

## Appendix C - Worksheets

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## Overall Cost Summary

	Total	Allocable to Cost Study	Recoverable Costs	ICI	LDV w/o ICI	Total LDV	LOD+CCD	MC HW	HD HW	NR CI	Other	Total
<b>Labor (PC&amp;B)</b>	<b>FTE</b>											
Direct	113.55	58.08	\$5,783,606	\$177,252	\$3,280,165	\$3,457,418	\$3,457,418	\$149,370	\$1,305,066	\$504,273	\$367,480	\$5,783,606
Indirect	64.20	21.14	\$2,105,564	\$87,728	\$1,452,275	\$1,540,004	\$1,540,004	\$23,459	\$320,614	\$40,887	\$180,601	\$2,105,564
<b>Total Labor</b>			<b>\$7,889,170</b>	<b>\$264,980</b>	<b>\$4,732,440</b>	<b>\$4,997,422</b>	<b>\$4,997,422</b>	<b>\$172,829</b>	<b>\$1,625,680</b>	<b>\$545,160</b>	<b>\$548,081</b>	<b>\$7,889,170</b>
	<b>Total Projected Costs</b>		<b>Recoverable Costs</b>									
<b>Operating:</b>												
<b>Indirect Program Costs:</b>												
Travel	\$185,000		\$111,047	\$2,836	\$56,472	\$59,308		\$3,574	\$29,557	\$12,066	\$6,541	\$111,046
Seniors	\$1,178,600		\$464,370	\$16,079	\$299,989			\$14,272	\$82,726	\$27,189	\$24,115	\$464,370
Buildings & Facilities Purchase and Repairs	\$21,427,000		\$236,559	\$11,183	\$175,197			\$0	\$32,258	\$0	\$17,921	\$236,559
Misc. & Office Supplies	\$60,000		\$39,274	\$846	\$17,523			\$1,269	\$12,025	\$5,137	\$2,475	\$39,275
Training	\$144,800		\$63,026	\$2,201	\$38,364			\$1,153	\$13,244	\$3,892	\$4,171	\$63,025
Lab Modernization	\$14,130,000		\$848,500	\$48,600	\$761,400			\$0	\$38,500	\$0	\$0	\$848,500
Communications	\$3,353,835		\$687,131	\$23,925	\$442,751			\$20,162	\$124,091	\$40,086	\$36,116	\$687,131
Facilities Operating Costs Ann Arbor	\$6,540,074		\$1,603,231	\$71,847	\$1,329,568	\$1,401,415		\$60,545	\$90,817	\$0	\$50,454	\$1,603,231
Safety Health and Environmental - AA	\$650,000		\$168,177	\$7,537	\$139,470	\$147,007		\$6,351	\$9,527	\$0	\$5,293	\$168,178
<b>Total Indirect Program Costs</b>			<b>\$4,221,315</b>	<b>\$185,054</b>	<b>\$3,260,734</b>	<b>\$1,607,730</b>	<b>\$0</b>	<b>\$107,326</b>	<b>\$432,745</b>	<b>\$88,370</b>	<b>\$147,086</b>	<b>\$4,221,315</b>
<b>Direct Program Costs:</b>												
CCD Compliance Programs	\$2,863,400		\$2,863,400	\$82,413	\$1,707,587			\$118,400	\$554,448	\$398,031	\$2,521	\$2,863,400
LOD Core Testing Operations	\$2,118,060		\$1,436,146	\$77,357	\$1,211,940			\$0	\$119,031	\$0	\$27,818	\$1,436,146
<b>Total Direct Program Costs:</b>	<b>\$4,981,460</b>		<b>\$4,299,546</b>	<b>\$159,770</b>	<b>\$2,919,527</b>	<b>\$0</b>	<b>\$0</b>	<b>\$118,400</b>	<b>\$673,479</b>	<b>\$398,031</b>	<b>\$30,339</b>	<b>\$4,299,546</b>
<b>Total Operating Costs:</b>						<b>\$6,605,152</b>	<b>\$4,997,422</b>					
<b>Overall EPA Overhead Cost (16.90%)</b>			<b>2,773,296</b>	<b>103,057</b>	<b>1,844,246</b>	<b>1,116,271</b>	<b>844,564</b>	<b>67,356</b>	<b>461,692</b>	<b>174,334</b>	<b>122,611</b>	<b>2,773,296</b>
<b>Grand Total Recoverable Costs</b>			<b>\$19,183,327</b>	<b>\$712,861</b>	<b>\$12,756,947</b>	<b>\$7,721,423</b>	<b>\$5,841,986</b>	<b>\$465,911</b>	<b>\$3,193,596</b>	<b>\$1,205,895</b>	<b>\$848,117</b>	<b>\$19,183,327</b>



Summary Sheet-LOD

Operations Division Calculation of Recoverable Costs				Light Duty Vehicles								
	Total	Allocation Method	Compl. Testing Costs	ICI	Cert/FE	In-use	Total LDV w/o ICI	MC HW	HD HW	NR CI	Other	Total
FTE												
<b>Labor (PC&amp;B):</b>												
Direct	7.0	Actual Count	\$697,060	\$41,824	\$376,412	\$278,824	\$655,236	\$0	\$0	\$0	\$0	\$697,060
Additional Direct Needs	8.5	Actual Count	\$846,430	\$35,849	\$322,639	\$238,992	\$561,631	\$0	\$124,475	\$0	\$124,475	\$846,430
Indirect	14.7	Various	\$1,466,629	\$69,332	\$623,984	\$462,210	\$1,086,194	\$0	\$199,995	\$0	\$111,108	\$1,466,629
Additional Indirect Needs	1.3	Actual Count	\$124,475	\$2,987	\$26,887	\$19,916	\$46,803	\$0	\$24,895	\$0	\$49,790	\$124,475
<b>Total Labor Costs:</b>	<b>31.5</b>		<b>\$3,134,594</b>	<b>\$149,991</b>	<b>\$1,349,922</b>	<b>\$999,942</b>	<b>\$2,349,865</b>	<b>\$0</b>	<b>\$349,365</b>	<b>\$0</b>	<b>\$285,373</b>	<b>\$3,134,594</b>
<b>Operating:</b>												
<b>Indirect Program Costs:</b>												
Travel	\$30,000	FTE	\$9,588	\$453.23	\$4,079.10	\$3,022	\$7,101	\$0	\$1,307	\$0	\$726	\$9,588
Seniors	\$672,000	STE <sup>1</sup>	\$138,868	\$6,564.69	\$59,082	\$43,765	\$102,847	\$0	\$18,937	\$0	\$10,520	\$138,868
Facilities Operating Costs Ann Arbor	\$6,540,074	Square Feet	\$665,995	\$31,483	\$283,351	\$209,889	\$493,240	\$0	\$90,817	\$0	\$50,454	\$665,995
Training	\$94,800	FTE	\$30,297	\$1,432	\$12,890	\$9,548	\$22,438	\$0	\$4,131	\$0	\$2,295	\$30,297
Safety Health and Environmental	\$650,000	FTE	\$69,862	\$3,302.58	\$29,723	\$22,017	\$51,740	\$0	\$9,527	\$0	\$5,293	\$69,862
Lab Mod	\$14,130,000	Worksheet 10	\$848,500	\$48,600	\$437,400	\$324,000	\$761,400	\$0	\$38,500	\$0	\$0	\$848,500
Communications	\$3,353,835	FTE	\$221,778	\$10,484	\$94,357	\$69,894	\$164,250	\$0	\$30,243	\$0	\$16,801	\$221,778
Buildings & Facilities	\$21,427,000	Worksheet 11	\$236,559	\$11,182.78	\$100,644.99	\$74,552	\$175,197	\$0	\$32,258	\$0	\$17,921	\$236,559
<b>Total Indirect Program Costs:</b>	<b>\$46,897,709</b>		<b>\$2,221,447</b>	<b>\$113,503</b>	<b>\$1,021,527</b>	<b>\$756,686</b>	<b>\$1,778,213</b>	<b>\$0</b>	<b>\$225,720</b>	<b>\$0</b>	<b>\$104,011</b>	<b>\$2,221,447</b>
<b>Direct Program Costs:</b>												
Core Testing Operations	\$2,118,060	Actual Count	\$1,436,145	\$77,357	\$696,221	\$515,720	\$1,211,940	\$0	\$119,031	\$0	\$27,818	\$1,436,145
<b>Total Direct Program Costs:</b>	<b>\$2,118,060</b>		<b>\$1,436,145</b>	<b>\$77,357</b>	<b>\$696,221</b>	<b>\$515,720</b>	<b>\$1,211,940</b>	<b>\$0</b>	<b>\$119,031</b>	<b>\$0</b>	<b>\$27,818</b>	<b>\$1,436,145</b>
<b>Grand Total Recoverable Costs</b>			<b>\$6,792,186</b>	<b>\$340,851</b>	<b>\$3,067,669</b>	<b>\$2,272,349</b>	<b>\$5,340,018</b>	<b>\$0</b>	<b>\$694,116</b>	<b>\$0</b>	<b>\$417,202</b>	<b>\$6,792,186</b>

<sup>1</sup> Senior Time Equivalent

### Summary Sheet-CCD

Compliance Division Calculation of Recoverable Costs												
	Total	Allocation Method	Compliance Costs	Light Duty Vehs and Trucks			Total LD w/o ICI	MC HW	HD HW	NR CI	Other	Total
				ICI	Cert & FE	In-use						
<b>Labor (PC&amp;B):</b>												
DC Direct	19.36	Actual Count	\$1,927,869	\$0	\$0	\$0	\$0	\$0	\$1,180,591	\$504,273	\$243,005	\$1,927,869
DC Indirect.	1.57	FTE	\$156,314	\$0	\$0	\$0	\$0	\$0	\$95,724	\$40,887	\$19,703	\$156,314
AA Direct	23.22	Actual Count	\$2,312,248	\$99,580	\$1,037,624	\$1,025,674	\$2,063,298	\$149,370				\$2,312,248
AA Indirect	3.60	FTE	\$358,147	\$15,409	\$160,564	\$158,715	\$319,278	\$23,459				\$358,147
<b>Total Labor Costs:</b>	<b>47.75</b>		<b>\$4,754,578</b>	<b>\$114,989</b>	<b>\$1,198,188</b>	<b>\$1,184,389</b>	<b>\$2,382,576</b>	<b>\$172,829</b>	<b>\$1,276,315</b>	<b>\$545,160</b>	<b>\$262,708</b>	<b>\$4,754,578</b>
<b>Operating:</b>												
<b>Indirect Program Costs:</b>												
Travel DC & AA	\$155,000	FTE	\$101,459	\$2,383	\$24,829	\$24,543	\$49,371	\$3,574	\$28,250	\$12,066	\$5,814	\$101,460
Seniors AA	\$327,800	STE <sup>1</sup>	\$220,929	\$9,515	\$99,142	\$98,000	\$197,142	\$14,272				\$220,929
Seniors DC	\$178,800	STE	\$104,573	\$0	\$0	\$0	\$0	\$0	\$63,789	\$27,189	\$13,595	\$104,573
Ann Arbor Facilities Operating Costs			\$937,236	\$40,363	\$420,586	\$415,742	\$836,328	\$60,545	\$0	\$0	\$0	\$937,236
Safety Health and Environmental Communications			\$98,315	\$4,234	\$44,119	\$43,611	\$87,730	\$6,351	\$0	\$0	\$0	\$98,315
Communications			\$465,353	\$13,441	\$140,056	\$138,444	\$278,500	\$20,162	\$93,849	\$40,086	\$19,315	\$465,353
Training DC & AA	\$50,000	FTE	\$32,729	\$769	\$8,009	\$7,917	\$15,926	\$1,153	\$9,113	\$3,892	\$1,876	\$32,729
Misc. & Office Supplies., AA & DC	\$60,000	FTE	\$39,274	\$846	\$8,812	\$8,711	\$17,523	\$1,269	\$12,025	\$5,137	\$2,475	\$39,274
<b>Total Indirect Program Costs:</b>	<b>\$771,600</b>		<b>\$1,999,868</b>	<b>\$71,550</b>	<b>\$745,553</b>	<b>\$736,967</b>	<b>\$1,482,521</b>	<b>\$107,325</b>	<b>\$207,026</b>	<b>\$88,371</b>	<b>\$43,075</b>	<b>\$1,999,868</b>
<b>Direct Program Costs:</b>												
CCD Compliance Programs	\$2,863,400	Actual Count	\$2,863,400	\$82,413	\$858,738	\$848,849	\$1,707,587	\$118,400	\$554,448	\$398,031	\$2,521	\$2,863,400
<b>Total Direct Program Costs:</b>	<b>\$2,863,400</b>		<b>\$2,863,400</b>	<b>\$82,413</b>	<b>\$858,738</b>	<b>\$848,849</b>	<b>\$1,707,587</b>	<b>\$118,400</b>	<b>\$554,448</b>	<b>\$398,031</b>	<b>\$2,521</b>	<b>\$2,863,400</b>
<b>Grand Total Recoverable Costs</b>			<b>\$9,617,846</b>	<b>\$268,952</b>	<b>\$2,802,479</b>	<b>\$2,770,205</b>	<b>\$5,572,685</b>	<b>\$398,555</b>	<b>\$2,037,788</b>	<b>\$1,031,562</b>	<b>\$308,304</b>	<b>\$9,617,846</b>

<sup>1</sup> Senior Time Equivalent

## LOD Direct Labor

<b>Direct Labor -</b>			
<b>Compliance Development and Testing Group:</b>			
Overall FTE	Vehicle Testing FTE	% Compliance Related Vehicle Testing	Recoverable FTE
19	10	70%	7
<b>Advanced Testing Group:</b>			
Overall FTE	Vehicle Testing FTE	% Compliance Related Vehicle Testing	Recoverable FTE
20	0	0	0
Total			7

## LOD Indirect Labor Cost

Detail of Indirect FTE:				
		# of FTE	% of Time Allocable to Compliance	FTE Allocable to Compliance Testing
<b>Testing Services Group</b>				
		16	29%	4.6
	Data Team:	4		1.0
	Chemlab:	5		1.4
	Maintenance Team:	7		2.2
<b>Facilities Services Group</b>				
		10	30%	2.9
	Facilities:	4.75		1.4
	Purchasing:	3		0.2
	Quality Control:	2		1.3
<b>Information Management Group</b>				
		11.25	13%	1.5
	Project Management Network:	9	14%	1.3
	Lab Network System:	2.25	9%	0.2
<b>LOD Immediate Office</b>				
		17	34%	5.8
<b>Total Ann Arbor FTE</b>		306.2		
<b>Total Direct Operational LOD FTE</b>		48.5		
<b>Total FTE Allocable to Compliance Testing</b>				14.7
<b>Total OTAQ FTE</b>		377.4		
<b>Recoverable CCD FTE</b>		26.95		

## LOD Additional Labor Needs

	Light Duty		Heavy Duty Highway Engine <sup>3</sup>	Other	Total FTE
	Rover Testing <sup>1</sup>	Medium Duty Chassis <sup>2</sup>			
FTE - Direct	2.00	4.00	1.25	1.25	8.50
FTE - Indirect	0.00	0.50	0.25	0.50	1.25

1. Rover Testing: would require 2 Technicians
2. M.D. Chasis: would require 3 technicians, 1 engineer and .5Data management specialist to process the data
3. H.D.E.: would require 2 technicians, .25 engineer and .5 data management specialist to perform and process testing informa



## Seniors Costs-LOD

<b>Seniors</b>			
	<b>% alloc to Comp</b>	<b>Contract Cost</b>	<b>Total</b>
<b>Direct:</b>	45%	\$96,000	\$43,200
<b>Indirect:</b>			
Clerical	5%	\$96,000	\$4,594
Safety Health & Environmental	26%	\$32,000	\$8,279
Testing Services Group	0%	\$128,000	\$0
Facilities	26%	\$256,000	\$66,236
Information Management Group	26%	\$64,000	\$16,559
<b>Grand Total</b>	<b>21%</b>	<b>\$672,000</b>	<b>\$138,868</b>

## Ann Arbor Facilities Costs

Facility Requirements	FY01 Costs	Recoverable Portion	Allocation Basis		LDV	MC HW	HD HW	Other	Total
<b>Facilities Operations</b>	<b>\$6,540,074</b>	<b>\$1,603,231</b>		<b>Overall Summary</b>	\$1,401,415	\$60,545	\$90,817	\$50,454	\$1,603,231
				<b>CCD Summary</b>	\$876,692	\$60,545	\$0	\$0	\$937,236
				<b>LOD Summary</b>	\$524,723	\$0	\$90,817	\$50,454	\$665,995
NVFEL Operations & Maint Contract	\$700,000	\$243,738	sq ft						
Utilities	\$500,000	\$174,099	sq ft						
Housekeeping (Janitorial, etc)	\$305,000	\$106,200	sq ft						
Security Services(contract, equipment, etc)	\$650,000	\$188,036	sq ft						
ESPC Contract	\$1,210,120	\$421,361	sq ft						
Maintenance (emergencies,FM-200,etc)	\$75,000	\$26,115	sq ft						
Building renovation	\$80,000	\$27,856	sq ft						
Lab Facility Infrastructure	\$200,000	\$69,639	sq ft						
Facilities User Services(forklifts, copiers lawn, cars)	\$230,000	\$80,085	sq ft						
Misc ( Noresco Office in boiler room, Roof patching)	\$45,000	\$15,669	sq ft						
Office Building Rent, Utilities, etc	\$2,225,000	\$250,433	sq ft						

## Laboratory Modification Budget Request

<b>NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY</b>				
<b>Laboratory Modernization Plan - Budget Submission 2002 and 2003</b>				
<i>Required Instrumentation</i>	<i>Equipment Cost Estimate</i>	<i>Recoverable</i>	<i>Non- Recoverable</i>	<i>10 yr Amortized</i>
<b>Critical Tier II LDV Test Capability:</b>				
<b><u>Standard LDV Chassis Test Sites</u></b>				
Low Emission Sampling System	\$1,500,000	\$1,500,000		\$150,000
LDV Chassis Dyno#1: Compliance upgrade of site	\$100,000	\$100,000		\$10,000
Portable Emissions Systems - 20 @ 50k ea	\$1,000,000	\$1,000,000		\$100,000
LDV Chassis Dynos #6: Low Emission Analytical System & Single Roll Dyno.	\$700,000	\$700,000		\$70,000
One time support labs upgrade	\$400,000	\$400,000		\$40,000
OBD Performance Site	\$400,000	\$400,000		\$40,000
LDV Chassis Dynos # 3&4: Clayton Dyno Closed Loop Cooling				
<b>QC Gas Laboratory</b>				
Upgrade QC Analytical Bench for Low Emissions	\$400,000	\$400,000		\$40,000
<b><u>Diesel and 4WD Car/Truck Test Site</u></b>				
Chassis Dyno (US06, SUV and Hybrids)	\$1,000,000	\$1,000,000		\$100,000
Diesel Emission Analytical/Sampling System	\$800,000	\$800,000		\$80,000
Low Emission Analytical System	\$500,000	\$500,000		\$50,000
<b><u>New Procedures (US06, SC03) Test Site</u></b>				
Low Emission PM Analytical System	\$300,000	\$300,000		\$30,000
Tier II Low Range HC & NOX Analyzers	\$400,000	\$400,000		\$40,000
<b><u>Support Laboratories and Shops</u></b>				
Required Upgrades to Support Labs	\$600,000	\$600,000		\$60,000
<b>Critical Diesel Engine Standards Test Capability:</b>				
<b><u>Heavy Duty Test Engine Sites</u></b>				
HDE#2 HDE Cell Controller Replacement	\$300,000	\$75,000		\$7,500
Sulfur Measurement Equipment	\$500,000		\$500,000	
HDE #2: Analytical / Sampling System	\$730,000	\$182,500		\$18,250
HDE #1&2: Diesel Engine Cell Cooling Control	\$30,000	\$3,750		\$375
HDE #1&2: Nox & PM Measurement Methods/Equipment	\$750,000	\$93,750		\$9,375
Chemistry Laboratory: GC/MS Magnetic Sector Analyzer for toxins	\$600,000		\$600,000	
HDE #2: SCR Load Controller [Heavy Duty Engine Test Sites]	\$120,000	\$30,000		\$3,000
Wide High Torque HDE A/C Dyno				
<b>Critical Regulatory Development Test Capability:</b>				
<b><u>Advanced Engine Test Sites</u></b>				
HFID/Nox Analyzers/Analytical Systems ( required for alt fuels)	\$500,000		\$500,000	
HDE Cells 3 & 4: SCR Controllers	\$200,000		\$200,000	
Low Emission PM Analytical Systems	\$600,000		\$600,000	
Room 310: Diesel Analysis System (includes tunnel)	\$500,000		\$500,000	
<b><u>Climate Control test Facility</u></b>				
LD Chassis Dyno Installation	\$600,000		\$600,000	
Dilute/Raw Emission Analytical System	\$600,000		\$600,000	
Funding Request FY2001	\$2,400,000	\$1,675,000	\$500,000	
Funding Request FY2002	\$11,730,000	\$6,810,000	\$3,600,000	
Funding Request FY2003	\$0			
<b>Total Funding</b>	<b>\$14,130,000</b>	<b>\$8,485,000</b>	<b>\$4,100,000</b>	<b>\$848,500</b>

## Building and Facilities Costs for NVFEL

Facilities Costs for NVFEL							
Fiscal Year Funded	Project						
<u>FY Completed</u>	<u>Summarization of Projects</u>	Amount	Amort. Period (Years)	Yr. Amort. Completed	Total Annual Amortized Costs	Allocation Method	Recoverable Compliance Annual Amortized Cost
1998	Office Furniture Lease	\$959,862	10	2008	\$95,986	sq.ft.	\$10,804
1998	Removal and replacement of Underground fuel tanks	\$1,916,000	22	2020	\$87,091	sq.ft.	\$30,325
1995	Replacement of Halon Fire Protection Systems	\$173,000	31.5	2026.5	\$5,492	sq.ft.	\$1,912
1996	Laboratory Toxic Gas Monitoring and Detection System	\$492,000	31.5	2026.5	\$15,619	sq.ft.	\$5,439
1996	Potable Water Loop	\$66,000	50	2046	\$1,320	sq.ft.	\$460
1996	Installation of Greenlights	\$154,000	31.5	2027.5	\$4,889	sq.ft.	\$1,702
1999	Fuel Drum Storage Bldg	\$30,000	22	2021	\$1,364	sq.ft.	\$475
1998	Space Alteration New Office Building	\$96,000	10	2008	\$9,600	sq.ft.	\$3,343
		<b>\$2,927,000</b>					\$54,459
	<b><u>Prior Projects Still Being Amortized</u></b>						
1991	Building Purchase	\$14,000,000	31.5	2022.5	\$444,444	FTE	\$137,800
1992	Office Expansion	\$4,500,000	31.5	2023.5	\$142,857	FTE	\$44,300
		<b>\$18,500,000</b>					\$182,100
	<b>Grand Total</b>	<b>\$21,427,000</b>					<b>\$236,559</b>

### Core Testing Operations

		<b>Core Testing Operations</b>							
		<b>Total</b>	<b>% Alloc to CDTG</b>	<b>% Alloc To Compliance</b>	<b>Recoverable Cost</b>	<b>Light Duty</b>	<b>HD HW</b>	<b>Other</b>	<b>Total</b>
Testing Support Services		<b>\$782,800</b>			<b>\$273,980</b>				
Instrumentation Repair Parts		\$148,800	50%	70%	\$52,080	\$41,033	\$7,102	\$3,945	\$52,080
Test Fuel Calibration and Gases		\$228,000	50%	70%	\$79,800	\$62,873	\$10,882	\$6,045	\$79,800
Tools, Fixtures and Small Equipment		\$230,000	50%	70%	\$80,500	\$63,424	\$10,977	\$6,098	\$80,500
Maint repair and Supplies		\$176,000	50%	70%	\$61,600	\$48,533	\$8,400	\$4,667	\$61,600
Lab Maint Contracts		<b>\$266,300</b>	50%	70%	<b>\$93,205</b>	\$73,434	\$12,710	\$7,061	\$93,205
Vehicle Procurement		<b>\$1,000,000</b>	100%	100%	<b>\$1,000,000</b>	\$1,000,000			\$1,000,000
Engine Procurement - Heavy Duty		<b>\$68,960</b>	100%	100%	<b>\$68,960</b>		\$68,960		<b>\$68,960</b>
<b>Total Testing Operations</b>		<b>\$2,118,060</b>			<b>\$1,436,145</b>	\$1,289,297	\$119,031	\$27,817	\$1,436,145

## CCD Programs

NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY	
Certification and Compliance Division - Anticipated Projected Costs 2003	
Recoverable Program Items	Budget Cost Estimate
<b><u>Light-Duty Compliance</u></b>	
CFEIS-Website Features and Information	\$1,165,000
Coast Down Audits	\$270,000
Fuel Economy Audits	\$300,000
On-road Testing	\$50,000
Industry Workshops	\$5,000
<b>LD Subtotal</b>	<b>\$1,790,000</b>
<b><u>Motorcycle Compliance</u></b>	
Motorcycle Procurement	\$72,000
Motorcycle Testing	\$26,400
Motorcycle Computer Support	\$20,000
<b>Motorcycle Subtotal</b>	<b>\$118,400</b>
<b>Total</b>	<b>\$1,908,400</b>
<b><u>Heavy-Duty Highway Engine Compliance</u></b>	
Computer hardware/software	\$12,248
In-use on-vehicle testing	\$297,200
On-vehicle testing units purchase	\$80,000
Enhanced engine compliance programs	\$165,000
<b>Total</b>	<b>\$554,448</b>
<b><u>Nonroad CI Engine Compliance</u></b>	
Computer hardware/software	\$5,231
In-use on-vehicle testing	\$72,800
On-vehicle testing units purchase	\$20,000
Enhanced engine compliance programs	\$300,000
<b>Total</b>	<b>\$398,031</b>
<b><u>Other Compliance</u></b>	
Computer hardware/software	\$2,521
<b>Total</b>	<b>\$2,521</b>
<b>Funding Recoverable Through Fee Program</b>	<b>\$2,863,400</b>

## CCD Labor

	<i># of FTE</i>	<i>non-recoverable</i>	<i>Recoverable/Direct</i>	<i>Indirect</i>	<i>LD Cert</i>	<i>LD FE</i>	<i>LD In-use</i>	<i>MC HW</i>	<i>HD HWY</i>	<i>NR CI</i>	<i>OTHER</i>
	1	0	0.00	1.00							
	1	0	0.00	1.00							
	1	0	0.00	1.00							
	1	0	0.00	1.00							
	1	0	0.00	1.00							
	1	0.3	0.70	0.00	0.20	0.20	0.30				
	0.8	0.2	0.60	0.00	0.10	0.20	0.30				
	1	0	1.00	0.00	0.20	0.30	0.50				
	1	0	1.00	0.00	0.20	0.30	0.50				
	1	0	1.00	0.00	0.20	0.30	0.50				
	1	0	1.00	0.00			1.00				
	1	0	1.00	0.00			1.00				
	1	0	1.00	0.00	0.20	0.20	0.60				
	1	0	1.00	0.00	0.00	0.00		1.00			
	1	0.5	0.50	0.00	0.10	0.10	0.30				
	1	0.1	0.90	0.00	0.20	0.20	0.50				
	1	0	1.00	0.00	0.20	0.20	0.60				
	0.5	0	0.50	0.00	0.00	0.00	0.00	0.50			
	1	0	1.00	0.00	0.30	0.20	0.50				
	1	0.2	0.80		0.30		0.50				
	1	0	0.30	0.70	0.10	0.20					
	1	1	0.00	0.00							
	1	0.5	0.50	0.00	0.20	0.10	0.20				
	0.4	0.28	0.12	0.00	0.12						
	1	0.2	0.80	0.00	0.30	0.30	0.20				
	1	0.2	0.80	0.00	0.30	0.30	0.20				
	1	0	1.00	0.00	0.40	0.30	0.30				
	1	0	1.00	0.00	0.20	0.60	0.20				
	1	0	1.00	0.00	0.20	0.40	0.40				
	1	0	1.00	0.00	0.20	0.40	0.40				
	1	0.6	0.40	0.00	0.20	0.00	0.20				
	1	0.5	0.50	0.00	0.20	0.10	0.20				
	0.5	0	0.50	0.00	0.30	0.20					
	1	0	1.00	0.00	0.10	0.10	0.80				
	0.1		0.10	0.00	0.10						
	1	0.3	0.70	0.00	0.70						
	1	1	0.00	0.00							
	1	1	0.00	0.00							
	1	1	0.00	0.00							
	0.5	0	0.50	0.00	0.20	0.20	0.10	0.00			
<b>AA Total</b>	<b>36.80</b>	<b>7.88</b>	<b>23.22</b>	<b>5.70</b>	<b>6.02</b>	<b>5.40</b>	<b>10.30</b>	<b>1.50</b>			

## CCD Labor

	# of FTE	non-recoverable	Recoverable	Indirect	LD Cert	LD FE	LD In-use	MC HW	HD HWY	NR CI	OTHER
	4		3.00	1.00					1	1	1
	1			1							
	1	0.44	0.56						0.35	0.13	0.08
	1	0.44	0.56						0.35	0.13	0.08
	1	0.44	0.56						0.35	0.13	0.08
	1	0	1.0						0.85	0.15	
	1	0.9	0.1						0.05		
	1	0.8	0.2						0.2		
	1	0	1.0						0.85	0.15	
	1	0.18	0.8						0.3	0.15	0.37
	1	0	1.0						0.85	0.15	0
	1	0	1.0						0.85	0.15	0
	1	0.55	0.5						0.2	0.22	0.02
	1	0.01	1.0						0.8	0.12	0.07
	1	0	1.0						0.85	0.15	0
	1	0.14	0.9						0.29	0.35	0.22
	1	0.1	1.0						0.1	0.62	0.16
	1	0.03	1.0						0.42	0.4	0.14
	1	0	1.0						0.85	0.15	0
	1	0	1.0						0.85	0.15	0
	1	0.44	0.6						0.35	0.13	0.08
	1	1	0.0								0
	1	0.9	0.1								0.1
	1	0.6	0.4					0.4			0
	1	1	0.0								0
	1	0.9	0.1					0.05	0.05		0
	1	0.85	0.2					0.075	0.075		0
	1	1	0.0								0
	1			1.0							
	1	1	0.0								0
	1	1	0.0								0
	1	0.3	0.7					0.35	0.35		0
	1	0.65	0.4					0.15	0.15		0.05
	1	1	0.0								0
<b>DC Total</b>	<b>37.00</b>	<b>14.59</b>	<b>19.36</b>	<b>3.00</b>	0.00	0.00	0.00	0.00	<b>11.85570</b>	<b>5.06</b>	<b>2.44</b>
<b>Grand Total</b>	<b>73.8</b>	<b>22.47</b>	<b>42.58</b>	<b>8.70</b>	6.02	5.40	10.30	1.50	11.86	5.06	2.44
		<b>0.65</b>									
		<b>5.69</b>									
		<b>48.27</b>									
		<b>\$4,102,950.00</b>									



## Seniors Cost-CCD

Seniors	% of Full Time	PC&B	Recoverable Total
<b>Ann Arbor Direct</b>		<b>\$238,400</b>	<b>\$162,410</b>
	90%	\$29,800	\$26,820
	60%	\$29,800	\$17,880
	50%	\$29,800	\$14,900
	100%	\$29,800	\$29,800
	60%	\$29,800	\$17,880
	100%	\$29,800	\$29,800
	25%	\$29,800	\$7,450
	60%	\$29,800	\$17,880
		<b>\$89,400</b>	<b>\$58,519</b>
	65%	\$29,800	\$19,506
	65%	\$29,800	\$19,506
	65%	\$29,800	\$19,506
<b>AA Subtotal</b>		<b>\$327,800</b>	<b>\$220,929</b>
<b>DC Direct</b>		<b>\$119,200</b>	<b>\$65,560</b>
	100%	\$29,800	\$29,800
	10%	\$29,800	\$2,980
	10%	\$29,800	\$2,980
	100%	\$29,800	\$29,800
<b>Indirect:</b>		<b>\$59,600</b>	<b>\$39,013</b>
	65%	\$29,800	\$19,506
	65%	\$29,800	\$19,506
<b>DC Subtotal:</b>		<b>\$178,800</b>	<b>\$104,573</b>
<b>Grand Total</b>	<b>65%</b>	<b>\$59,600</b>	<b>\$39,013</b>

### Enhanced Engine Compliance Programs

	# of tests	Contract Tests Costs	
		NR CI	HD HW
<b>Confirmatory Testing for Certification</b> 10% of Certified Families (1 eng/family)	6	6 families	0 families
Contract- \$20,000/engine		\$120,000	\$0
<b>Selective Enforcement Audits</b> \$3,000/audit		10 audits	5 audits
		\$30,000	\$15,000
<b>In-Use Engine Dyno Testing</b> Families (5 engines/family - 2 famlies) 5	10	1 Family	1 family
Contract- \$30,000 per engine		1	1
		\$150,000	\$150,000
<b>Total Recoverable Costs</b>	<b>16</b>	<b>\$300,000</b>	<b>\$165,000</b>
<b>Grand Total</b>		<b>\$465,000</b>	