

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER DE-06-003

Pursuant to the authority vested in the California Air Resources Board (ARB) by Health and Safety Code, Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Section 39515 and 39616 and Executive Order G-02-003;

This action relates to Verification under sections 2700 through 2710 of Title 13 of the California Code of Regulations

Süd-Chemie Inc.
EnviCat-DPF™ Particulate Trap

ARB has reviewed the request by Süd-Chemie Inc. for verification of the EnviCat-DPF™ diesel particulate filter (DPF). Based on an evaluation of the data provided, and pursuant to the terms and conditions specified below, the Executive Officer of the ARB hereby finds that the EnviCat-DPF™ reduces emissions of diesel particulate matter (PM) consistent with a Level 3 device (greater than or equal to 85 percent reductions) (California Code of Regulations (CCR), Title 13, sections 2702 (f) and (g) and section 2708). Accordingly, the Executive Officer determines that the system merits verification and, subject to the terms and conditions specified below, classifies the EnviCat-DPF™ as a Level 3 system, for use with stationary prime and emergency standby generators and prime and emergency standby pumps using engine families listed in Attachment 1.

This verification is subject to the following terms and conditions:

- The engine must be used in a stationary application associated with prime or emergency standby generators or pumps.
- The engines are model years 1996 through 2006 having the engine family names listed in Attachment 1.
- The engine must be a certified off-road engine with particulate matter (PM) emission levels less than or equal to 0.2 g/bhp-hr (as tested on an appropriate steady-state certification cycle outlined in the ARB off-road regulations – similar to ISO 8178 D2).
- The engine must be in its original certified configuration.
- The engine must not employ exhaust gas recirculation.
- The engine must not have a pre-existing oxidation catalyst.
- The engine must not have a pre-existing diesel particulate filter.
- The engine must be four-stroke.
- The engine can be turbocharged or naturally-aspirated.
- The engine must be certified in California.
- Sud-Chemie Inc. must review actual operating conditions (duty cycle, baseline emissions, exhaust temperature profiles, and engine backpressure) prior to retrofitting an engine with the EnviCat-DPF™ to ensure compatibility.

- The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
- The other terms and conditions specified below.

Table 1: Conditions for the EnviCat-DPF™

Parameter	Value
Application	Stationary Prime and Emergency Standby Power Generation and Stationary Prime and Emergency Standby Pumping
Engine Type	Diesel, with or without turbocharger, without Exhaust-Gas Recirculation (EGR), mechanically or electronically controlled, certified off-road engine with particulate matter (PM) emission levels less than or equal to 0.2 g/bhp-hr.
Minimum Exhaust Temperature for Filter Regeneration	The engine must operate at the load level required to achieve 400 degrees Celsius (°C) for a minimum of 30 minutes. Operation at lower temperatures is allowed, but only for a limited duration.
Maximum Consecutive Minutes Operating Below Passive Regeneration Temperature	300 Minutes
Number of Cold Start and 30 Minute Idle Sessions before Regeneration Required	10
Number of Hours of Operation Before Cleaning of Filter Required	1,500 when using diesel with up to 500 ppm sulfur, 2,000 when using Low Sulfur Diesel (<15 ppm Sulfur).
Fuel	California diesel fuel with less than or equal to 500 ppm* sulfur or a biodiesel blend provided that the biodiesel portion of the blend complies with ASTM D6751 (15 ppm sulfur), the diesel portion of the blend complies with Title 13 (CCR), sections 2281 and 2282 and the blend contains no more than 20 percent biodiesel by volume.
PM Verification Level	Level 3 Verification: At least 85% reduction of PM.

* The 500 ppm diesel fuel sulfur limit required by this Executive Order shall be superseded by a 15 ppm diesel fuel sulfur limit as of September 1, 2006, as required by Title 13 CCR, section 2281.

The EnviCat-DPF™ consists of a catalyzed passive diesel particulate filter and a Dwyer 3000, Series AN 14, backpressure monitor.

This Executive Order is valid provided that installation instructions for the EnviCat-DPF™ do not recommend tuning the engine to specifications different from those of the engine manufacturer.

Changes made to the design or operating conditions of the EnviCat-DPF™, as exempted by ARB, which adversely affect the performance of the engine's

pollution control system, shall invalidate this Executive Order. As such, no changes are permitted to the device.

If Süd-Chemie Inc. plans to make changes to the design of the EnviCat-DPF™ diesel particulate filter (DPF), the ARB must be notified in writing of any changes to any part of the EnviCat-DPF™. Any changes to the device must be evaluated and approved by ARB. Failure to do so shall invalidate this Executive Order.

Marketing of the EnviCat-DPF™ using identification other than that shown in this Executive Order or for an application other than that listed in this Executive Order shall be prohibited unless prior approval is obtained from ARB.

As specified in the Diesel Emission Control Strategy Verification Procedure (Title 13 CCR Section 2706 (g)), the ARB assigns each Diesel Emission Control Strategy a family name. The designated family name for the verification as outlined above is:

CA/SUD/2006/PM3/NOO/ST/DPF01

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, Süd-Chemie Inc. is responsible for honoring their warranty (California Code of Regulations (CCR), Title 13, section 2707) and conducting in-use compliance testing (section 2709).

In addition, ARB reserves the right in the future to review this Executive Order and verification provided herein to assure that the verified add-on or modified part continues to meet the standards and procedures of CCR, Title 13, section 2222, et seq and CCR, Title 13, sections 2700 through 2710.

Systems verified under this Executive Order shall conform to all applicable California emissions regulations. This Executive Order does not release Süd-Chemie Inc. from complying with all other applicable regulations.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order.

Executed at Sacramento, California, this 17th day of August 2006.

Catherine Witherspoon
Executive Officer
by

/s/

Robert Fletcher, Chief
Stationary Source Division

Attachment