

MOTOR VEHICLE AND ENGINE COMPLIANCE PROGRAM COST ANALYSIS

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I. Overview of MVECP Fees Cost Analysis

This cost analysis describes the costs incurred by the Environmental Protection Agency (EPA) in conducting the Motor Vehicle and Engine Compliance Program (MVECP). Along with background information, this document provides an overview of the methodology used by EPA to determine and allocate the cost of the MVECP, detailed in Appendix C, and a description of a proposed new fee schedule. The written part of this analysis is a guide to understanding the tables in Appendix C.

This analysis will be used for: (1) developing regulations consistent with the Clean Air Act (CAA), Independent Office Appropriations Act (IOAA), Office of Management and Budget Circular No. A-25, and other legal authority; and (2) creating a Fee program that will be self-sustaining to the extent possible. The methodology steps include: (1) determining which costs are recoverable and (2) utilizing the data collected to determine the appropriate fee schedule.

II. MVECP Fees Program

A. Description and Background

On July 7, 1992, EPA published a final rule (57 FR 30055) establishing user fees to recover all reasonable costs associated with certification and compliance programs within the Office of Transportation and Air Quality (OTAQ), then called Office of Mobile Sources (OMS). Functioning under the Office of Air and Radiation (OAR), OTAQ carries out a broad range of activities to help reduce pollutants emitted from on-road and nonroad vehicles, engines and their fuels. The Motor Vehicle and Engine Compliance Program (MVECP) includes all compliance activities performed by EPA that are associated with certification, fuel economy, selective enforcement auditing (SEA), and in-use compliance. In 1999, under the Compliance Assurance Program (CAP 2000) regulations, the provisions for fees were updated to reflect several changes in the costs of the MVECP. The CAP 2000 regulations apply only to light-duty vehicles (cars and trucks.) A review of user fees was conducted in 1998 in conjunction with the development of this new regulation. In addition, under CAP 2000, the fee schedule was updated to reflect the change in the anticipated number of certificate requests. At that time EPA also recognized the need for updating the 1991 cost analysis but determined that the appropriate time to do a comprehensive reevaluation would be in a separate rulemaking.

The fee regulations were further modified by a regulatory amendment published on March 7, 2000 (65 FR 11904). This amendment, which is applicable to original equipment manufacturers (OEMs) and aftermarket conversion manufacturers, allows a fee waiver for small volume alternatively fueled vehicles and engine families that are certified to the Clean-Fuel Vehicle standards for model years (MY) 2000 through 2003.

EPA now has a more complete assessment of the combined changes in all compliance activities and programs since the 1991 cost analysis and the recent implementation of CAP 2000 regulations. Since 1991, EPA incurred additional costs due to inflation along with increased costs for supporting current compliance programs, new compliance programs and testing requirements for nonroad and Tier 2 in-use regulations. The fee provisions are being revised to reflect these changes and are being proposed in the upcoming Notice of Proposed Rulemaking (NPRM) for the MVECP fees program.

B. To What Industries Will the Fees Apply?

The proposed fees apply to manufacturers of the following:

- Light-duty vehicles (cars and trucks)
- On-highway motorcycles
- Heavy-duty highway diesel and gasoline engines
- Nonroad utility, farm and construction diesel engines
- Locomotives
- Marine diesel and gasoline engines
- Nonroad gasoline engines
- Medium-duty passenger vehicles
- Complete heavy-duty vehicles
- Recreational vehicles (Snowmobiles, all-terrain vehicles and off-highway motorcycles)
- Heavy-duty highway gasoline vehicles (evaporative emissions)

C. Updating the MVECP Fees Program: Overview of the Proposed Rulemaking

Under the current MVECP Fees Program, user fees are collected for on-highway vehicle and engine compliance and fuel economy programs. Fees are currently applicable to manufacturers of light-duty vehicles, light-duty trucks, heavy-duty vehicles, heavy-duty engines and on-highway motorcycles. In the NPRM, EPA is proposing to update the current fee schedule and to establish fees for nonroad and recreational industries. We are updating the fees because of increased costs to the Agency including costs of equipment needed for measuring emissions from vehicles and engines that meet new emissions standards; new compliance programs such as heavy-duty nonroad, marine, small nonroad, and locomotive engines compliance programs; anticipated compliance programs for recreational vehicles; an increased emphasis on heavy-duty in-use engines; and inflation.

EPA proposes to recover its costs by assessing fees for all direct and indirect costs incurred for the MVECP. The direct costs associated with the MVECP include numerous activities related to certification, fuel economy, SEA, and in-use compliance. These activities include pre-production certification; testing; confirmatory testing; certification compliance audits and investigations; laboratory correlation; in-use monitoring; review and audits of manufacturer test data, in-use data and production line test data; fuel economy selection, testing, and labeling; corporate average

fuel economy (CAFÉ) calculations; and fee administration.

EPA conducts numerous activities related to mobile source air pollution control that are not included in the MVECP and for which it does not anticipate assessing fees. These non-recoverable activities include: regulation development, determination of emission factors, air quality assessment, the Partnership for a New Generation of Vehicles (PNGV) initiative, and support of inspection and maintenance programs. Although these activities benefit manufacturers indirectly by facilitating the MVECP, the costs associated with them are not considered recoverable.

D. Description of the Five (5) OTAQ Divisions

The U.S. Environmental Protection Agency's Office of Transportation and Air Quality is responsible for developing and implementing programs to control air pollution from motor vehicles, engines, and their fuels. OTAQ's mission is to reconcile the transportation sector with the environment by advancing clean fuels and technology, and by working to promote more liveable communities. OTAQ's compliance programs focus on the on-highway and nonroad mobile sources which include: cars and light trucks, large trucks and buses, farm and construction equipment, lawn and garden equipment, marine engines, and locomotives.

OTAQ is divided between EPA's headquarters in Washington, D.C. and the National Vehicle and Fuel Emission Laboratory (NVFEL) in Ann Arbor, Michigan. OTAQ includes the Immediate Office of the Director and five major divisions: Advanced Technology Division (ATD), Assessment and Standards Division (ASD), Certification and Compliance Division (CCD), Laboratory Operations Division (LOD), and the Transportation and Regional Programs Division (TRPD). Below is a description of the activities and programs in each division.

Advanced Technology Division

The Advanced Technology Division (ATD) is responsible for the development of automotive technology for improving fuel economy and reducing emissions from mobile sources. The division's current projects include the Partnership for a New Generation of Vehicles Clean Car program, low NO_x diesel engines, and alternative fuel technologies. ATD is also responsible for climate change policies and strategies related to vehicle efficiency and fuels.

Assessment and Standards Division

The Assessment and Standards Division (ASD) identifies and develops future emission control strategies and is responsible for federal rulemaking and policy development for highway and nonroad vehicles, engines and fuels. In the process, ASD determines the contribution of mobile sources to pollutant emission inventories and assesses the feasibility, cost, and in-use effectiveness of emission control technologies. ASD uses an integrated approach that addresses both vehicle/engine classes and fuels simultaneously. The Tier 2, Diesel Sulfur, and Nonroad rulemakings show such efforts. ASD also develops the computer models EPA uses to support environmental policy decisions, tests their assumptions, analyzes their effectiveness, makes improvements in them and also provides modeling support to

other OTAQ Divisions.

Certification and Compliance Division

The Certification and Compliance Division (CCD) manages federal compliance programs for all highway and nonroad vehicles and engines including pre-production certification and activities that assess the new engine and in-use performance of these vehicles and engines. CCD also conducts a national fuel economy and CAFÉ audit program for light-duty passenger cars and trucks. This division plays a major role in the MVECP. CCD is also responsible for the On-Board Diagnostics (OBD) and On-Board Vapor Recovery (ORVR) programs. Approaches to compliance have been reinvented through the CAP 2000 rulemaking by setting compliance goals and focusing more on in-use effectiveness. CCD staff is split between Ann Arbor and Washington, DC.

Laboratory Operations Division

The Laboratory Operations Division (LOD) provides emission testing services for motor vehicle, heavy-duty engine, and nonroad engine programs in support of rulemaking development, enforcement actions, and compliance testing. LOD conducts tests for certification, fuel economy, in-use compliance, fuels and fuel additives analysis, and exhaust compounds analysis. LOD is also responsible for providing all facility services and upgrades, computer network services, and administrative support services to OTAQ.

Transportation and Regional Programs Division

The Transportation and Regional Programs Division (TRPD) works with regions, states, local government, and other stakeholders to reduce pollution from fuels, transportation, and nonroad sources. TRPD implements national and regional pollution control programs, such as the reformulated gasoline (RFG) program and a transportation-based climate change program. It also develops and supports voluntary initiatives that encourage clean air and liveable communities such as the Commuter Choice Program. State and local government agencies and EPA's regional offices work with TRPD and are key partners with OTAQ in pursuing its goals of reducing mobile source emissions and achieving sustainable transportation systems. TRPD staff is split between Ann Arbor and Washington, D.C.

Immediate Office

The Immediate Office of the Director in Washington, D.C. is comprised of the Director, her staff and OTAQ's budgetary, policy and communications functions. The Immediate Office of the Deputy Director, located in Ann Arbor includes the Deputy Director. His staff oversees Human Resources and NVFEL communications functions.

E. MVECP Activities

The following compliance-related activities comprise the bulk of EPA's actions that incur

recoverable¹ costs:

Certification

Before a manufacturer can distribute or offer a regulated vehicle or engine for sale in the United States, it must obtain a certificate of conformity from the EPA. To obtain a certificate, manufacturers must go through the certification process, which may include submitting one or more prototype vehicles or engines of an engine family or test group to EPA for emissions confirmatory testing. The CAA requires EPA or manufacturers to conduct a variety of tests necessary to ensure that these vehicles and engines comply with established standards. In addition to confirmatory testing and compliance inspections, EPA's certification activities include, but are not limited to, the following: review of applications for certification; review of durability justification; emission data vehicle and engine approval, testing, and processing; certification request processing; generating and issuing certificates and maintaining a vehicle and engine test database.

Fuel Economy/Corporate Average Fuel Economy (CAFÉ)

EPA administers the fuel economy program for passenger cars and light-duty trucks, which includes activities such as fuel economy labeling and CAFÉ auditing. Fuel economy labeling provides fuel economy values and other information to consumers. These labels are used by manufacturers to market their products and meet the requirements of the Energy Policy and Conservation Act (EPCA). Other fuel economy activities include confirmatory testing of vehicles, and reviewing and auditing manufacturers' vehicle and engine tests, calculations, and labels. EPA oversees CAFÉ activities that determine each manufacturer's compliance with the CAFÉ standards specified in the EPCA. The bi-annual Fuel Economy Guide is a cooperative effort by EPA and the Department of Energy.

Selective Enforcement Auditing (SEA)

To further ensure compliance with the CAA, EPA has the authority to test production vehicles and engines as they leave a manufacturer's assembly line and to revoke or suspend any certificate of conformity if a certain percentage of vehicles or engines does not conform to the required standards. SEAs involve selecting vehicles and engines off of the assembly line and monitoring their testing at various production plants around the world to determine compliance with emission standards.

In-Use Compliance Programs

A manufacturer may be held liable if a class of its vehicles or engines fails to comply with emission standards throughout its useful life. EPA conducts a number of in-use evaluation and testing programs to ensure that vehicles and engines continue to meet emission standards throughout their useful life.

¹Recoverable costs are those costs that EPA incurred to provide its certification and compliance programs. In the preamble of the proposed revised fee rule, we will include information on how we determined what costs were recoverable.

III. The Fees Cost Analysis Methodology

As a result of an in-depth study of the resources expended on the MVECP, this cost analysis provides a detailed account of the recoverable and non-recoverable costs associated with the program. It sets forth the costs of the MVECP and the calculations that form the basis for each fee.

A. Fees Cost Analysis Methodology: General Steps

The methodology for the cost analysis involved completing a number of steps. A more detailed explanation of these steps along with a breakdown of the recoverable costs within the OTAQ divisions is provided later. The steps below provide a general overview of the method used to set each of the proposed fees.

- 1) *Looked at the fiscal year (FY) 2001 budget for OTAQ programs and costs.*
The FY 2001 budget lays out the various programs within the OTAQ divisions and the costs associated with them. We examined this budget to determine which programs in OTAQ are compliance related and how much it costs to implement them.
- 2) *Determined which programs in the budget are recoverable and non-recoverable.*
We examined the OTAQ budget for compliance related programs and found that all of the recoverable activities are conducted by LOD and CCD so their budgets were reviewed in greater detail. Divisions ASD, ATD, and TRPD perform work that is related to the MVECP such as research and policy development, computer modeling, regulatory development, climate change analysis, transportation control measures, and commuter choice programs but are non-recoverable through fees.
- 3) *Specified cost of compliance programs and determined cost to support future regulations.*
The FY 2001 OTAQ budget details the costs of running current compliance programs. The cost analysis calculations are based on the actual dollar amounts from the budget. The FY 2001 budget was used as a starting point because it contained the most current data available for calculating the costs of compliance activities. Cost estimates for future compliance programs are based on the cost estimates for the equipment and contract needs and the projected job functions required to support the new compliance-related regulations. These programs and associated costs will be detailed in the FY 2002-2003 budget which is currently being established.
- 4) *Examined and separated direct and indirect programs attributable to the MVECP.*
CCD and LOD perform a number of compliance-related activities therefore incurring primarily recoverable direct costs. For any job functions in the divisions that are

considered partially recoverable, we only included the cost of the recoverable portion.

- 5) *After determining all direct costs we incorporated the recoverable indirect costs.*
Indirect costs are expenses common to multiple programs and not specifically identified with any particular output or program. In the cost analysis, indirect costs come from activities that support direct compliance activities. Examples of indirect cost activities include facilities and maintenance work, computer support, transportation, travel and human resources. An overall indirect cost rate percentage that covers Agency level support functions was applied to all of the recoverable costs. The percentage is explained later in this document.
- 6) *Interviewed managers and subject matter experts on Full Time Equivalent (FTE) employees' job functions and the amount of time spent on compliance work.*
We interviewed managers and subject matter experts regarding staff job functions to determine the time and effort spent in support of compliance activities. We asked managers and/or subject matter experts to focus on each FTE and determined the type of work and time spent on compliance activities. An FTE is a unit of measure that represents a full year's worth of work for one employee. An FTE unit can be divided up (i.e. .25, or .5 FTE) among various job functions. If an employee worked on recoverable and non-recoverable projects, we divided the FTE allocation accordingly. At times the actual FTEs were interviewed. Using all of this information, we were able to determine how much of the employee's work and time on compliance activities are recoverable through fees and to which industries those fees should be attributed. The services provided to recoverable FTEs that allow the FTEs to perform their jobs (i.e. communications, facilities) are included in operating costs. The FTE's time spent on recoverable activities is reflected in the Personnel Compensation and Benefits (PC&B) section of the cost study.
- 7) *Used recoverable costs to determine the fee schedule.*
The direct and indirect recoverable costs attributed to the MVECP were allocated to the various industry categories. Industry groupings were based on the type of compliance work (basic certification, testing, in-use compliance, SEA, and/or Fuel Economy) provided for each certification request type (LDV, MC, Heavy-Duty Highway, Nonroad CI and Other.) The fee amount was determined by adding up the recoverable costs for each certification request type and dividing that amount by the number of certificates issued yearly (per industry).

B. Fees Cost Analysis Breakdown by Applicable Divisions

1. Laboratory Operations Division (LOD)

a. Overview of LOD Groups, Support Groups, and Functions

LOD consists of two operational groups and four support groups. The operational groups are:

Advanced Testing Group (ATG) – conducts research for advanced engine technologies. Costs associated with this group were deemed non-recoverable.

Compliance/Development Testing Group (CDTG) – performs compliance and confirmatory testing for light-duty vehicles, and heavy-duty and nonroad engines. The group also performs testing for regulatory work.

The four support groups are:

The Testing Services Group (TSG) is comprised of three smaller groups: Data Team, Chem Lab Team and Maintenance Team. TSG supports the ATG and CDTG groups by providing data collection, chemical analysis and maintenance work for ATG and CDTG test sites. TSG also provides correlation work for the other groups and provides parts and supplies.

The Data Team develops and maintains computer systems for the operational groups. Out of the four FTE in this group, one works solely on the development of vehicle test data which is 100% compliance related and is therefore fully recoverable. The remainder of the group services the Advanced Technology Group and the development testing of vehicles and engines, which is considered non-recoverable.

The Maintenance Team calibrates equipment in the laboratory, performs minor repairs, performs diagnostics in test cells, names gases and does other ad-hoc work required to keep the laboratory running smoothly.

The Information Management Group (IMG) provides all necessary information management services to NVFEL and is organized into two sub-groups -- The Program Management Network (PMN) and the Laboratory Network System (LNS). The PMN provides support services to all operations except for laboratory testing. The LNS provides support services for laboratory testing.

The Facilities Services Group (FSG) is comprised of three smaller groups; Facilities, Purchasing and Quality Control. As a whole, FSG provides basic infrastructure services to the five divisions in NVFEL. These services include but are not limited to management of housekeeping, security services, HVAC systems, procurement, and quality control.

Immediate Office (IO) – performs the administrative tasks to keep the LOD operating effectively and efficiently.

b. Data Collection

The proposed fees for the MVECP program are based upon annual expenses such as the purchase of buildings, leases and leasehold improvements, buildings and facilities projects. The 2001 Budget was used as a guideline for costs with projections made to future years when the current costs did not reflect a standard cost. In conjunction with the 2001 budget, we used contracts to verify costs when available. We also interviewed subject matter experts when the recoverability of costs was not easily determined with respect to the MVECP fees program. Subject matter experts were used to develop assumptions for recoverable FTE by work group (e.g. the Compliance/Development Testing Group, Testing Services Group, Facilities Services Group, Information Management Group, Advanced Testing Group and Immediate Office within LOD) and recoverable core testing operations costs. The combination of these sources was used to develop the recoverable costs in this cost study.

EPA costs are separated into two categories:

Labor - consists of EPA employee labor costs. As of Fiscal Year 2000, these costs were an average of \$85,000 per FTE. Total labor costs allocated to this study were developed using the applicable number of FTEs multiplied by the PC&B rate of \$85,000. Based upon the information the subject matter experts shared, the following allocation units were used to determine recoverable PC&B costs:

Type of Work Performed – used as an allocation unit if it directly impacted the services offered by the Compliance Development and Testing Group. This type of allocation was used for the Compliance Development Testing Group, Advanced Testing and Testing Services Group. The subject matter experts were able to determine the total amount of FTE expended on compliance and confirmatory testing work. Based upon the recoverable FTE, PC&B costs were calculated by multiplying the FTE by the PC&B rate of \$85,000.

Common Units of Measure are used as allocation methods if FTE or operating costs did not have a unique link to the CDTG and it was not possible to isolate the amount expended on compliance and confirmatory testing. The Immediate Office, Facilities Service Group and the Information Management Group used this type of allocation. The allocation units used are:

- FTE – Immediate Office PC&B costs
- Workstations serviced – Information Management Group PC&B costs
- Square footage – Facilities Service Group PC&B costs

Operating Costs – consists of contracts, parts, supplies, and infrastructure, excluding PC&B costs. These costs were obtained from budgets, contracts and interviews with subject matter experts.

Once costs were categorized, we determined if a cost was recoverable or non-recoverable. Recoverable costs are expenses associated with providing a unique service to a specified set

of customers. In this case, the customers are the manufacturers of motor vehicles and engines that fall under the purview of the MVECP. Non-recoverable costs are those expenses that are associated with providing an independent benefit for the public social interest.

Within LOD's operational groups there are both recoverable and non-recoverable costs. The Advanced Technology Group's work is primarily research-related; it develops new technologies that help produce cleaner more fuel-efficient vehicles. ATG's work serves as a public social interest thus is deemed non-recoverable.

The Compliance Development and Testing Group has both recoverable and non-recoverable costs because it performs compliance and certification testing for vehicle and engine manufacturers, which is deemed a unique service to a specific set of customers. The group also performs developmental testing in support of new regulations, which is deemed as a public social interest and therefore is non-recoverable.

LOD's support groups' costs are indirect and are comprised of both recoverable and non-recoverable costs since they service all aspects of LOD and the other divisions.

2. Explanation of LOD Cost Analysis Tables

Laboratory Operations Division (LOD) Summary Sheet (Worksheet #3)

This worksheet provides a summary of the LOD's calculation of recoverable costs. It brings forth data collected on the more detailed background worksheets. This sheet is divided into three main cost categories: Labor, Operating, and Overall EPA Indirect Costs. Operating costs are split into two categories; Indirect Program Costs and Direct Program Costs. The grand total recoverable costs are carried over to the Overall Cost Summary, Worksheet #1. The summary sheet also allocates the recoverable cost to their respective fee categories. The costs for each fee category are also carried over to the Overall Cost Summary Worksheet (#1).

Direct FTE as a Percentage of Total FTE is used to allocate recoverable labor, travel, employees of the Senior Environmental Employment Program (SEEP), training and Safety Health and Environmental (SHE) costs across fee categories. This measure was used to accurately reflect the cost of services to each of the fee categories. The percentage is calculated using the direct recoverable FTE enumerated on Worksheets # 5 and #7 which includes the number of FTE that currently work in LOD (7 FTE) and the needed additional direct FTE for LOD (9.5 FTE,) divided by Total direct LOD FTE (16.5) (see Table III.B-1 below):

Table III.B-1

LOD FTE by Industry as a Percentage of Total Recoverable FTE

	Light-Duty Vehicles (LDV)	Motor-cycles (MC)	Heavy-Duty Highway (HD HW)	Non-road Diesel (NR CI)	Other	Total
Recoverable Direct FTE	13	0	2.25	0	1.25	16.5
% of Total	79%	0	14%	0	8%	100%

Direct FTE as a percent of labor is used as an allocation device throughout the cost study. In each case the fraction of direct FTE to the entire FTE applicable to that category is applied to the entire cost to determine the recoverable fraction.

Labor:

Direct- These are the costs associated with LOD employees who perform compliance and confirmatory related work. The 39 direct FTE represent the current FTEs as of FY 2001. Worksheet # 5 shows the total number of FTE per operational group (CDTG and ATG) and the portion that is recoverable to the MVECP. The recoverable number of direct FTEs (7) is then multiplied by the PC&B rate of \$85,000 which results in the recoverable direct PC&B cost of \$595,000. The recoverable direct PC&B cost is allocated to each industry based upon work performed by recoverable FTEs for that industry.

The entire PC&B cost was allocated only to the light-duty industry because the direct, recoverable FTE in LOD currently test only light-duty vehicles and light-duty trucks. Of those, 60% work on certification and fuel economy while 40% work on recall activities, based upon review of Federal Test Procedure Equivalents (FTPEs)² performed. The PC&B cost for certification and fuel economy was determined by multiplying the compliance cost, \$595,000 by 0.6 to calculate the Certification/Fuel Economy cost of \$357,000. The In-use cost was calculated in the same way using 0.4 as the multiplier, resulting in a cost of \$238,000.

Additional Direct and Indirect- The description of Worksheet #7 contains an account of the additional LOD labor needs 9.5 direct and 1.5 indirect FTE. Since these FTE are specifically for compliance programs as shown in Worksheet #7, all of the labor costs for

²An FTPE is a measure of work used by the lab and is equivalent to the amount of resources needed to perform a standard emissions test called the Federal Test Procedure. All test procedures are expressed in terms of the amount of resources used to perform the Federal Test Procedure. For example, the amount of resources need to conduct the Highway Test Procedure are half of that needed for the Federal Test Procedure. Therefore, the Highway Test Procedure requires .5 FTPE.

these FTE are recoverable. The PC&B costs are determined by multiplying the FTE by the PB&B rate of \$85,000. Worksheet 7 shows that 6 direct FTE and 0.5 indirect FTE are needed for LD. The LD direct and indirect additional FTE costs are distributed between Cert/FE (60%) and Recall (40%) resulting in direct costs of \$306,000 and \$204,000, respectively and indirect costs of \$25,500 and \$17,000, respectively.

The additional FTEs needed for heavy-duty highway are 2.25 direct and 0.5 indirect resulting in costs of \$191,250 and 42,500, respectively. Testing for Other engines requires 1.25 additional direct and 0.5 indirect FTEs with costs of \$106,250 and 42,500 respectively.

Indirect PC&B- are the costs associated with LOD support groups that provide services to the operational groups. The 54 total indirect FTE represent current FTE as of FY 2001. Worksheet #6 shows the total number of current FTE per support group and the portion which is recoverable to the MVECP. The recoverable number of indirect FTEs (15) is multiplied by the PC&B rate of \$85,000 to get the recoverable direct PC&B cost of \$1,278,957. The recoverable indirect PC&B cost is allocated to each industry based on Direct FTE as a Percentage of Total.

The total annual recoverable labor cost is \$2,808,957.

Operating:

Indirect Program Costs are non-labor related costs that are incurred by LOD that are not directly associated with confirmatory and compliance activities but are required to assure daily business operations. These costs include travel; senior costs; facilities; training; and safety, health and environmental costs.

Travel: The overall travel cost was obtained from FY 2001 budgets for LOD and were multiplied by the percentage of recoverable direct FTE to operational FTE to determine the recoverable portion.

The total recoverable travel dollars (\$10.2K) are allocated across industries based on Direct FTE as a Percentage of Total as was done with PC&B above.

Seniors: The total cost for the LOD SEEP employees contract is \$672,000 and the recoverable cost is \$89,889 as shown in worksheet #8. The recoverable cost for SEEP employees is allocated across industries based on Direct FTE as a Percentage of Total.

Ann Arbor Facilities: This category includes the cost of operating the Ann Arbor facility and all of the budget items outlined in the Ongoing Facilities Costs Table (Worksheet #9). The entire cost for FY 2001 is \$6,540,074. CDTG's portion of the cost is \$1,603,231. The total recoverable cost for light-duty was \$1,412,797. LOD's portion of this is the fraction of LOD direct FTE that work on light-duty (13) with respect to the

total that work on light-duty. The totals for Cert/FE and In-use LDV are \$314,834 and \$209,889 respectively. The totals for Heavy-duty highway is \$90,817 and \$50,454 for the Other category. Please refer to Worksheet #9 for further clarification on how costs were allocated across fee categories.

Training: Overall training expenditures were obtained from the LOD FY 2001 budget and were multiplied by the ratio of recoverable FTE to operational FTE to determine the recoverable portion.

The total recoverable training dollars are allocated across industries based on Direct FTE as a Percentage of Total as was described above.

Safety Health and Environmental (SHE): The Safety, Health and Environmental budget for the Ann Arbor campus is \$650,000 for FY 2001. The recoverable portion of the budget was determined by multiplying the cost by the ratio of direct FTE's in LOD and CCD to the FTEs in the Ann Arbor campus. This ratio was used since LOD manages the SHE budget for all the OTAQ divisions housed in Ann Arbor.

The LOD portion of the recoverable budget, \$31,781 was then distributed to each industry by multiplying the recoverable total by the fraction of direct FTE for each. The LDV allocation was again divided between Cert/FE and In-use.

Communications: The communications category includes the Working Capital Fund, IT Support and Computer Support. The Working Capital Fund expenses are for the AA and DC OTAQ facilities. This category covers workforce related information technology services including but not limited to E-mail, Internet connectivity, Wide Area Network (WAN) and Local Area Network (LAN) access, long distance services and teleconferencing. In addition to the above, the Working Capital Fund also covers the OTAQ DC facilities telephone, voice mail and miscellaneous services. IT support are expenses related to contracted services for the OTAQ Ann Arbor facility. These services include help-desk support, desktop installations, moves, repairs and voice and data services (e.g. phone and video conferencing). Computer Support applies to AA and DC OTAQ facilities and are comprised of items needed to keep our computer systems operational. This includes but is not limited to licenses for hardware and software, equipment, parts and supplies. The recoverable costs were distributed to the industries by the percent of total of FTEs.

Lab Modernization: The Laboratory Modernization undertaking, as discussed in detail under worksheet #10, has a total cost estimate of \$14,130,000 of which \$10,030,000 is recoverable. The recoverable portion is amortized over 10 years for an annual recoverable cost of \$1,003,000. The costs are allocated to the light-duty and the heavy-duty highway industries directly according to the program for which the equipment is purchased.

Buildings & Facilities: Buildings and Facilities expenditures are non-recurring costs that are included but not limited to the laboratory building purchase, office building expansion and necessary repairs and improvements to both buildings as discussed in detail in Worksheet #11.

The total for Buildings and Facilities is \$21,547,000, with an amortized annual recoverable cost of \$243,523. The costs were distributed to the industries using the percentage of direct FTE.

Total Indirect Program Costs: The total indirect costs are a sum of the columns in the Indirect Program Costs portion of the table.

Direct Program Costs: These are costs directly associated with EPA's compliance programs. LOD's direct program costs are all associated with testing at the NVFEL.

Core Testing Operations- Core Testing Operations include the costs for instrumentation repair, lab maintenance contracts, vehicle and engine procurement, and other aspects of conducting tests. These costs are described in more detail in the description of Worksheet #12. The total cost is \$2,274,460 and the recoverable cost is \$1,592,545. The costs were divided among the industries by direct percentage in the same way as Buildings & Facilities above.

Total Direct Program Costs consists only of the Core Testing costs.

Total Operating Costs: This is the total of the Indirect Program Costs and Direct Program Costs.

Overall EPA Indirect Costs: The Overall EPA Indirect Costs rate was developed by the Office of the Chief Financial Officer (OCFO), Financial Management Division (FMD) in accordance with Federal Accounting Standard #4. According to Federal Accounting Standard #4, we are able to recover a prorated share of all applicable indirect costs. The rates were calculated based upon the FY2000 actual indirect costs for specified units and the total FY2000 disbursements. Our indirect costs come from three levels within the EPA. The rate was developed based upon the indirect costs incurred by the following units:

- 1) National EPA General and Administrative Costs (to recover EPA headquarter costs) - 7.82%
- 2) Office of Air and Radiation Headquarters Costs - 5.56%
- 3) Office of Transportation and Air Quality – 3.52%

The total percentage 16.9% was used to develop the current indirect costs. The OCFO used this same methodology to develop this type of rate system for other programs such as

Superfund. The overall indirect cost was developed by multiplying the total for each category by the 16.9% indirect rate. This resulted in an EPA total indirect cost of \$1,116,487 for LOD.

Grand Total Recoverable Costs: The Grand Total Recoverable Costs is the total of all of Labor, Operating and Indirect costs described above. The total recoverable cost for LOD is \$7,722,921.

LOD Direct Labor (Worksheet # 5)

This worksheet shows the FTE from LOD's Compliance Development and Testing Group (CDTG) and the Advanced Testing Group (ATG) that work directly on compliance testing. The table illustrates how we counted recoverable FTEs for LOD in terms of direct labor. The recoverable FTEs are only from the CDTG group. This group performs compliance and in-use testing. ATG has no recoverable FTE because the work is based on developmental testing and research in vehicle technology and not compliance testing. Below is an explanation of the breakdown as shown in worksheet #5.

Of the 19 FTE in CDTG, 10 FTE work on vehicle testing. According to a subject matter expert, 70% of their work is compliance-related, resulting in 7 recoverable FTE. Because there are no recoverable tests performed by ATG, the number of recoverable direct FTE is 7.

Indirect Labor Cost-LOD & CCD (Worksheet #6)

LOD Indirect Labor costs are incurred by the work of four support groups – Testing Services, Facility Services, Information Management, and the Immediate Office. The recoverable costs for each of these support functions were determined based on interviews with group managers.

Testing Services Group - provides three distinct services listed below. These services were reviewed separately to determine how much time the FTE's in each of these groups spend supporting the compliance and confirmatory testing process.

- 1) *The Data Team* develops and maintains computer systems for the operational groups. Out of the four FTE in this group, one works solely on the development of vehicle test data which is fully recoverable. The remainder of the group supports the Advanced Technology Group and performs the development testing of vehicles and engines which is considered non-recoverable. There is 1 recoverable FTE in this group.
- 2) *The Chemistry Laboratory Team* performs various chemical analyses for compliance testing and regulatory development. The chemistry laboratory has five FTE two of which are recoverable. One FTE solely does compressed natural gas work, which is 100 % compliance related. The chemistry laboratory has another FTE that works on the fuels needs for the laboratory. That FTE spends approximately 40% of his/her time supporting fuel confirmatory testing needs. The rest of the FTEs perform non-recoverable work.

There are 1.4 recoverable FTE in this group

- 3) *The Maintenance Team* which calibrates equipment in the laboratory, performs minor repairs, performs diagnostics in test cells, provides calibration gases and does other ad-hoc work required to keep a laboratory running smoothly. There are seven FTE in this group of which 2.2 support confirmatory testing and are, therefore, recoverable.

The Testing Services Group has a total of 4.6 recoverable FTE.

Facilities Services Group

- 1) *Facilities* employs 4.75 FTE and provides housekeeping, security, and HVAC management services. This group does not provide any unique service to the Compliance and Confirmatory Process, therefore FTE were allocated by the standard measure of work facilities uses, square footage serviced. The procurement group uses "Purchase Requests processed" as a standard measure of work. Recoverable FTE were determined by multiplying the percentage of recoverable square footage by the number of FTE. The percent of recoverable square footage was determined by examining which areas were allocated for activities directly related to compliance and confirmatory activities and dividing by total square footage. These calculations resulted in a total of 1.4 recoverable facilities FTE.
- 2) *Purchasing* provides procurement services and employs 3 FTE's. This group does not provide any unique service to the Compliance and Confirmatory Process. Therefore FTE were allocated by the standard measure of work that the Purchasing group uses- Purchase Requests (PR's) processed for procurement. An interview with the group manager and review of PR's indicated that approximately 75% of requests were from the LOD and CCD. Of the portion from LOD and CCD, 9% were allocable to confirmatory and compliance testing. The net result is 6.8% of 3 FTE's time is recoverable (.20 FTE.)
- 3) *Quality Control* employs 3 FTE and provides unique services to each of its customers. Based on interview with the group's manager, the quality control group spends approximately 90% of its time with the Compliance and Development Testing Group. Approximately 70% of that time is related to compliance and confirmatory testing. As a result, 63% of the 2 FTE (1.3) is recoverable.

The Facilities Services Group has a total of 2.9 recoverable FTE.

The Information Management Group (IMG) provides communication infrastructure services to the six OTAQ divisions. Based on an interview with the group manager, this group does not provide any unique service to the compliance and confirmatory process. Therefore, FTE were allocated by the standard measure of work the IMG uses: workstations serviced. The IMG is broken into two groups: Program Management Network and Laboratory Network System.

- 1) Program Management Network (PMN) provides support services to all operations except laboratory testing. This group employs a total of nine FTE. The recoverable portion of FTE was determined by dividing the number of workstations serviced (450) by the number of recoverable workstations (74) in LOD and CCD. This quotient is multiplied by the number of FTE in the PMN group (9) to determine the recoverable portion of PMN, 1.5 FTE.
- 2) Laboratory Network System (LNS) provides support services for laboratory testing. This group employs a total of 2.25 FTE and services 300 workstations of which 40 are for compliance and confirmatory testing. The recoverable portion of LNS FTE is .3.

The total recoverable FTE for the Information Management Group is 1.8.

LOD Immediate Office employs 17 FTE, which handle the managerial and administrative functions of LOD. The Immediate staff does not provide a unique service to the Compliance and Development Testing Group thus its PC&B costs are allocated using Direct Recoverable FTE/Operational FTE. As a result, 34% of the 17 LOD Immediate Office FTE is recoverable, 5.8 FTE.

LOD Additional Labor Needs (Worksheet #7)

This worksheet describes the LOD additional labor needs for compliance testing services the EPA will implement by FY 2003. EPA will be performing new or additional confirmatory, in-use and on-road testing for light-duty vehicles (including medium-duty chassis testing), heavy-duty engines and nonroad gasoline engines. The worksheet shows the FTE required for light-duty portable emissions system testing, medium duty chassis testing under the light-duty program, heavy-duty highway engine, and nonroad engine testing programs. Both direct and indirect FTEs are utilized in these areas. Direct FTE are involved in conducting and performing tests. Indirect FTE provides computer support by processing the data collected. Based upon interviews with group managers in LOD and CCD, the following FTE are needed in the following test areas as shown in Table III.B-2 below:

Table III.B-2
Additional LOD FTEs Needed for Compliance Testing Services

<i>Industry</i>	<i>Direct FTE Needed</i>	<i>Indirect FTE Needed</i>
<i>Light-duty</i>	6	0.5
<i>Heavy-duty Highway</i>	2.25	0.5
<i>Other</i>	1.25	0.5
<i>TOTAL</i>	9.5	1.5

The total FTE for LOD's additional labor needs are 9.5 direct FTE and 1.5 indirect FTE for a total of 11 additional FTE.

SEEP Employee Costs LOD (Worksheet #8)

EPA participates in the Senior Environmental Employee Program (SEEP) program whereby the agency contracts with an organization that provides qualified retired persons to perform duties for the agency that are not performed by the existing workforce. The costs associated with this grant program are considered operating costs. We interviewed subject matter experts in each of the LOD groups to determine whether each SEEP employee performs any work that specifically benefits confirmatory and compliance testing.

In cases where a SEEP employee works directly on confirmatory and compliance testing, that portion of his or her time was directly allocated to the cost study. In cases where an indirect benefit was provided to the program, a common unit of measure, FTE, was used to determine the percentage of FTEs to be allocated to the MVECP. The indirect allocation was determined by applying the percentage of LOD and CCD recoverable FTE to total Ann Arbor FTE multiplied by the total contract cost of \$672,000. The total recoverable cost for senior employees is \$89,889.

Ann Arbor Facilities (Worksheet #9)

The Ann Arbor Facilities costs are expenses associated with the maintenance and security of the (NVFEL) Laboratory Building and the Office Building in Ann Arbor. Some of the costs included in the facilities line items are rent, utilities, housekeeping and security. Recoverable costs were determined based on interviews with the Facilities and Compliance Development and Testing Group managers.

Recoverable facilities costs for the laboratory building were allocated by square footage used by the Compliance and Development Testing group for confirmatory and compliance testing only. The office building costs were allocated by square footage occupied by the recoverable FTE housed in that building.

The ongoing costs of the lab building are 35% recoverable based on the square footage that is used for recoverable activities. By the same method, 11% of the office building operation costs are recoverable.

The percent allocated to the fee categories is based on CCD and LOD direct FTE divided by the overall CCD and LOD direct FTE. These percentages multiplied by the direct overhead CDTG allocation of \$1,603,231 equal recoverable costs of: \$1,412,797 (LDV), \$61,037 (MC), \$91,555 (HD HW), and \$50,864 (Other).

The total recoverable cost for On-Going Facilities Operations is \$1,603,231.

Special Case:

Security Services are available to both the office building and the laboratory building. The recoverable cost is determined using a weighted average of square footage occupied in the laboratory and Office buildings related to compliance and confirmatory testing. The square footage percentages for the lab and office buildings were weighted 75% and 25%, respectively. This reflects the usage rate of services by both buildings. This percentage is multiplied by the annual contract cost of \$650,000 which results in a recoverable cost of approximately \$188,000.

NVFEL Laboratory Modernization Budget Request (Worksheet #10)

The NVFEL Laboratory Modernization Plan consists of equipment and upgrades necessary to ensure that the National Vehicle and Fuel Emissions Laboratory in Ann Arbor, has the necessary tools to perform all the testing that is required for new rules and regulations regarding mobile sources and air quality. The portion deemed recoverable is that which relates to compliance and confirmatory testing. All laboratory modernization costs were amortized on a straight-line basis over a 10-year period based on the useful life of the equipment.

To prepare for testing of these new regulatory standards, OAR developed a “Laboratory Equipment Modernization Program” for the Ann Arbor Laboratory. The principle functions that require upgrading at the laboratory are:

- testing of vehicles at very low emission levels using a variety of fuels;
- testing of heavy-duty engines;
- fuel and chemical analysis capabilities

LOD testing services needed to support certification and compliance activities include:

- Continued testing using US06
- Special case by case support for compliance testing items like hybrid electric vehicle testing and Rover/PEMS testing of heavy-duty engines
- In-use procurement contracts
- The ability to test at very low emissions levels
- OBD compliance, in-use, and special testing.
- CNG, NMOG and Tier 2 testing on a variety of fuels

- Fuel cell vehicle testing
- 4WD confirmatory and in-use testing capabilities
- Heavy-Duty (HD) and Nonroad (NR) compliance testing
- Laboratory information system services enabling the transfer of data to and from the emissions test database

The NVFEL Laboratory Modernization Plan-Budget Submission consists of three critical testing support areas requiring new instrumentation and upgrades. These critical areas are:

- Critical Tier II LDV Test Capability (recoverable costs)
- Critical MY2007 Diesel Engine Standards Test Capability (recoverable costs)
- Critical Regulatory Development Test Capability (non-recoverable)

The critical testing areas, shown on the Worksheet #10, indicate the required upgrades needed to support compliance testing. Note that the Critical Regulatory Development test capability area is not involved in compliance testing. The instrumentation required in this area will support developmental testing and research and is therefore non-recoverable.

Critical Tier II LDV Test Capability:

Standard Tier II LDV Test Capacity

This category includes gasoline fueled, 2WD car and truck compliance testing. EPA must accurately and reliably measure emissions from Tier 2 level cars and trucks. The equipment listed in Worksheet #10 includes low range analytical instruments, exhaust sampling and conditioning systems and instruments needed for the new gas standards and support systems required to operate these systems in a reliable manner. Worksheet #10 also lists the laboratory equipment required to operate these cells in compliance with the revised federal test procedures.

Diesel and 4WD Car/Truck Test Site

This category includes gasoline fueled 4WD car, truck and hybrid compliance testing, and all diesel fueled car and truck compliance testing. NVFEL will upgrade current laboratory equipment to test 4WD vehicles and trucks. Currently the laboratory is only capable of testing 4WD designs in 2WD mode. In addition, upgrades will allow the testing of hybrid vehicle designs that also have 4WD capability. Requests have been made for instrumentation that is needed to test medium-duty passenger vehicles powered by engines that comply with Tier 2 emission standards. The laboratory modernization budget worksheet lists all of the test equipment upgrades required to measure diesel emissions at the Tier 2 levels.

The total recoverable cost for this category is \$8,100,000. There were no non-recoverable items.

Critical MY2007 Diesel Engine Standards Test Capability:

Heavy-duty Engine Test Sites

This category covers testing equipment needed to test heavy-duty on-highway engines that meet the 2004 MY standards and the even tighter 2007 MY standards. Low range analytical instruments and a sophisticated exhaust sampling and conditioning system will be required to reliably measure the lower levels of HC, NOx and particulate matter.

Worksheet #10 lists, in this category, the equipment necessary for EPA to test heavy-duty engines that meet the 2004 and 2007 MY standards.

The total recoverable cost for this section is \$1,930,000. The non-recoverable costs total \$1,100,000.

The Critical Regulatory Development Test Capability

This capability is not necessary for the MVECP. The equipment is, therefore, considered a non-recoverable cost.

The Advanced Technology Division (ATD) is responsible for all automotive technology research and development programs to improve fuel economy and to reduce vehicle and fuel emissions from mobile sources. The major focus of the division is the development of new and emerging technologies such as Clean Car (Partnership for a New Generation of Vehicles), low NOx diesel engines, and alternative fuel technologies. ATD is also responsible for climate change policies and strategies related to vehicle efficiency and fuels.

The total non-recoverable cost for this category is \$3,000,000.

Building and Facilities Funding for NVFEL (Worksheet #11)

The purchase and repairs for the building facilities that are described in this worksheet are non-recurring facilities expenditures which include but are not limited to: the purchase of the laboratory building, the office building expansion and necessary repairs and improvements to both buildings.

The repair and improvement expenditures are amortized over their useful life on a straight-line basis. Useful lives were extracted from IRS Publication 946, Appendix B³ which gives descriptions of different types of assets and their useful lives. For example in Appendix B-1 office furniture shows a useful life of 10 years. The recoverable portion of the repairs and improvements were calculated using square footage as a common unit of measure since none of

³The IRS Publication 946, Appendix B, gives the recovery periods for types of assets. It is a standard document that most accountants use as a resource recovery period information.

these projects are directly allocable to compliance and confirmatory testing. Repairs and improvements were allocated based on recoverable square footage.

The building purchase and office expansion recoverable cost used the same allocation method as that from the 1992 cost study. The “Summarization of Projects” category on the worksheet includes those projects that occurred after the 1992 fees rulemaking. There are still two projects currently being amortized from the 1992 rulemaking and they are ; building purchase and the office expansion. The grand total of costs incurred is \$21,000,000 with an amortized annual recoverable cost of \$243,523.

Core Testing Operations (Worksheet #12)

Core Testing Operations consists of three groupings:

1. Testing Support Services
2. Laboratory Maintenance Contracts
3. Vehicle and Engine Procurement

The recoverable portions of these groups are allocated to light-duty, heavy-duty and Other industries by applying a percentage to the total cost of each group. The percentage applied is the number of LOD FTE that work directly on compliance testing to the number of direct LOD FTE. The percentages allocable to LDV, HD HW, and Other fee categories are 79%, 14%, and 8%, respectively.

Testing Support Services repairs equipment and tests fuels and gases. Testing Support Services has total costs of \$782,800. Based on interviews with subject matter experts we determined that 50% of testing support services benefit the Compliance/Development Testing Group (CDTG). Of that amount 70% is related to compliance and confirmatory testing, and the remaining 30% is for regulatory development testing work which is a non-recoverable cost. The total recoverable cost of these services is \$273,980. These cost incurred are based on the FY 2001 budget.

Laboratory Maintenance Contracts are utilized for the upkeep of laboratory equipment. The total costs for Laboratory Maintenance Contracts is \$266,300. Based on interviews with subject matter experts we determined 50% of laboratory maintenance contracts benefit the CDTG. Of that amount 70% is related to compliance and confirmatory testing, and the remaining 30% is for regulatory development testing work which is a non-recoverable cost. The total recoverable cost of these services is \$93,205.

Vehicle and Engine Procurement is all compliance and confirmatory testing related, thus fully recoverable. Total vehicle procurement is \$1,000,000. The procurement cost of Heavy-duty highway (HD HW) engines for recall testing is based on an estimate obtained from a contractor who performs these type of services. The procurement of HD HW engines would cost ~ \$25K for the first engine in an engine family and \$22K for each additional engine. Tests can be performed on two engine families annually, five engines per engine family. The

procurement costs for vehicles and engines is 100% recoverable at \$1,225,360.

The Core Testing Operations total costs is \$2,274,460, of which \$1,592,545 is recoverable.

3. Certification and Compliance Division (CCD)

The Certification and Compliance Division (CCD), implements the motor vehicle and engine standards, thereby ensuring that the United States achieves the environmental benefits projected by EPA regulations. CCD uses a three part program to assure compliance with EPA emissions regulations. The three part compliance program consists of vehicle and engine certification; selective enforcement auditing and production line testing; and in-use testing and recall.

a. Overview of CCD Functions and Division Structure

Certification

The CAA requires that regulated motor vehicles and engines distributed or offered for sale in the U.S. must be covered by a Certificate of Conformity indicating compliance with the emission standards set forth in the Act. Each model year, EPA receives certification requests for LDV/LDTs, heavy-duty diesel (CI) and gasoline (SI) engines, heavy-duty vehicle evaporative systems, motorcycles, heavy-duty on-highway engines, nonroad spark ignition (SI) engines, nonroad diesel (CI) engines, locomotives and marine engines. EPA processes these applications and makes a determination of conformance with the CAA and related regulations. If the vehicles or engines satisfy the prescribed emission standards, EPA issues a Certificate of Conformity for the relevant vehicles or engines.

The certification process includes but is not limited to an application for certification review, a durability justification review, an onboard refueling vapor recovery system review (where applicable), emission-data vehicle approval and processing, certification request processing and computer support. Other activities related to the certification process include auditing an applicant's testing and data collection procedures, laboratory correlation, and EPA confirmatory testing and compliance inspections and investigations related to certification.

Selective Enforcement Auditing and Production Line Testing

EPA further ensures compliance with the CAA through selective enforcement auditing (SEA.) SEA activities include the selection and testing of vehicles and engines off the assembly line at various production plants around the world to determine compliance with emission standards.

Under some regulations, and in some cases voluntarily, manufacturers submit their own production line test data to the EPA. In these cases, manufacturers routinely select and test vehicles or engines from the assembly line and then submit the data to the EPA. The data is

reviewed to assure that the vehicles and engines conform to the applicable standards.

In-use Testing and Recall

In-use compliance activities ensure that vehicles and engines continue to meet emission standards throughout their useful lives.⁴ In-use compliance relies upon testing performed by the EPA and manufacturers to assure that the vehicles and engines are meeting the applicable standards in the field. If the tests indicate that a vehicle or engine group does not meet the applicable in-use emission standards, a recall may be conducted.

Based on the above activities, EPA determines whether a manufacturer meets the CAA requirements, issues a Certificate of Conformity to permit the manufacturer to market vehicles or engines in the U.S., and ensures compliance.

CCD also administers several other programs that either support the division's compliance goals or support agency goals. Other compliance activities include a fuel economy program that involves corporate average fuel economy calculations and fuel economy labels.

Division Structure

CCD consists of three program groups and a division office group. CCD is geographically split between Ann Arbor, MI and Washington, D.C. with two groups in each location. The following are the responsibilities of the individual groups.

- 1) Vehicle Programs Group (VPG) - VPG performs most of the compliance work for light-duty vehicles. VPG activities include certification, selective enforcement auditing, in-use testing and recall for these vehicles.
- 2) Outreach and Planning Group (OPG) - OPG is split between Washington, DC and Ann Arbor, MI. Each geographical location has a group manager. This group is responsible for outreach, planning, budgeting and assessment, enforcement development and policy coordination. OPG also contributes to regulation development and coordination, information management, and other programs.
- 3) Engine Programs Group (EPG) - EPG performs most of the heavy-duty and nonroad engine compliance activities. This includes certification, selective enforcement auditing, in-use testing and recall for heavy-duty engines, heavy-duty trucks and nonroad engines.
- 4) Division Office Group - This group performs both program work and the

⁴Definitions of vehicle and engine useful life are included in sections 202 and 207 of the CAA, as amended.

administrative tasks to keep the division operating effectively and efficiently.

b. Data Collection

The following is an explanation of how we collected data for the cost study. We used several methods to identify the costs of recoverable programs. In each case, we used the method most appropriate to identify the cost of conducting each program. Whenever possible, we used costs that were directly attributed to a program. We made estimates where necessary. Each of the methods used are discussed below.

1) Examined CCD Budget and Programs

The CCD 2001 budget was examined and recoverable activities were identified. If division projections included augmenting or decreasing programs, the projected budgets for the future programs were used in the cost study. In this portion of the cost study we included only items that were not covered in the LOD section. This is true even though the work request may have originated in CCD.

2) Interviews with CCD Management and Subject Matter Experts

When costs could not be determined for a specific item, subject matter experts were interviewed to determine what fraction of an entire cost was attributable to a recoverable activity. Using this information, we were able to determine how much of the employee's time should be recovered by fees and to which industries those fees should be attributed.

3) Separated Recoverable and Non-recoverable Programs, FTEs and Job Functions

According to the Clean Air Act, Section 217, the Administrator may promulgate regulations to recover all reasonable costs associated with new vehicle or engine certification, new vehicle or engine compliance monitoring and testing and in-use vehicle or engine compliance monitoring and testing. Therefore, all costs associated with EPA's certification, selective enforcement auditing and in-use testing and recall programs meet the above criteria and are recoverable according to the Act.

Once we identified the recoverable programs, we compiled a list of CCD employees and asked managers to indicate which employees work directly on compliance activities. If an employee's entire time was not spent on compliance, the manager was asked to indicate how much of that employee's time was spent on compliance activities.

Recoverable and non-recoverable programs were determined by examining CCD's 2001 fiscal year budget and determining which items directly support certification, SEA and in-use programs.

4) Separated Direct and Indirect Programs, FTEs and Job Functions

Budget items for recoverable programs were determined by examining CCD's 2001 fiscal year budget and identifying the items that directly support certification, SEA and in-use programs. We identified all of CCD's program budget items (testing, computer, contracts) that directly support recoverable programs. Other budget items that are associated with CCD programs but do not directly support them are indirect costs. These budget items are used across the division but the cost per program cannot be determined directly. In this case, only the portion of the indirect budget that is allocable to compliance programs is recoverable by fees.

5) Allocation Methods and Cost Determination for CCD

Whenever possible, recoverable costs were allocated by determining the current direct costs to support the CCD compliance programs. In cases when the direct costs could not be determined, the portion of a budget item that was used to support the compliance program was calculated. We also took into account the changes that will be taking place as the division increases emphasis on in-use compliance and estimated cost changes as applicable using the best cost estimates available. The details for each cost are outlined below. The heavy-duty and nonroad compliance plan described in Worksheet #16 and the motorcycle compliance program discussed in Worksheet #13 show estimated future costs.

CCD Labor Costs

1) PC&B Calculations

Personnel compensation and benefits are all costs associated with the CCD labor force (salary, health benefits, pension, etc.) The PC&B rate used in this cost study is \$85,000 per FTE.

2) FTEs in CCD

Federal employees that work directly on recoverable compliance programs were determined by interviewing the CCD group managers, employee surveys and interviews. If a person works a fraction of his or her time on compliance, that fraction of an FTE was counted in the cost study.

FTE who provide services for the division to support its programs, including the compliance program, were included as indirect FTE. The recoverable percentage of the indirect employees' time was determined in the same way as in the LOD section.

Operating Costs

Operating costs consist of contracts, parts, supplies and infrastructure; they do not include

PC&B costs. These costs were obtained from budgets, interviews with subject matter experts and contracts.

1) Travel, Training, Office Supplies and Miscellaneous

CCD's budget includes specific items that include travel, training and office supplies. These items are provided to employees as they are needed for the employee to perform his or her job effectively. CCD does not record or estimate what portion of these funds is used in support of compliance activities. Therefore, the recoverable portion of these budget items was estimated by multiplying CCD's budget amount by the ratio of recoverable direct FTE to total direct FTE.

2) CCD SEEP Employees

As stated above, the EPA participates in the SEEP program whereby the agency contracts with an organization that provides qualified retired persons to perform duties for the agency that are not performed by the existing workforce. The costs associated with this grant program are considered operating costs. Each division allocates money for the SEEP employees that work for the division.

The CCD budget includes a contract item for hiring SEEP employees. The average wage for each full time CCD SEEP is \$29,800. Actual wages may vary depending on an employee's duties and work schedule. This average assumes that each employee works full time. To estimate how much of the SEEP budget is dedicated to supporting recoverable compliance activities we interviewed supervisors and asked them to estimate how much of each employee's time is spent on compliance activities. For employees who work directly on recoverable programs we added each person's time directly and converted into a cost.

SEEP employees that provide services to the entire division provide indirect support to the recoverable programs. To determine the portion of the budget for indirect SEEP employees, we used the same method as used above to determine the indirect FTE for CCD. We calculated the percentage of recoverable, direct FTE and multiplied this by the number of senior employees that provide indirect support to the division. Worksheet #15 shows the recoverable portion of the senior budget.

3) Ann Arbor Facilities Operating Costs; Safety, Health, and Environmental Costs, Communications for CCD is the same as LOD. The FTE percent of total was used to distribute the costs across the appropriate industries.

4. Explanation of CCD Cost Analysis Tables

CCD Programs (Worksheet #13)

The CCD programs sheet lists the program items that CCD expects to fund along with its budgeted costs. The top half of the worksheet lists the compliance related programs that are recoverable through fees. The top half is divided into five parts, which are described below.

The first group of recoverable areas is Light-Duty Compliance; it includes all of CCD's light-duty compliance budget items. The first item is the certification and fuel economy information system (CFEIS) which collects manufacturer and EPA emissions test data for certification purposes. Also included in this section are coast down audits and fuel economy audits that will be conducted to confirm the data submitted by manufacturers for certification. Federal Register printing and industry workshops are recoverable costs as both the printing and the workshops cover material that will clarify EPA regulations for manufacturers.

The next section under Light-duty Compliance is Motorcycle Compliance. CCD is planning to supplement its motorcycle compliance program by conducting some in-use tests. The tests will either be conducted at a contracted facility or at the NVFEL test facility. The total for this program will cover the procurement of the in-use, on-highway motorcycles from members of the public, the testing of the on-highway motorcycles, and the computer support needed to establish and maintain the databases for storing the test data.

The next three sections of recoverable costs listed in Worksheet # 13 are Heavy-Duty Highway Engine (HD HW) Compliance, Nonroad CI (NR CI) Engine Compliance and Other Compliance. The first item in each of the categories is computer hardware and software costs for the FTE that work on the programs. The rest of the budget items the same for the Heavy-Duty Highway Engine Compliance and Nonroad CI Engine Compliance and will be described together. In-use on-vehicle testing is the contract cost of testing HD HW and NR CI engines to determine in-use emissions. The next item is the cost of equipment that will measure real onroad field operating emissions. CCD is planning to purchase commercial emission detection units that can monitor engine emissions during use. The last item under the Engine Compliance categories is the new HD and NR Compliance Program which will be a more robust compliance program for testing new and in-use heavy-duty and nonroad CI engines. The estimated total cost of the program is given in Worksheet #16 and is discussed later in this methodology. The enhanced engine program cost is split evenly between the HD HW and NR CI engine categories because the testing will be evenly split between the categories. The total cost was estimated assuming that testing would take place at a contracted facility.

The bottom half of the page lists all of CCD's non-recoverable budget items. Included in this section are rulemaking activities, work related to processing Freedom of Information Act requests, import coordination and various other activities not recoverable under the MVECP.

CCD Labor (Worksheet #14)

Worksheet #14 illustrates the CCD labor breakdown of recoverable and non-recoverable FTE. As discussed above, managers and employees were interviewed to determine what amount of each employee's time was spent directly on recoverable and non-recoverable programs. The

number of indirect FTE that supported recoverable programs was determined by multiplying the number of indirect FTE by the fraction of recoverable FTE in the entire program. Direct FTE were counted as those employees who work directly on certification, selective enforcement auditing, in-use or fuel economy audits or other compliance activities. Also counted as direct, recoverable FTE are certain CCD group managers and employees who work with manufacturers to input data into CFEIS and IO staff who work directly with compliance issues. If a group manager's recoverable time could not be determined directly, it was calculated based on the overall percent of recoverable staff.

The CCD Labor table shows a total of 73.8 FTE in CCD. Two sections show the FTE split between Ann Arbor, MI and Washington, DC. The total FTE that work directly on recoverable subject matter is 42.58, while the number that work directly on non-recoverable subject matter is 22.47. The indirect FTE that support both recoverable and non-recoverable programs is 8.7.

Senior (SEEP Employee) Cost -CCD (Worksheet #15)

The Senior Cost Summary shows the percentage of time worked by individual SEEP employees. The average cost for individual CCD SEEP employees is \$29,800. This number was determined by dividing the CCD SEEP budget by the number of SEEPs. The recoverable, direct total is determined using the percentage of time each individual employee works directly on recoverable programs, shown in the second column. The indirect number of senior employees was determined by multiplying the number of indirect FTE by the fraction of recoverable FTE in the program. The recoverable total for SEEP employees is \$220,929 for AA and \$104,573 for DC.

Large Engine Highway and Nonroad Compliance Program (Worksheet #16)

This worksheet describes a robust engine compliance program that EPA plans to implement. This new program will help to identify engine families or test groups that fail to meet EPA's large engine highway and nonroad CI engine standards. Listed on the page are aspects of the program that include Confirmatory Testing for Certification, Selective Enforcement Audits, and In-Use Dyno Testing programs. The number of tests planned for highway and nonroad CI engines is listed with the price per test and the total cost for each compliance activity. The test prices are determined by using projected contractor prices.

The CCD Staff column is the number of people needed to plan and oversee the testing. The labor cost for the required staff is included in the CCD Labor worksheet.

Summary Sheet-CCD (Worksheet #4)

The CCD summary sheet illustrates the distribution of CCD's recoverable budget dollars. The left-most column lists each of the recoverable budget items. The calculation of the total compliance costs and the distribution of the costs among different industries is shown across the page.

Labor

DC Direct and, AA Direct and Indirect - The first heading in the left column is labor. The labor FTEs are taken from Worksheet #14. Labor categories are split between direct employees and indirect employees in Ann Arbor, MI and Washington, DC. For the number of FTE listed as direct, 100 percent of the time is recoverable. The compliance costs column shows FTE for each category multiplied by the standard OTAQ PC&B rate of \$85,000. For indirect FTE who work on both recoverable and non-recoverable programs, the percent of their time that is allocable to recoverable programs is the amount of time that is spent supporting the recoverable FTE. We applied the ratio of direct recoverable to direct program FTE for DC and Ann Arbor to the DC indirect FTE (3) and the AA indirect FTE (5.7) to determine the recoverable indirect FTE (1.57 in DC and 3.6 in AA .) We determined the total recoverable FTE, by totaling the DC and AA indirect recoverable FTE (5.17) and adding them to the direct recoverable FTE (42.58) for a total of 47.75 FTEs.

The next two columns show the costs specifically for light-duty vehicles and trucks with subcategories for certification and fuel economy and in-use. Note that there are no light-duty costs for Washington, DC. because light-duty compliance work is done only in Ann Arbor. To determine the specific costs for the light-duty industry, managers of CCD were interviewed and asked to identify the people who worked directly on light-duty. The number of directly recoverable FTE working in Ann Arbor are 23.22 as shown on Worksheet #14. The FTE that work directly on certification and fuel economy were 6.02, the total for in-use was 5.4 making the total FTE for LD certification and fuel economy 11.42. The labor cost for LD FTE who work in cert and fuel economy is \$85,000 times the FTE for a total of \$970,700. The in-use portion is determined the same way using the LD FTE who work on in-use for a total of \$875,500. The Total LD column shows the total of the previous two columns, \$1,846,200.

Indirect labor for DC and Ann Arbor was determined by multiplying the number of recoverable indirect FTE for the two locations, indicated in the second column as 1.57 and 3.6, by the standard PC&B rate of \$85,000 resulting in compliance costs for DC and Ann Arbor of \$133,427 and \$305,709, respectively. The indirect costs for the light-duty industries were determined the same way as the direct costs, by multiplying the total compliance costs by the percentage of FTE working in LD. The result (\$285,684) is split between Cert & FE and In-Use by multiplying by the ratios of FTE that work in those areas, resulting in totals of \$150,208 and \$135,476, respectively.

The column entitled MC shows the costs for the motorcycle compliance program. The labor cost for the program is the PC&B for 1.5 FTE and the staff that indirectly supports those FTE. The indirect PC&B was determined by multiplying the fraction of motorcycle FTE (1.5/42.58) to total direct AA FTE by the “compliance cost” for AA direct labor. The cost of direct labor is \$127,500 and the cost of the indirect labor is \$20,025.

The next columns show the costs for heavy-duty highway diesel and gas engines, nonroad CI engines and other engines. Because the heavy-duty and nonroad CI and Other compliance programs take place in Washington, DC, there are no labor costs for these programs in Ann Arbor.

The labor cost associated with these categories of vehicles and engines is the PC&B cost multiplied by the number of FTE who work on engine compliance. We determined that 11.86 FTE work on HD HW engine compliance, 5.06 direct FTE work on NR CI compliance and that 2.44 FTE work on compliance for other engines and evaporative systems. The FTE labor fraction of the overall recoverable for the HD HW engine industry is 11.86/42.58. The labor fraction of the overall recoverable FTE for the nonroad CI industries is 5.06/42.58. The labor fraction of the overall recoverable FTE for the Other industries is 2.44/42.58. The total labor costs for the industries are the respective fractions multiplied by the total DC direct labor compliance costs for a total of \$1,007,735, \$430,440 and \$207,425 respectively.

We calculated the indirect labor cost for the industries is in the same way as the direct labor costs. We applied the LD, HD HW and Other industry ratios discussed above to the indirect FTE compliance cost. The result is \$81,708, \$34,901 and \$16,819, respectively.

Operating Costs

Travel- The first item in the operating cost section of the spreadsheet is the travel allowance for CCD. The entire travel budget for the division is \$155,000. We determined the applicable compliance costs using the percentage of direct FTEs, resulting in a total compliance cost of \$89,430. We allocated the travel costs to the different industries by determining the percentage of the FTEs that work on those industries to the total direct FTEs and applying those percentages to the total compliance travel cost.

Seniors AA, Seniors DC- The next items under Operating Costs are SEEP employees-AA and SEEP employees-DC. As discussed above, EPA uses a contract to fund the hiring of senior employees. The recoverable portion of the SEEP employees budget item is determined by adding the hours that each SEEP works on compliance activities and converting that into a certain number of full time senior employees and multiplying that by the salary for a full-time SEEP. The average salary for a full time SEEP is \$29,800. The resulting costs are \$297,000 for AA and \$210,000 for DC. The percentage allocable to compliance costs is determined by dividing the compliance cost by the total senior budget for both AA and DC. The compliance costs are allocated to the industries by applying the ratio of recoverable, direct FTEs that work on each industry to the number of total FTEs as was done in Travel above.

Ann Arbor Facilities Operating Costs; Safety, Health and Environmental Costs;- The total overall cost and the recoverable cost are shown in the Overall Summary. CCD's portion of the costs was determined by multiplying the total recoverable cost by the

number of direct CCD FTE divided by the number of total recoverable FTE.

This group of costs are incurred while operating the Ann Arbor facility. Therefore, these costs are only divided among the light-duty and motorcycle industries. The costs are split between the industries according to the FTE ratio as discussed above for Labor. The recoverable totals are in the “Compliance Cost” column.

Communications- Includes Working Capital; IT Support; and Computer Support as discussed above in the LOD section. The costs for this item were determined through LOD because that division manages the finance of these services. CCD’s portion of the costs was determined using CCD recoverable FTE divided by total recoverable FTE. The costs were distributed to the industries by applying the FTE percentage for each industry and summing into the Communications row.

Miscellaneous and Office Supplies AA & DC and Training DC & AA- The next categories of operating costs are Miscellaneous and Office Supplies, and Training for DC and Ann Arbor. The recoverable costs of these budget items were determined by applying the CCD percentage of direct FTE to the budget items, as was done for Travel, above. The costs for Miscellaneous and Office Supplies.

Programs

The program costs for heavy and light-duty vehicles and engines come from the CCD Programs (Worksheet 13). The total compliance cost is \$3,158,400.

The totals for this row come directly from the respective categories on Worksheet 13.

Overall EPA Indirect Costs

Overall EPA Indirect Costs was developed by the Office of the Chief Financial Officer (CFO), Financial Management Division in accordance with Federal Accounting Standard #4 as discussed in the description of the LOD Summary Sheet, Worksheet #3. The overall CCD indirect costs are calculated by multiplying 16.9% by the sum of the labor, Operating and Programs categories. The total result is \$1,512,920.

Grand Total Recoverable Costs

Grand Total Recoverable Costs are the total of the labor, operating, program and EPA indirect costs for each column, which is equal to \$10,465,109.

5) Overall Cost Summary Table (Worksheet #1)

The overall cost summary worksheet reflects the EPA’s projection of total annual costs incurred by the LOD and CCD on an annual basis. For each item, the amount in the Total Projected costs column represents the sum of the totals from the LOD and CCD summary.

PC&B:

Direct PC&B- are associated with LOD and CCD operational groups employees who perform compliance/confirmatory testing or work on compliance activities and issue certificates. The total FTE of 91.08 is the sum of the LOD and CCD direct FTE. The number of recoverable direct FTEs (59.08) is multiplied by the PC&B rate of \$85,000 which results in the recoverable direct PC&B cost of \$5,021,800. The recoverable direct PC&B industry allocations are the sums of LOD and CCD's costs for each industry.

Indirect PC&B- are the costs associated with LOD and CCD's support groups that provide services to the operational groups. The 60.67FTE are the sum of the indirect FTE from the two division. The recoverable number of indirect FTEs (21.71) is then multiplied by the PC&B rate of \$85,000, which results in the recoverable indirect PC&B cost of \$1,845,593. The recoverable indirect PC&B cost allocations are the sums of LOD and CCD's costs for each industry.

Operating Costs:

Travel – The overall travel dollars were obtained from the LOD and CCD worksheets #3 and #4. The costs were multiplied by the percentage of recoverable direct FTE to operational FTE to determine the recoverable portion.

The total recoverable travel dollars (\$99,636) are allocated across industries based on Direct FTE as a Percentage of Total as shown on worksheets #3 and #4 for LOD and CCD.

Seniors (SEEP employees)-The total recoverable cost for SEEP employees (\$415,391) is the sum of the LOD and CCD SEEP employee costs. The allocations are the sums of LOD and CCD's costs for each industry.

Building and Facilities Purchase and Repairs—The total recoverable cost and industry allocations for Building and Facilities Purchase and Repairs is the unrounded total taken from Worksheet #11.

Miscellaneous and Office Supplies (CCD only)-The total for this category and the industry allocations are carried forward from the CCD summary sheet.

Training— The recoverable training costs and industry allocations are the sum of the LOD and CCD training costs.

Laboratory Modernization – The laboratory modernization costs and industry allocations were carried forward from the LOD summary sheet.

Communications-The communications cost is the sum of LOD's and CCD's Communications categories in Worksheets #3 and #4. The industry allocations are sums of the divisions allocations.

Ann Arbor Facilities Operating Costs and Safety, Health, and Environmental categories—The Ann Arbor Facilities Operating costs are carried forward from Worksheet #9. The Safety Health and Environmental industry allocations are the sum of LOD's and CCD's Ann Arbor Facilities Operating Costs.

Direct Programs Costs:

CCD Compliance Programs—These costs and industry allocations consist of the CCD Program Compliance costs carried forward from the CCD Summary Sheet (Worksheet #4) for each of the respective industries.

Core Testing Operations —These costs are LOD's core testing operations costs carried forward from the LOD Summary Sheet (Worksheet #3).

Overall EPA Indirect Costs (16.9%):

Overall EPA Indirect Cost Rate - This cost, as discussed above, is calculated as a percentage of the total costs. The costs in each column of this category are the sums of the LOD and CCD indirect categories.

IV. Fees Schedule and Structure

A. Determination of the Fee

The event that triggers EPA costs related to the MVECP is the certification request. By seeking certification, a manufacturer potentially becomes involved in a number of EPA activities, including certification, fuel economy, SEA, and in-use compliance. The proposed fee structure is based on activities associated with the MVECP from which EPA may recover costs.

B. Types of Certification Requests

There are three types of certification requests that initiate EPA activities. The first type is LDV, which includes MC & LD. The second type includes heavy-duty highway engines that are highway heavy-duty diesel and gasoline engines, and nonroad diesel engines and the third type, for the purpose of this cost analysis is referred to as "Other" which includes marine, nonroad gasoline engines and locomotive engines and all California-only engine certificates submitted for engines that are intended for sale only in California. In the near future EPA anticipates additional nonroad certification requests from the all-terrain vehicle, snowmobile, large gasoline, and recreational diesel engine industries which, for purposes of the fee determination, are included in the Other category.

The LDV/LDT certification request type may also include an evaporative emission family certification request. While a separate fee could be charged for each unique evaporative emission family, it is unnecessary to do so. This is because the certification requests for evaporative emission families closely parallel requests for engine-system combinations. The single fee that is proposed for LDVs and LDTs includes the cost of both evaporative emission family compliance and engine-system combination compliance. The proposed fee for each unique engine-system combination includes all combinations of evaporative emission families.

Conversely, EPA requires a separate fee for HDV evaporative certification requests. HDV evaporative certification requests may include HDEs that were certified previously by a manufacturer different than the one requesting HDV evaporative certification. To ensure that each manufacturer is responsible for an appropriate portion of certification costs, EPA believes it is necessary to separate the activities for the HDE certification request from the HDV evaporative certification request. Separate fees for evaporative systems may also apply to some nonroad engines. For the purpose of this fee determination, the evaporative system certification applications are included in the Other category.

C. Description of Vehicle Fee Groupings

The following table shows the regulated industries and the compliance activities that EPA conducts or anticipates conducting for each category within the industry. Where the activity is normally borne by the manufacturer, such as mandatory PLT or in-use testing, the proposed fees include only the costs of receiving, reviewing and entering the submitted data. The proposed fees are based on the compliance activities that EPA performs in each category.

Table IV-D.1

<i>Industry</i>	<i>Vehicle/Engine Types</i>	<i>Applicability</i>	<i>Compliance Activities</i>
LDV	LD	Light-duty trucks Light-duty passenger cars, medium-duty passenger vehicles, complete HD vehicles	Certification Review Certification Testing Fuel Economy Testing SEA, In-Use, Recall
	MC	On-highway motorcycles	Certification Review Certification Testing, In-Use, Recall

HD HW & NR CI	Highway Engines: Heavy-Duty(HD) Diesel (CI)& Gas (SI)	(HD) Engines for Trucks and Buses	Certification Review Certification Testing SEA, In-use, Recall
	Nonroad (NR): Diesel (CI) Engine	Engines used in tractors, dozers, cranes, generators, forklifts, lawn tractors	Certification Review Certification Testing, In-use, SEA, Recall,
Other	Marine CI	Engines used to propel a marine vessel	Certification Review, SEA, Recall
	Marine SI	Outboard engines, engines used in personal watercraft	Certification Review, PLT, In-use, Recall
	Marine IMO	Engines for large commercial vessels	Certification Review
	NR SI <25HP	Lawnmowers, chainsaws, generator sets, weed wackers	Certification Review PLT, In-use, Recall
	Locomotives	Locomotive engines	Certification Review In-Use, PLT, Recall
	Evaporative HD	HD HW Trucks	Certification Review
	California Only Engines (HW & NR)	Engines used in HD HW trucks, tractors, dozers, cranes, generators, forklifts, lawn tractor	Certification Review
	Recreational Engines (in process)	Snowmobiles, off road motorcycles, ATVs, forklifts	Certification Review , SEA/PLT, In-use, Recall
	Large SI (in process)	Industrial Engines	Certification Review, In- use, PLT, Recall
	Marine SI (in process)	In-board and sterndrive engines	under review
Marine Recreational CI (in process)	In-board for recreational vessels	Certification Review, In- use, PLT, Recall	

D. Explanation of Fee Structure Table

Worksheet #2 is the Proposed OTAQ Compliance Program Fee Structure by industry. The table shows proposed fees for each industry and the estimated fee per unit. The table is split up into 3 categories: light-duty vehicles, heavy-duty highway and nonroad CI engines, and other engines.

Current Fees

EPA currently collects a fee for on-highway motorcycles, light-duty vehicles (Federal and California certification) and heavy-duty highway engines and evaporative systems:

LD Federal:\$27,211	LD California: \$8,956
HD HW Federal: \$12,584	HD HW California: \$2,145
HD HW Evap: \$2,145	Motorcycle: \$840

The fees rulemaking proposes that EPA collect fees from these industries as well as nonroad CI engines, marine engines, nonroad SI engines, locomotive engines and recreational vehicles. Proposed fees were determined by dividing the total recoverable costs for each industry by the projected number of certificates.

EPA generally has the authority to conduct the same level of activity for each certification request. The amount of compliance oversight given to the different industries varies depending on the history of the industry and its environmental impact. The proposed fees are based on the compliance activities that CCD currently conducts and plans to conduct in the near future. In 2001, we reviewed applications for certificates of conformity for all certification types. In addition, we performed certification compliance testing and fuel economy confirmatory testing on light-duty vehicles and selective enforcement audits on heavy-duty engines. The proposed fees are based on the current level of activity and planned programs for the heavy-duty highway engines, nonroad CI engines and on-highway motorcycles. In the event that it becomes necessary to provide more scrutiny to an industry, EPA will address the change in costs in a future fees rulemaking.

Light-duty and On-Highway Motorcycles (Worksheet #2, Column 1)

This category includes fees for on-highway motorcycles and light-duty vehicles. Light-duty vehicles are passenger cars and trucks. In addition, light-duty fees will apply to medium-duty passenger vehicles and complete heavy-duty vehicles because these vehicles will receive the same services for certification as passenger cars and trucks. Medium-duty passenger vehicles and complete heavy-duty vehicles were recently regulated. Although certification is not yet required for these categories of vehicles, we are including them in anticipation of certification requests for these industries in the near future.

On-highway motorcycles-The Grand Total Recoverable Cost for on-highway motorcycles indicated on the Overall Summary (Worksheet #1) is \$421,851. The number of certificates granted for MY2000 is 174. Dividing the total cost by 174 certificates results in a proposed fee per certificate of \$2,424. The industry sales for the MY were 386,127. Dividing \$421,851 by 386,127 yields an estimated cost of \$1.09 per motorcycle.

Light-Duty-The Grand Total Recoverable cost for light-duty is \$12,272,843. The certification and fuel economy portion of the cost is determined by adding the grand totals for those columns in the LOD and CCD summary sheets, \$3,648,655 and \$3,255,515 respectively, for a total of \$6,904,170. This number, divided by the number of requests for certification and fuel economy services (329 federal, 37 CA and 46 ICI, Total: 411) results in \$16,798 per certificate.

The in-use portion of the LDV cost was determined by adding the grand totals for those columns in the LOD and CCD summary sheets, for a total of \$5,368,673. This number, divided by the number of certificates that receive in-use services (329 federal and 46 ICI for a total of 375) results in \$14,316 per certificate. Federal and ICI certificates will have a fee of \$31,153 that includes costs for certification, fuel economy (\$16,798) and in-use services (\$14,316.) California certificates that only receive certification and fuel economy services from the EPA will have a fee of \$16,798.

Dividing the total recoverable cost to the light-duty industry by the annual industry sales (15,000,000) results in an average cost of \$0.82 per vehicle.

HD Highway and Nonroad CI Engines (Worksheet #2, Column 2)

The second category includes heavy-duty highway diesel and gas engines as well nonroad diesel engines regulated under 40 CFR part 89. The only diesel engines not included in this category are marine diesel engines and locomotives.

The cost of the compliance programs for the two industries is \$3,556,179 and \$1,183,846 as shown in the Overall Summary sheet (Worksheet #1.) These industries were listed together in this category because the EPA has the authority to conduct the same compliance measures in both industries including certification, selective enforcement auditing and in-use testing.

Heavy-duty Highway Diesel and Gas Engines-The proposed fees for the highway diesel and gas engines were determined by dividing \$3,556,675 by the number of certificates issued for these industries in model year 2001 (130.) This results in a proposed fee of \$27,351 per certificate. The fee per unit was determined by dividing \$3,556,675 by the industry sales for highway diesel and gas engines in MY 2000 resulting in a per unit cost of \$2.20.

Nonroad Diesel-The proposed fee for nonroad CI engines was determined by dividing \$1,183,848 by the number of certificates issued for nonroad CI engines in model year

2000 (603). This results in a proposed fee per certificate of \$1,963. The fee per unit was determined by dividing \$1,183,846 by the industry sales for heavy-duty nonroad diesel in MY 2000 resulting in a per unit cost of \$1.34.

Other (Worksheet #2, Column 3)

The third category includes all nonroad industries not covered under 40 CFR part 89. This includes, marine SI, marine CI and IMOs, nonroad spark ignition engines, and locomotives. In addition, fees are being considered for recreational vehicles and other classes of marine engines, and large nonroad SI engines, in conjunction with a separate rulemaking controlling emissions from those nonroad sources that is currently under development. In anticipation of certification requests for these industries, we are including them in our fee calculation. The certificate requests for heavy-duty, on-highway evaporative systems and California-only engines are also being considered here as they currently receive only certification services from EPA. They will be included whenever we refer to the Other certificate requests below.

These industries were put together in this category because they receive the same amount of compliance services from the EPA. As stated above, some of these industries conduct their own production line and in-use testing and EPA provides oversight in the event of noncompliance. Some of the industries are newly regulated and do not have established compliance programs. Still other industries are not yet subject to regulation and we cannot anticipate our need to test these engines beyond certification.

Because each certificate from these industries is given the same level of review, it is appropriate that the fee per certificate for each industry is the same. Therefore, to determine the proposed fee per certificate, the cost for the category, \$753,813, was divided by the total number of certificates that were issued in model year 2000 or that are anticipated when the industries begin certification (1,027) for a fee of \$734 per engine family.

V. Conclusion

When a manufacturer decides to market a vehicle or engine in the United States, EPA is required to provide certain services to assure that manufacturers meet emission compliance regulations. In doing so, EPA incurs costs that can legally be recovered as authorized by the CAA and the IOAA. The cost analysis presents how EPA is able to recover these costs through the fee program that has been in existence since 1992.

Upon examining the costs incurred by EPA in conducting MVECP activities, an updated fee schedule was proposed. The methodology process described in this document sets forth a user-fee program that is equitable and reasonable. As a result EPA's goal of making the MVECP fee program as self-sustaining will be accomplished.

Appendix A Acronyms

ASD	Assessment and Standards Division
ATD	Advanced Technology Division
ATG	Advanced Technology Group
CAA	Clean Air Act
CAAA	Clean Air Act as Amended
CAFÉ	Corporate Average Fuel Economy
CCD	Certification and Compliance Division
CDTG	Compliance Development & Testing Group
Cert	Certification
CFEIS	Certification and Fuel Economy Information System
CFO	Chief Financial Officer
CI	Compression Ignition
DOD	Deputy Office Director
EPA	Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
EPG	Engines Programs Group
FE	Fuel Economy
FMD	Financial Management Division
FSG	Facilities Services Group
FTE	Full Time Equivalent

FTP	Federal Testing Procedure
FY	Fiscal Year
HC	Hydrocarbons
HD	Heavy-duty
HDE	Heavy-duty Engine
HDV	Heavy-duty Vehicle
HW	Highway (on-highway)
ICI	Independent Commercial Importer
IMG	Information Management Group
IO	Immediate Office
IOAA	Independent Office of Appropriations Act
LD	Light-duty
LDV	Light-duty Vehicle
LOD	Laboratory Operations Division
LNS	Laboratory Network System
K	Thousand(s)
MVECP	Motor Vehicle and Engine Compliance Program
MC	Motorcycle
MY	Model Year
NO _x	Oxides of Nitrogen
NPRM	Notice of Proposed Rulemaking
NR	Nonroad

NVFEL	National Vehicle and Fuel Emissions Laboratory
O&M	Operations and Maintenance
OAR	Office of Air and Radiation
OBD	On-board Diagnostics
OCFO	Office of the Chief Financial Officer
OEM	Original Equipment Manufacturer
OMS	Office of Mobile Sources
OPG	Outreach Programs Group
ORVR	On-board Vapor Recovery
OTAQ	Office of Transportation and Air Quality
PC&B	Personnel, Compensation & Benefits
PMN	Program Management Network
PNGV	Partnership for a New Generation of Vehicles
PLT	Production Line Testing
RFG	Reformulated Gasoline
SEA	Selective Enforcement Audit
SEEP	Senior Environmental Employee Program (also used to describe the actual employee)
SI	Spark-Ignition
TRPD	Transportation and Regional Programs Division
VPG	Vehicle Programs Group

Appendix B Definitions

Amortize - to provide a gradual extinguishment by contributing periodic payments; liquidate gradually. EPA usually divides a significant, one time cost over a 10 year period of time;

Direct Costs – expenses that can be specifically identified with an output or specifically identifiable to a particular program such as the cost in administering activities associated with the Mobile Source Compliance Program MVECP.

Direct FTE % of Total – is the percentage used in allocating certain overhead costs across the various industries that are being charged fees. It is calculated separately for the Laboratory Operations Division and Certification and Compliance Division. The numerator signifies how many direct recoverable FTE perform work for the industry we are charging fees. The denominator is the total number of direct recoverable FTE's, which can be found in worksheet #5,7,13 and 15.

FTE - Full Time Equivalent is a unit of measure to equate a full year's worth of work for one employee.

Full Cost - The full cost of programs includes both those costs specifically identifiable with each particular program (direct costs) and those costs which collectively support many programs (indirect costs).

Indirect Costs – are expenses common to multiple outputs but cannot be specifically identified with any particular output. Those costs which collectively support the many programs. Some examples of indirect costs are facilities, computer support, transportation, travel, etc.

Motor Vehicle and Engine Compliance Programs (MVECP)- OTAQ program that incorporates all activities involved the certification and compliance assurance of vehicles and engines.

Motor Vehicle and Engine Compliance Programs Fees Program - a user-fee program that charges manufacturers for direct and indirect services related to the MVECP.

Non-recoverable Costs – are expenses that serve an independent public social interest. Such costs are not included in the MVECP yet contributes to cleaning the air.

Personnel Compensation and Benefits (PC & B)- are all costs associated with the EPA Labor force (salary, health benefits, pension, etc). The rate for PC&B used is \$85,000 per FTE. This is the average PC&B cost for the Office of Air and Radiation

Recoverable Costs – are expenses associated with providing a unique service to a specified set of customers for the Motor Vehicle and Engine Compliance Program (MVECP).

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Senior Environmental Employee Program (SEEP) – an employee program that EPA participates in which the agency contracts the work of qualified retired persons.

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