Commission, the Wyoming Public Service Commission, and the Montana Public Service Commission.

Comment date: April 23, 1996, in accordance with Standard Paragraph E at the end of this notice.

Standard Paragraph

E. Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 18 CFR 385.214). All such motions or protests should be filed on or before the comment date. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 96–9398 Filed 4–16–96; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

[FRL-5458-4]

Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses; Approval of a Notification of Intent to Certify Equipment

AGENCY: Environmental Protection Agency.

ACTION: Notice of Agency Certification of Equipment for the Urban Bus Retrofit/Rebuild Program.

SUMMARY: The Agency received a notification of intent to certify equipment signed September 6, 1996 from Johnson Matthey Inc. (Johnson Matthey) with principal place of business at 460 East Swedesford Road, Wayne, PA 19087–1880 for certification of urban bus retrofit/rebuild equipment pursuant to 40 CFR 85.1401–85.1415. The equipment is applicable to petroleum-fueled Detroit Diesel Corporation (DDC) two-cycle engines originally installed in an urban bus from model year 1979 to model year 1993, exclusive of the DDC 6L71TA 1990 model year engines, all alcohol fueled engines, and models which were manufactured with particulate trap devices (see Table A). On December 13, 1995, EPA published a notice in the Federal Register that the notification had been received and made the notification available for public review and comment for a period of 45-days (60 FR 64048). EPA has completed its review of this notification, and the comments received, and the Director of the Engine Programs and Compliance Division has determined that it meets all the requirements for certification. Accordingly, EPA approves the certification of this equipment.

The certified equipment provides 25 percent or greater reduction in exhaust emissions of particulate matter (PM) for the engines for which it is certified.

The Johnson Matthey notification, as well as other materials specifically relevant to it, are contained in Public Docket A–93–42, category XI, entitled "Certification of Urban Bus Retrofit/ Rebuild Equipment". This docket is located in room M-1500, Waterside Mall (Ground Floor), U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460.

Docket items may be inspected from 8:00 a.m. until 5:30 p.m., Monday through Friday. As provided in 40 CFR Part 2, a reasonable fee may be charged by the Agency for copying docket materials.

DATES: The date of this notice April 17, 1996 is the effective date of certification for the equipment described in the Johnson Matthey notification. This certified equipment may be used immediately by urban bus operators. Operators who have chosen to comply with program 1 or program 2 can utilize this equipment or other equipment that is certified for any engine that is listed in Table A that undergoes rebuild.

FOR FURTHER INFORMATION CONTACT: Anthony Erb, Engine Compliance Programs Group, Engine Program & Compliance Division (6403J), U.S. Environmental Protection Agency, 401 M St. SW, Washington, D.C. 20460. Telephone: (202) 233–9259.

SUPPLEMENTARY INFORMATION:

I. Background

By a notification of intent to certify signed September 6, 1995, Johnson Matthey applied for certification of equipment applicable to petroleum-fueled Detroit Diesel Corporation (DDC) two-cycle engines originally installed in an urban bus from model year 1979 to model year 1993, exclusive of the DDC 6L71TA 1990 model year engines and models which were manufactured with particulate trap devices or alcohol fueled (see Table A). The notification of intent to certify states that the equipment being certified is a catalytic exhaust muffler (CEM). The CEM contains an oxidation catalyst developed specifically for diesel applications, packaged as a direct replacement for the muffler. The application demonstrates that the candidate equipment provides a 25 percent or greater reduction in emissions of particulate matter (PM) for petroleum fueled diesel engines relative to an original engine configuration with no after treatment installed. Certification is applicable to engines that are rebuilt to original specifications, or in-use engines that are not rebuilt at the time the CEM is installed provided the engine meets engine oil consumption limits specified by Johnson Matthey. According to Johnson Matthey, a 6V engine that uses more than one quart of oil per 10 hours of operation, or an 8V engine that uses more than 1.5 quarts of oil per 10 hours of operation, must be rebuilt. Johnson Matthey is also certifying a 25 percent reduction in PM for engines that are retrofit/rebuilt with certified new rebuild kits that do not include after treatment devices. This will apply only when the CEM is installed at the same time the retrofit/rebuild occurs. Currently, this applies to the DDC retrofit/rebuild kit which was certified on October 2, 1995 (60 FR 51472).

Certification of the Johnson Matthey CEM does not trigger any new program requirements for applicable engines, as the requirement to use equipment certified to achieve at least a 25% reduction has already been triggered for these engines. Johnson Matthey stated that it would offer the equipment for less than $2000 (in 1992 dollars).

The CEM contains an oxidation catalyst developed specifically for diesel applications, packaged as a direct replacement for the muffler.

Using engine dynamometer testing in accordance with the Federal Test Procedure for heavy-duty diesel engines, Johnson Matthey documented significant reductions in PM emissions after retrofit. This amounted to a 50% PM reduction in the pre-rebuild retrofit test and a 38% reduction in the post-rebuild retrofit test. The test data show that engines with the certified retrofit equipment installed comply with applicable Federal emission standards for hydrocarbon (H.C.), carbon monoxide (CO), oxides of nitrogen (NO), and smoke emissions in addition to demonstrating reductions in PM exhaust emissions.

TABLE A. CERTIFICATION LEVELS

Engine models	Model year	PM level [1] with CEM	Code	Family
6V92TA MUI [2]	1979–87	0.38	All	All
	1988–1989	0.23	All	All
6V92TA DDEC I	1986–89	0.23	All	All
6V92TA DDEC II	1988–91	0.23	All	All
	1992–93	0.19	All	All
6V71N	1973–87	0.38	All	All
6V71N	1988–89	0.38	All	All
6V71T	1985–86	0.38	All	All
8V71N	1973–84	0.38	All	All
6L71TA	1988–89	0.23	All	All
6LV71TA DDEC	1990–91	0.23	All	All
8V92TA	1979–87	0.38	All	8V92TA
	1988	0.29	All	8V92TA
8V92TA–DD	1988	0.31	All	8V92TA–DDEC II
8V92TA	1989	0.35	9E70	KDD0736FWH9
8V92TA	1989	0.29	9A90	KDD0736FWH9
8V92TA	1989	0.26	9G85	KDD0736FWH9
8V92TA DDEC	1989	0.31	1A	KDD0736FZH4
8V92TA	1990	0.35	9E70	LDD0736FAH9
8V92TA DDEC	1990	0.37	1A	LDD0736FZH3
8V92TA DDEC	1991	0.19	1A or 5A	MDD0736FZH2
8V92TA DDEC	1992–93	0.16	1D	NDD0736FZH1 & PDD0736FZHX
8V92TA DDEC	1992–93	0.22	6A	NDD0736FZH1 & PDD0736FZHX
8V92TA DDEC	1992–93	0.15	5A	NDD0736FZH1 & PDD0736FZHX
8V92TA DDEC	1992–93	0.19	1A	NDD0736FZH1 & PDD0736FZHX

[1] The original PM certification levels for the 1991 6V92TA DDEC II, 6LV71TA DDEC and 8V92TA DDEC engine models are based on Federal Emission Limits (FELs) under the averaging, banking and trading program. These limits are higher than the 1991 PM standard of 0.25 g/bhp–hr. The PM level listed in this table for the engines that are equipped with the CEM provide at least a 25% reduction from the original certification levels. The 1992 to 1993 6V92TA DDEC II and 8V92TA DDEC engine models were also certified using FELs under the trading and banking program and likewise the PM levels for the engines equipped with the CEM represent at least a 25% reduction from the original certification levels.

[2] For 6V92TA MUI models that are rebuilt using a certified DDC emissions retrofit kit, Johnson Matthey is certifying the PM engine emissions to a level of 0.22g/bhp–hr for the 1979 to 1987 models and to a level of 0.17 g/bhp–hr for the 1988–1989 models provided the CEM is installed at the same time the rebuild with the DDC upgrade takes place. The DDC upgrade kit certification notification was published in the Federal Register on October 2, 1995 (60FR51472).

Under Program 1, all rebuilds of applicable engines must use equipment certified to reduce PM levels by at least 25 percent. This requirement will continue for the applicable engines until such time as it is superseded by equipment that is certified to trigger the 0.10 g/bhp-hr emission standard for less than a life cycle cost of $7,940 (in 1992 dollars).

Johnson Matthey has established PM certification levels as specified in Table A for this equipment. Operators who choose to comply with Program 2 and install this equipment, will use the specified PM emission levels in their calculation of fleet level attained.

II. Summary and Analysis of Comments

EPA received comments from two parties on this notification. The Detroit Diesel Corporation (DDC) had a number of comments in the following areas: engines models covered by the application, certification of equipment for use on different stages of engine rebuild, test engine selection and extrapolation of test results, certified emission levels and representivity of test data. The Engelhard Corporation commented on the following areas: incomplete parts list, modification of the manufacturers specification, representivity of test data, and public health risk assessment.

DDC stated that certain engines that appear to be covered by Johnson Matthey's certification request cannot be included in the final certification, specifically 6V–92TA DDEC alcohol fueled engines for urban bus applications and 1992 and 1993 engines which were certified with particulate trap systems. EPA agrees that this is the case and these engines are not covered under this certification. DDC also stated that the 8V–92TA should not be included in the coverage under this certification as they are too large for use in urban buses. EPA agrees that engines this large will generally not be installed in urban buses. However, if any of these engines are in fact installed in urban buses, they are subject to the retrofit/rebuild requirements. Therefore, this engine is included in the certification, but will only apply when the 8V–92TA is installed in an urban bus. DDC also notes that 6V–92TA DDEC engines equipped with particulate traps do not appear to be included in the certification request, and should not be included. EPA agrees that Johnson Matthey did not intend to certify its equipment for use on 6V–92TA engines with particulate traps.

In the notification, Johnson Matthey seeks to certify engines which are not in need of rebuild based upon specified engine calibrations. DDC has stated that certification should be approved only with respect to engines that have been rebuilt to original specifications as the retrofit/rebuild requirements do not apply until the operator rebuilds an engine. DDC agreed that under program 2 operators could conceivably install certified add-on equipment without rebuilding the base engine and use the certified emission level in their fleet averaging, but expressed concerns that the engine may have worn cylinders or fuel injection components in need of rebuild, and as a result the engine out PM emissions may be high. DDC stated that engine wear conditions would create difficulty in achieving the certification level when applying the CEM to an engine which has not been rebuilt. DDC and Engelhard expressed concerns about the low emission level of the pre-rebuild engine that was used in baseline tests for this application.

DDC noted that it would not be appropriate to approve the certification on engines which have been rebuilt using the DDC certified emission upgrade kits as no reductions were made in the PM emission levels stated in the notice. DDC stated its belief that the addition of the CEM to an engine already rebuilt using the certified DDC kit will provide incremental PM reduction, but that Johnson Matthey must certify to a level that has been demonstrated using both the DDC upgrade kit and the CEM. Further, Johnson Matthey had not provided the emission performance warranty for this emission level and that Johnson Matthey must accept all liability associated with this warranty. DDC would warrant only for emission defects.

DDC's claim that program requirements do not start until an operator rebuilds an engine is only partly correct. Operators choosing to comply with program 1 are not required to take any action until an affected engine is rebuilt or replaced. However, operators choosing to comply with program 2 must ensure their fleet is equal to or less than their target fleet level at all times. Thus, program requirements apply continuously to program 2 operators. In addition, if an operator desires to be able to change between programs, the regulations require that both programs be complied with prior to the switch. Johnson Matthey has supplied test data in the application which demonstrates that engine rebuild is not necessary to ensure a 25% PM reduction with the CEM installed, allowing program 2 operators to utilize this equipment. Furthermore, Johnson Matthey has addressed the concern that engine wear might prevent an engine from achieving the PM level to which it is certified by providing an oil consumption criteria. Engines which exceed this criteria are presumably worn, and must be rebuilt in order to install the CEM to meet program requirements.

While it is true that program one requirements become effective when the engine is rebuilt, EPA does not want to stop an operator from taking the initiative to install certified equipment prior the time it is actually required under the regulations. EPA believes that the addition of the CEM would provide some incremental benefit to an in-use engine prior to the time a rebuild is found necessary. Therefore, in the interest of cleaner air, EPA will allow program one participants to install certified equipment aftertreatment prior to time a rebuild is found necessary in order to allow for an incremental reduction of PM emission in the interim.

In regard to DDC's concerns that engine wear needs to be evaluated prior to installing this equipment, Johnson Matthey has modified its application to remove the language referring to calibrations which were stated to be vague and unenforceable and will instead require that operators determine the oil consumption rate for an engine prior to installing the CEM in order to determine engine wear and condition. If this rate of consumption exceeds 1.5 quarts of oil consumption per 10 hours of operation for 6V engines or 2.0 quarts of oil consumption per 10 hours of operation for 8V engines, Johnson Matthey will require that the engine be rebuilt prior to CEM installation in order to address these concerns. Furthermore, Johnson Matthey will be responsible for meeting the performance warranty for a period of 150,000 miles on each engine under this certification. EPA believes that operators will rebuild engines when necessary in order to keep their fleet in reasonable operating condition. The decision to rebuild will not be affected by the option to install a catalyst. Rather, operators will only choose to install the catalyst in order to reduce emissions, and not in place of a needed rebuild. It is noted that the testing data provided for a 50% reduction in the pre-rebuild engine and a 38% reduction in the case where the engine was rebuilt. Based on these levels of reduction, it is apparent there should be ample margin between the in-use emissions of an engine that the operator finds is not in need of a rebuild to reasonably project that the levels stated in Table A can be met.

Both Engelhard and DDC commented on the low emission level of the engine that was used for baseline testing. Johnson Matthey selected an engine that was normally used in the transit industry. Although the pre-rebuild level does appear low (0.44 g/bhp-hr PM), this engine was not modified or adjusted prior to the baseline test. Further, nothing in the engine's history indicates that it is not a representative urban bus engine. Information from the transit company and Johnson Matthey indicates that the engine was properly maintained in accordance with industry practices. Therefore, EPA finds the data to be acceptable as well.

With regard to the application of the Johnson Matthey CEM to engines which were upgraded using DDC certified rebuild kits, Johnson Matthey has provided revised language in the application to warrant the emissions performance for these engines to reduced emission levels of 0.22 g/bhp-hr PM for the 1979 to 1987 engines and 0.17 g/bhp-hr for the 1988 and 1989 engines. These levels are included in Table A herein. This should address the DDC concerns in this area.

With regard to the issues raised by DDC concerning test engine selection and extrapolation of test results, DDC stated that the testing was done on a used engine prior to rebuild and after rebuild using DDC replacement parts. However, the rebuild was incomplete and did not put the engine into any configuration which had been certified. Since no testing was reported using either an unused engine or an in-use engine that was newly rebuilt to its original configuration, DDC has stated that it does not appear that Johnson Matthey fulfilled the requirements of 40 CFR section 85.1406 (a)(v). Engelhard also commented that it disputed whether the application represented a standard rebuild.

In response to these issues, Johnson Matthey has provided documentation that it attempted to rebuild the engine to a configuration which would be normal for those engines currently in the field. Since the original build date of the test engine a number of changes were made in the field in accordance with DDC guidance. In undertaking the rebuild, Johnson Matthey attempted to rebuild the engine to the standard that exists for engines in the field. Johnson Matthey has provided numerous pages from parts and engine references which document that the parts installed are in accordance with recommended field guidance. This documentation is included in the docket.

It is noted that a change in horsepower was made during the engine rebuild. This change in horsepower has evidently caused confusion regarding the final engine rebuild configuration. After consultation with EPA, during the rebuild the engine horsepower was modified to 277 horsepower vs. the 253 horsepower of the original engine. It was believed that more urban bus engines exist in the field with 277 horsepower, and that this would be more representative of the existing in-use urban bus fleet and this change was made simply to make the engine more representative of the fleets that exist in the field. Consequently, EPA believes that this change in horsepower caused the apparent confusion relative to the rebuild status of this engine and that Johnson Matthey has provided documentation that the rebuild represents a standard rebuild for the 277 horsepower engine in accordance with the requirements of section 85.1406.

DDC commented that the certifier appears to be in conformance with the requirements of EPA's ''worst case engine configuration'' requirements as stated in 40 CFR section 85.1406 (a)(2). However, DDC also stated that EPA only considered trap technology in developing the definition of worst case engine configuration, and noted that particulate traps remove both the volatile and non-volatile particulate components but that catalysts only reduce volatile particulate.

DDC stated that for catalyst technology, worst case should not be based on total particulate but rather on the engine with the lowest volatile particulate fraction and that EPA should modify the definition in the regulations.

Trap technology was discussed in the preamble language to the Urban Bus Retrofit/Rebuild rule. EPA also referenced aftertreatment devices in this language and EPA obviously considers catalysts to be aftertreatment devices. EPA, at this time, does not have information that would break down engines into groups having the highest volatile or lowest volatile composition and none was supplied with the comments. Further, revision of the definition in the regulation will not take place during this notification review, but would instead take place in a regulatory amendment process based upon information received. However, in the meantime, EPA will continue to interpret the worst case definition to apply for both trap and catalyst technology.

With regard to certified emission levels, DDC commented that the proposed certification levels do not represent a full 25% reduction, and cited an example where only a 20% reduction was present in the table for 1979 to 1987 for 8V–92TA engines. In addition, for the 1991 code 5A 8V92TA DDEC engine, the original certification testing yielded a PM emission level of 0.20 g/bhp–hr and the proposed certification level of 0.19 g/bhp–hr given in Table A represents only a 5% reduction.

The pre-rebuild levels listed in § 85.1403(c)(1)(iii)(A) were determined by EPA based on certification results or engineering data and judgement. In Table A, Johnson Matthey has listed the PM levels it is certifying to for listed models and years. In a number of instances the certification level shown represents a 25% reduction from the levels that were listed in § 85.1403(c)(1)(iii)(A). In other instances, the number reflects a 25% reduction from the level that was certified by DDC during new engine certification. In the case of the 1979–1987 8V–92TA models, the certification level was not directly listed in § 85.1403 (c)(1)(iii)(A). However, there is a designation for ''other engines'' which is listed as 0.50 g/bhp–hr PM.

In the case for the 1991 8V92TA DDEC engine the original certification testing by DDC yielded a PM emission level of 0.20 g/bhp–hr. However, DDC certified the engine to a level 0.37 g/bhp–hr level under the averaging, banking and trading program. Therefore, the proposed certification level of 0.19 g/bhp–hr PM provides for more than a 25 % reduction from the original DDC certification level for this engine. In the case of the 1979–1987 8V92TA engines, the level used by Johnson Matthey was based on the level that was approved under a previous application. In that application, the Engelhard Corporation certified this engine model to a PM level of 0.40 g/bhp–hr level based on what it projected to be a reasonable reduction. EPA accepted this level and no comments were received on this during the review or post certification time frame. However, based on DDC's comment and lacking more specific information relative to the original emission levels of this engine, Johnson Matthey has amended its application and Table A has been revised to provide a certification level of 0.38 g/bhp–hr for these engines. EPA will contact Engelhard with regard to a revision to the certification level for this engine relative to its certification as well. EPA has reviewed the certification levels in accordance with DDC's request and believes that Table A represents at least a 25% reduction in all instances. Further, based on the test data provided by Johnson Matthey, EPA believes that the test data will in fact reduce the PM emissions by 25% or more on these engines.

With regard to DDC's comments on representivity of test data, Johnson Matthey's notification provides baseline testing data with a particulate level of 0.44 g/bhp–hr even though the test engine had accumulated 300,000 miles in service. In contrast, the table in § 85.1403 (c) (1)(iii)(A) of the regulations provides a baseline value of 0.50 g/bhp–hr. In the case of DDC's own notification of intent to certify the baseline certification testing yielded a value of 0.53 g/bhp–hr for this engine model. DDC questioned whether the blower that was installed on this engine based on an in-field update was 100% bypass blower. DDC noted that the injection timing was set at 1.460 for the testing and not at 1.475 as would have been the case if the engine were properly updated. Engelhard also questioned whether the injectors were rebuilt and the injector height. According to DDC, the Johnson Matthey pre-rebuild test configuration was not consistent with any DDC certified configuration. According to DDC, because of this discrepancy, the catalyst efficiency assessments would be expected to be higher, than if testing had been performed using a properly rebuilt 1986 or 1987 engine. It was not clear whether the post-rebuild was intended to reflect a standard rebuild or a rebuild using the certified DDC upgrade kit. DDC and Engelhard noted that the parts listing in the application did not include a blower, turbocharger cylinder heads or fuel injectors, all of which were noted to be key components which are subject to wear and must be replaced at rebuild. DDC also noted that the cylinder kits were listed as part number 23503938. This part number was noted by DDC to apply to a truck engine and are not the proper kits for upgrading the engine to either a standard or upgraded bus engine configuration. DDC noted that the 1.475 injection timing used in the post-rebuild testing would have been proper for a standard rebuild, but a timing change of 1.500 must be used with a DDC certified upgrade rebuild. Johnson Matthey's post rebuild test level of 0.13 g/bhp–hr is well below DDC's expectations and range of test experience for properly rebuilt engines. DDC and Engelhard questioned the representivity of such low test data.

According to Johnson Matthey, and as noted in testing documentation in the application, pre-rebuild engine emissions were sampled on the engine just as it came from the field. No changes were made to components, settings or parts prior to testing. The engine history indicates that the test engines went into revenue service on April 10, 1986. In May 1989, with 158,880 miles on the odometer, the engine was serviced at an authorized DDC facility under a warranty claim. Warranty repairs were made due to high oil consumption and smoke emissions. Warranty repairs consisted of the replacement of the cylinder kit with standard DDC parts. DDC authorized the replacement of the 83% blower with a 100% blower. It is noted that this is the by-pass blower. Aside from routine maintenance, the engine operated in regular service until it was determined through maintenance records that the engine, due to excess oil consumption was in need of a major engine overhaul. The engine was removed from service and sent to the Southwest Research Institute for certification testing. It was determined through baseline testing that the engine was consuming oil at a rate of 5 quarts per 12 hours. Testing was performed at Southwest Research on the engine in its as received condition. The engine was tested with T–70 injectors set a timing of 1.460. DDC indicated that the injection timing should have been 1.475 if the engine were properly updated. Based on the information presented, EPA concludes that the pre-rebuild engine was tested in the configuration that would represent the original configuration along with recommended modifications for the engine in the field including the timing. Johnson Matthey has provided EPA with detailed documentation that the engine was tested in the original in-use configuration. Therefore, it is apparent that the 1.460 timing would have been acceptable for the original configuration, it would not have been acceptable for the engine which had been updated in the field according to DDC. However, this engine had not undergone the complete update and had been only partially updated based on the warranty work performed in 1989. Therefore, it is apparent that the 1.460 timing would be correct for this engine since it had not undergone the update. Unfortunately, the confusion was evidently caused by the fact that the blower was replaced under warranty. But the additional changes necessary to update the engine were not made at that time. Therefore, the engine was tested with the original injection timing setting rather than the setting that is specified for the updated rebuild.

In regard to the rebuilt engine presented for the post rebuild testing, Johnson Matthey rebuilt the engine to the 277 horsepower configuration as discussed earlier. The injectors for this horsepower were the G–75 injectors set at the 1.475 timing. The documentation submitted by Johnson Matthey indicates that this is the proper setting according to printed field guidance and DDC commented that this would be the correct timing for the standard rebuild. It is apparent to EPA that the direction given in the field by DDC for a standard rebuild updates the engine to the configuration which Johnson Matthey presented for post rebuild testing. In regard to the parts list missing the components noted, these parts were inadvertently left off the parts list contained in the notification. Johnson Matthey has provided this listing and it contains all the parts mentioned by the commenters as being necessary for the rebuild and has been added to the docket. In regard to the cylinder kits used in the rebuild, this part number was provided in a printout of information from DDC's computerized service information system identifying the listed cylinder kit part number to be correct for this engine. In regard to this being a truck part number, the servicer who performed the rebuild explained that there was no bus engine designation at the time this engine was originally manufactured, therefore the truck part number is referenced in the guidance provided in the DDC printout. This printout is included in the docket. Although the low level of PM that was generated in the post-rebuild testing is lower than that seen for other rebuilt engines tested under this regulation, the information presented by Johnson Matthey indicates it was rebuilt to what would be a standard rebuild configuration. Therefore, EPA believes it is acceptable for the purpose of certification in the demonstration of a 25% reduction demonstration. EPA notes that a low PM number for the pre-retrofit test does not seem to be an advantage to the certifier when certifying a 25% reduction.

DDC noted that the maximum exhaust pressure limit for the 1986 6V–92TA engine family limit was exceeded when the CEM was installed. The backpressure was 3.4 inches Hg. on the pre-rebuild engine and 3.7 inches Hg. on the post rebuild engine. The maximum backpressure limit for the 253 horsepower configuration is 2.5 inches Hg. and in the 277 horsepower configuration the maximum backpressure is 3.0 inches Hg. DDC noted that an in-use catalyst which becomes partially plugged could become more restrictive due to ash accumulations and cause still higher levels of backpressure. DDC commented that the use of the same size and configuration catalyst on 8V–92TA engines which have higher exhaust flows would result in extremely high back pressures. DDC noted that increased backpressure will cause increased engine out smoke and increased non-volatile particulate levels. It would also cause increased cylinder and exhaust temperatures and have a deleterious effect on engine durability. DDC also commented that the life-cycle cost should be modified to reflect an increased cost based on the fuel economy shown in the post rebuild certification testing. The post rebuild test with the CEM in place presented an exhaust backpressure of 3.7 inches Hg. (an increase of 1.3 inches Hg. over the baseline test without the CEM) and brake-specific fuel consumption increased from 0.441 to 0.454 lb/bhp-hr when the CEM was added (an increase of 2.9%). DDC stated its belief that the loss in fuel economy resulted from the increased backpressure. Using the equation in 40 CFR section 85.1403 (b)(1)(ii)(C) DDC estimated the increased cost based on loss of fuel economy to be $459 (1995 dollars). DDC believes that this component must be included in the life-cycle cost analysis.

In response to the backpressure issue, Johnson Matthey noted that the CEM that was used during certification testing was a prototype which developed greater backpressure than the production models to be manufactured. Johnson Matthey referenced SAE paper NO 930129 ''Production Experience of a Ceramic Wall Flow Electric Regeneration Diesel Particulate Trap'' which reports measured in-use back pressure of 5.2 inches Hg. on a particulate trap system of the design approved by DDC and certified by EPA for the DDC 6V92TA engine and noted that the level experienced during Johnson Matthey's certification testing was well below this level.

Johnson Matthey has also provided field data indicating that the recent data collected shows backpressure experienced with CEMs in the field is lower than that seen during the certification tests. It noted that the certification test is designed to represent the standard muffler in place on the exhaust system and the associated backpressure. The CEM is designed to take the place of the muffler in the exhaust system. Johnson Matthey has provided information indicating it will design each CEM so that the backpressure due to the CEM will be less than or equal to the muffler it replaces. Consequently, there will be no incremental increase in backpressure due to the replacement of the muffler with the CEM. Johnson Matthey provided field data from an operator in which the backpressure readings were taken for buses during ''full stall''. Full stall is a procedure used in the field to evaluate system backpressure. The information provided indicates that with standard mufflers in place the backpressure ranged between 2.7 and 3.0 inches of Hg. For comparison purposes, Johnson Matthey also provided data that the back pressure on an in-use bus was 2.4 inches Hg. at full stall with a production CEM installed. Further, Johnson Matthey has indicated that it will size each catalyst for the flow requirements of the engine to minimize backpressure. Johnson Matthey has arranged for production CEMs to be designed and fabricated by a major manufacturer of urban bus mufflers. The production CEMs currently in use in field tests were designed with this company. Johnson Matthey has indicated that it will size the catalyst element to accommodate engine flow. However, the conversion of PM will never be compromised as the gas space hourly velocity (GHSV) will be maintained. As noted by Johnson Matthey, the GHSV determines the effectiveness and performance of the catalyst to convert PM. To accommodate engines with greater exhaust flow, the catalyst volume will be changed in accordance with the exhaust flow rate. Therefore, if the engine flow rate is increased, a larger catalyst can be applied so long as the GHSV is maintained. The resultant ability of the catalyst to convert PM will be maintained.

Johnson Matthey also provided temperature data which documented the exhaust temperatures with and without the catalyst. The peak temperature difference between the two was between 10 to 15 degrees C in the worst case. Johnson Matthey also noted that over the past six years more than 1,000 buses in Europe have been equipped with CEMs and there have not been any warranty claims resulting from CEM backpressure. Based on the backpressure levels and the operating temperatures noted during the test, EPA does not believe the backpressure or temperatures experienced during testing will be detrimental to engines if experienced in the field.

Based on the fact that Johnson Matthey has shown it will provide catalysts to operators which are designed in tandem with a major muffler producer to have equal or less backpressure than the mufflers they will replace, while at the same time maintaining catalyst efficiency, and in conjunction with the field data presented, EPA does not find it would be appropriate at this time to consider a life-cycle cost impact due to a fuel economy decrease which would be attributable to increased backpressure. Therefore, life-cycle costs will not be modified.

Since the requirements for trigger technology have already been triggered for all engine models covered by this application, the life-cycle cost calculation is not necessary from the standpoint of triggering requirements. No new requirements will be placed on operators based on this certification and no operator will be required to specifically purchase this equipment. Rather, operators will be able to select the equipment they will use. The Johnson Matthey equipment may be used by operators choosing program 1 or program 2. However, this certification will not be considered trigger technology, and will not affect the emission levels for program 2. EPA encourages operators to supply fuel economy or emissions data relative to this certification directly to EPA, if fuel economy decreases or emission increases are noted in the field. If in the future, EPA finds that based on the data presented that the fuel economy or emissions have been affected, a notice will be issued in the Federal Register.

DDC commented that EPA should seek assurances that the certified hardware will be available for all engine bus combinations. Johnson Matthey has indicated it will work with the operators to meet their needs and is developing CEMs to be direct bolt in designs. This coupled with the fact that other companies have already certified equipment for the engines covered under this application should handle this concern.

DDC also commented that the CEM must be placed within six feet of the turbine outlet as the testing data was developed with the catalyst placed six feet from the turbine. DDC noted that the temperature and conversion efficiency would be affected by the catalyst placement. If the catalyst is placed nine feet from the turbine outlet, rather than at six feet as positioned during the emissions test, the difference in exhaust temperature between the two placements may affect the catalyst efficiency. In the application, Johnson Matthey provided temperature data indicating that the temperature change between the turbine outlet and the catalyst was 10 degrees C over the six foot length and projected that the difference in the additional three foot length would amount to 5 degrees C. It is not thought that this temperature difference will affect catalyst effectiveness.

Engelhard has raised a health effects issue concerning the formulation of the catalyst. Specifically, Engelhard stated it's belief that the Johnson Matthey CEM contains a catalyst that contains platinum and vanadium. Engelhard noted that vanadium was toxic and was a real concern in Europe. Engelhard stated that the combination of vanadium and platinum raises the concern over increased aldehyde and oxygenate emissions which would be expected to increase exhaust odor. Engelhard stated that if the platinum and vanadium materials are being used, Johnson Matthey should be required to supply test data proving no risk to public health, welfare or safety. Engelhard did not provide any documentation or references with its comments on this issue.

In order to gain a better understanding of the Engelhard comment, EPA telephoned Engelhard to discuss its comment. EPA was told that the primary concern was based on a technical report titled, ''Assessment of Maleic Anhydride as a Potential Air Pollution Problem''. This report dated January 1976 was generated under EPA contract number 68–02–1337. Engelhard did not have a copy of the report on hand and sent EPA a summary abstract which has been added to the docket. EPA obtained a copy from the EPA Library. The report has been added to the docket as well. The report indicates that maleic anhydride is a white crystalline solid with a sharp irritating odor. It also states that the main method of manufacture is the reaction between benzene vapor and air in the presence of a vanadium catalyst. Benzene is listed by the American Council of Governmental Industrial Hygienists as having a ''A1'' designation indicating that it is a confirmed human carcinogen. Maleic anhydride has not received a designation from this group as no experimental data has been reported. The report notes that maleic anhydride is used in the production of esters, polyester resins, dye intermediates, pharmaceuticals, agricultural chemicals and fumaric acid. Health effects, physical chemical properties and measurement techniques are also discussed in this report. Based on the report, Engelhard concerns are focused on the fact that in a catalyst containing platinum and vanadium, with benzene in the exhaust stream, conditions may be present under which the benzene is converted to maleic anhydride.

Johnson Matthey considers the presence or absence of vanadium in the formulation of the catalyst used in the CEM to be proprietary information and does not wish to disclose this information to its competitors through public dissemination. To protect this proprietary information, EPA will not discuss the formulation of the catalyst in this notice. In any case, for the reasons given below, the presence of vanadium would not affect the certification of the CEM in this application.

EPA notes that the formation of maleic anhydride as discussed in the report is under a controlled environment with the specific purpose of producing maleic anhydride. In the process to manufacture maleic anhydride, a benzene/air mixture is oxidized to maleic anhydride over a vanadium catalyst at a pressure of 2 to 5 atmospheres at a temperature of 400 to 450 degrees C. While benzene is present in the diesel exhaust, the pressure in the exhaust will generally be at 1 atmosphere and the temperature will usually be less than 400 degrees C. The average diesel exhaust temperature ranges between 250 degrees and 350 degrees C. There may be occasions where the diesel exhaust reaches 400 degrees C or higher but this will represent peak temperatures of short duration for the most part. For example, in the test engine for the post rebuild test with catalyst installed, the exhaust temperature averaged approximately 240 degrees C and the peak temperature was less than 330 degrees C. Additionally, the required pressure of 2 to 5 atmospheres necessary for the specified conversion process will not be found in the diesel exhaust. Therefore, the conditions specified to carry out the conversion process as per the noted report will not be found in the diesel exhaust system. Additionally, in the case of an oxidation catalyst such as the CEM, volatile organic compounds such as maleic anhydride are oxidized. Therefore, for the most part, any maleic anhydride present would be converted to carbon dioxide and water by the CEM. Johnson Matthey has provided test data that aldehydes and oxygenate compounds were reduced by the catalyst used in the CEM.

After review of this matter, EPA does not believe that it has sufficient information or test data at this time indicating that use of the candidate equipment poses an unreasonable risk to public health and welfare or safety.

However, EPA is interested in gathering additional information in this area and requests that the public and industry provide information with regard to the content of the diesel exhaust stream and the effect oxidation catalysts may have upon exhaust stream components, especially non-regulated components. Further, as benzene is present in the diesel exhaust stream of all diesel engines, the possibility may exist for the production of maleic anhydride with or without the presence of vanadium. Therefore, the question raised here may pertain to all diesel engines whether or not they are employing oxidation catalysts. Based on this, EPA seeks information from the public and industry with regard to diesel exhaust relative to increases or decreases in exhaust components based on the use of oxidation catalysts which contain or do not contain vanadium.

III. Certification Approval

The Agency has reviewed this notification, along with comments received from interested parties, and finds that the equipment described in this notification of intent to certify:

(1) Reduces particulate matter exhaust emissions by at least 25 percent, without causing the applicable engine families to exceed other exhaust emissions standards;

(2) Will not cause an unreasonable risk to the public health, welfare, or safety;

(3) Will not result in any additional range of parameter adjustability; and,

(4) Meets other requirements necessary for certification under the Retrofit/Rebuild Requirements for 1993 and Earlier Model Year Urban Buses (40 CFR Sections 85.1401 through 85.1415).The Agency hereby certifies this equipment for use in the urban bus retrofit/rebuild program as discussed below in section IV.

IV. Operator Requirements and Responsibilities

This equipment may be used immediately by urban bus operators who have chosen to comply with either program 1 or program 2, but must be properly applied. Currently, operators having certain engines who have chosen to comply with program 1 must use equipment certified to reduce PM emissions by 25 percent or more when those engines are rebuilt or replaced. Today's Federal Register notice certifies the above-described Johnson Matthey equipment as meeting that PM reduction requirement. Only equipment that has been certified to reduce PM by 25% or more may be used by operators with applicable engines who have chosen program 1. Urban bus operators who choose to comply with Program 1 may use the certified Johnson Matthey equipment (or other certified equipment) until such time as the 0.10 g/bhp-hr standard is triggered for the applicable engines.

Operators who choose to comply with Program 2 and use the Johnson Matthey equipment will use the appropriate PM emission level from Table A when calculating their fleet level attained (FLA).

As stated in the program regulations (40 CFR 85.1401 through 85.1415), operators should maintain records for each engine in their fleet to demonstrate that they are in compliance with the requirements beginning on January 1, 1995. These records include purchase records, receipts, and part numbers for the parts and components used in the rebuilding of urban bus engines.

Dated: April 3, 1996.

Mary D. Nichols,

Assistant Administrator.

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[OPP–34095; FRL–5360–5]

Notice of Receipt of Requests for Amendments to Delete Uses In Certain Pesticide Registrations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: In accordance with section 6(f)(1) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, EPA is issuing a notice of receipt of request for amendment by registrants to delete uses in certain pesticide registrations.

DATES: Unless a request is withdrawn, the Agency will approve these use deletions and the deletions will become effective on July 16, 1996.

FOR FURTHER INFORMATION CONTACT: By mail: James A. Hollins, Office of Pesticide Programs (7502C), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Office location for commercial courier delivery and telephone number: Room 216, Crystal Mall #2, 1921 Jefferson Davis Highway, Arlington, VA, (703) 305–5761; e-mail: hollins.james@epamail.epa.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

Section 6(f)(1) of FIFRA provides that a registrant of a pesticide product may at any time request that any of its pesticide registrations be amended to delete one or more uses. The Act further provides that, before acting on the request, EPA must publish a notice of receipt of any such request in the Federal Register. Thereafter, the Administrator may approve such a request.

II. Intent to Delete Uses

This notice announces receipt by the Agency of applications from registrants to delete uses in the 22 pesticide registrations listed in the following Table 1. These registrations are listed by registration number, product names/ active ingredients and the specific uses deleted. Users of these products who desire continued use on crops or sites being deleted should contact the applicable registrant before July 16, 1996 to discuss withdrawal of the applications for amendment. This 90–