

The company is in a business of printing newspapers. It operates six lithographic printing systems to produce the L. A. Times daily newspaper. The SCRs were installed to control NOx emissions from the emergency ICEs. These SCRs are not effective on controlling NOx emissions due to the short run duration of the emergency ICEs. Under this project, the company is planning to remove two SCRs that are presently serving three above described ICEs.

DISCUSSION

L A Times is currently operating three diesel-fueled emergency ICE generators (Caterpillar, Model 3516, 2151 bhp, turbocharged & aftercooled) at their Los Angeles facility. When these ICEs were originally installed in 1990, LA Times believed that it would participate in the Los Angeles Department of Water and Power (DWP) Demand Reduction Program. As a result, these ICEs were vented to two selective catalytic reduction (SCR) systems to control NO_x emissions since these ICEs were expected to be frequently operated. Ultimately, LA Times did not operate the ICEs under DWP's demand reduction program. In addition, the emergency ICE generators are operated only during the power curtailments and test runs. These ICEs are typically operated for a short period of time (less than one hour each time) during the test run without carrying any electrical load. Occasionally these ICE are operated for a longer period (over one hour each time) so that the facility operator

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can test this equipment with electrical load. The operating history of these ICEs for past 3 years is summarized as follows (as of May 1, 2007):

Year	Operation	Days	ICE No. 1 hours ^(a)	ICE No. 2 hours ^(a)	ICE No. 3 hours ^(a)	Total hours
2005	Emergency	9	41.3 (9)	72.5 (9)	72.4 (9)	186.2
	M & T ^b	8	4.1	4.7	4.2	13
2006	Emergency	0	0	0	0	0
	M & T ^b	5	5.9 (1)	7 (1)	6.1	19
2007	Emergency	1	4.7 (1)	11 (1)	10.8 (1)	26.5
	M & T ^b	1	1.1	1.1	1.2	3.4
Total:		24	57.1	96.3	94.7	248.1

- a. Number of days that the testing lasted for more than two hours
- b. Maintenance & Testing

Due to the short durations of test runs, SCRs are not effective in controlling NOx emissions from these ICEs since it is difficult for the ICE exhausts to reach the optimum operating temperature for the SCRs. The optimum operating temperatures for SCRs are between 525 °F and 800 °F. Based on a temperature profile test at L A Times Los Angeles facility, the maximum exhaust temperature for emergency ICEs when testing without load for one hour was 218 °F. When the ICE was subsequently tested with a light load, the exhaust temperature did not reach the minimum temperature of 525 °F until one hour later. As a result, it takes a minimum of two hours to reach the minimum temperature when the ICE runs through a full testing cycle (without load first and subsequently with load).

L A Times has recently re-evaluated their testing routine and determined that testing with load is no longer necessary. Testing without load typically lasts for a short period of time (less than one hour). Even if testing with load is occasionally needed, each testing is expected to be less than 2 hours. As a result, the existing SCR will not be effective in controlling NOx emissions from the ICEs since the ICE exhaust will not reach the optimum operating temperatures for SCRs with their current testing routine. If L A Times continues to be required to operate the ineffective SCR, the facility will be faced with the heavy cost burden of equipment maintenance as well as the challenge of storing significant volumes of aqueous ammonia. In light of the demonstrated use of these ICEs solely as emergency units, L A times has requested that AQMD consider allowing the SCRs to be removed without triggering BACT.

A review of the current BACT requirements for emergency ICE generators installed in 1990 reveals that such equipment would be considered to be in compliance with BACT requirements if it is turbocharged and the timing for the ICE is retarded 4° relative to standard timing, if technologically feasible. The emergency ICEs at this LA Times facility

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comply with these requirements. Part B and Part D of the BACT Guideline did not list any SCR as BACT for NOx emissions from an emergency ICE. A search of the District database shows that LA Times has two similar-size emergency ICEs vented to a SCR system at their Costa Mesa facility (ID 124906). However, L A Times has encountered similar problems and will be submitting applications to request the removal of SCR. Staff also discussed with Mike Mills of the Neighborhood Commercial Team and Marty Kay of the BACT Team, but did not find any other installation of emergency ICE with SCR.

Based on the above analyses, L A Times' request to eliminate the use of SCRs for their emergency ICEs appears to be reasonable since the SCRs are not effective in controlling NOx emissions from the emergency ICEs due to the limited use and short operating duration of the equipment. Current BACT requirements do not include SCRs as the NOx control for emergency ICEs. As a result, the emergency ICEs at L A Times facility should be allowed to be operated without SCRs, and this modification will be considered as resulting in no emission increase.

EMISSION CALCULATIONS:

The proposed modifications are not expected to result in any increase in emissions from the ICEs or from the facility. The existing SCR is not effective in controlling NOx emissions from the ICEs since the ICE exhaust will not reach the optimum operating temperatures for SCRs with their current testing routine. As a result, the emissions before this modification are considered as the uncontrolled emissions, and there will be no emission increases as a result of this modification. The uncontrolled (pre-SCR) emissions are summarized below.

POLLUTANTS	GM/BHP-HR ¹	Ave/Max lb/hr	Ave lb/yr ²	Max lb/yr ³	30-day ave lb/day ⁴
ROG/TOG	1	4.7	235	940	3
NOx	4.07	19.3	965	3860	11
CO	1.05	5	250	1000	3
SOx	0.184*	0.9	45	180	1
PM/PM10	0.14	0.66	33	132	0

¹- District default factors from Annual Emission Inventories Guidelines for uncontrolled engines

²- average annual based on 50 hr/year testing

³- maximum annual based on 200 hr/year max allowed by permit condition

⁴- 30-day average based on maximum annual ÷ 12 mo/yr ÷ 30 days/mo

RULE EVALUATION:

Rule 212(c)(1): This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from

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the outer boundary of a school. Since there are no schools within 1,000 feet of the facility, a public notice will not be required per this section.

Rule 212(c)(2) & (g): These sections require a public notice for all new or modified facilities which have on-site emission increases for the equipment or the facility exceeding any of the daily maximums as specified in subdivision (g). since no emission increase from the equipment or facility is expected, public notice will not be required by this section.

LB/DAY	CO	NOX	PM₁₀	ROG	Lead	SOX
MAX. LIMIT	220	40	30	30	3	60
INCREASES	0	0	0	0	0	0

Rule 212(c)(3): There will not be an increase in TACs resulting from this modification. Therefore, a public notice will not be required per this section.

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

Rule 402: Nuisance is not expected with the proper operation of the equipment. Company file does not show any nuisance complaints.

Rule 404: The total PM concentration discharged from the ICEs will not exceed the allowable limit found in this rule. The total PM concentration discharged from each ICE is 0.015 gr/ft³. The allowable limit of the rule is 0.027 gr/ft³

$$\text{PM concentration} = (0.66 \text{ lb/hr})(7000 \text{ gr/lb})(\text{hr}/ 60 \text{ min})(\text{min}/4937 \text{ ft}^3) = 0.015 \text{ gr/ft}^3$$

Rule 431.2: L. A. Times shall use a diesel fuel is which the sulfur content will not exceed 15 ppm by weight (0.0015% by weight).

Rule 1110.2: Per Rule 1110.2 (h)(2), this engine is exempt from the requirements of this rule.

Rule 1303(a): BACT
This engine is expected to comply with BACT requirements as indicated in discussion section of this report.

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- Rule 1303(b)(1): MODELING
There are no criteria pollutant increases from this modification, therefore, modeling is not requirements:
- Rule 1303(b)(2): OFFSETS
The proposed modifications will not increase the facility-wide criteria emissions. Therefore, this project is not subject to the offset requirement.
- Rule 1401: The proposed modifications will not result in any increase in toxic air contaminants, therefore, compliance with the requirements in this rule is expected.
- RULE 1470: REQUIREMENTS FOR STATIONARY DIESEL-FUELED INTERNAL COMBUSTION AND OTHER COMPRESSION IGNITION ENGINES
This engine is not located within 500 feet of any school. Since the PM10 emissions are less than or equal to 0.15 gr/bhp-hr, the operating time for maintenance and testing is limited to 50 hrs/year, compliance with this rule is expected.

REGULATION XXX:

This facility is not in the RECLAIM program. The proposed project is considered as a “minor permit revision” to the Title V permit for this facility.

Rule 3000(b)(12)(vi) defines a “minor permit revision” as any Title V permit revision that does not result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP).

The proposed project is not expected to result in an increase in emissions of a pollutant subject to Regulation XIII – New Source Review (non-RECLAIM pollutants) or a hazardous air pollutant (HAP), and therefore is considered as a “minor permit revision” pursuant to Rule 3000(b)(12)(A)(vi).

This proposed project is the 1st permit revision to the Title V renewal permit issued to this facility on May 6, 2006. The following table summarizes the permit revisions since the Title V renewal permit was issued:

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Revision	HAP	VOC	NOx	PM₁₀	SOx	CO
1 st Permit Revision; modification to three ICEs by no longer venting to SCR and removing the two SCRs (A/Ns 374566 & 474567) from the FP. A/Ns 471432, 33 & 34	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0
Maximum Daily	30	30	40	30	60	220

RECOMMENDATION

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a “minor permit revision”, 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 permit will be issued to this facility.