



Winston H. Hickox  
Agency Secretary

# Air Resources Board

Alan C. Lloyd, Ph.D.  
Chairman

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Gray Davis  
Governor

August 2, 2001

Mr. Kevin Hallstrom  
Engelhard Corporation  
101 Wood Avenue  
Iselin, NJ 08830-0770

Dear Mr. Kevin Hallstrom:

The Air Resources Board (ARB) has reviewed your request for verification of your DPX catalyzed diesel particulate filter. Based on its evaluation of the data provided, ARB hereby verifies that the Engelhard DPX, with both the MEX and NEX catalyst formulations, reduces emissions of diesel particulate matter (PM) by 85 percent or greater for engines from the engine families in Table 1 in the applications listed in Table 2, for an emissions durability of 150,000 miles. The DPX is therefore approved as a Level 3 retrofit device for those engines and applications.

**Table 1. Engine Families Verified for Use with the ECS**

Engine Series	Engine Families
1995 Cummins M11 10.8 L	SCE661EJDATW, SCE661EJDASW
1996 Cummins M11 10.8 L	TCE661EJDATW, TCE661EJDARB
1997 Cummins M11 10.8 L	VCE661EJDATW, VCE661EJDARB
1998 Cummins ISM 10.8 L	WCEXH0661MAE, WCEXH0661MAD
1999 Cummins ISM 10.8 L	XCEXH0661MAI, XCEXH0661MAH
2000 Cummins ISM 10.8 L	YCEXH0661MAI, YCEXH0661MAH
2001 Cummins ISM 10.8 L	1CEXH0661MAR, 1CEXH0661MAQ

**Table 2. Verified Applications of the ECS**

Applications	
Refuse haulers	School buses
Fuel tanker trucks	Long haul trucks
Urban buses	Long haul buses

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

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The aforementioned verification is valid provided the following operating criteria are met:

1. The engine must be operated with a fuel that contains a sulfur content of no more than 15 parts per million by weight.
2. The average engine exhaust temperature must be at least 225 degrees Celsius. Since there may be significant variations from application to application, Engelhard has indicated that it will review actual vehicle operating conditions (duty cycle, baseline emissions, exhaust temperature profiles, and engine backpressure) prior to retrofitting a vehicle with the DPX to ensure compatibility.
3. The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
4. Engelhard must install a backpressure monitor and indicator light on all vehicles retrofitted with a DPX.

The ARB estimates that the DPX will incur no discernible fuel economy penalty when used in a compatible application.

After reviewing the submitted data, the ARB does not find that the DPX filter system has an appreciable effect on overall emissions of oxides of nitrogen.

Thank you for participating in ARB's diesel retrofit verification program. Should you have any questions or comments, please contact Ms. Annette Hebert, Branch Chief, Heavy-Duty Diesel In-Use Strategies Branch, at (626) 575-6973.

Sincerely,

//s//

Michael P. Kenny  
Executive Officer