

APPENDIX A

SUMMARY RETROFIT PROJECT TABLE

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Diesel Retrofit Technology and Program Experience

No.	Implementing Entity	State	Project Description	Data Availability
1.1	ARB	CA	Carl Moyer Program	Yes
1.2	ARB	CA	Diesel Risk Reduction Plan	Yes
2	NYC Transit	NY	Clean Diesel Program; Transit buses	Yes
3	PANYNJ	NY, NJ	Emission Reduction Retrofit Program; construction equipment and other nonroad equipment/vehicles serving Staten Island	No
4	CT DOT	CT	Retrofit 75-85 pieces of construction equipment with DOCs	Yes
6	TX DOT	TX	Texas Emission Reduction Plan; Retrofit technologies and alternative fuels for highway and nonroad applications	Yes
7	NYSERDA	NY	Clean Diesel Program; diesel retrofit technology commercialization and deployment	Yes
8	ADM/American Lung Association of MO	MO	SEP; Retrofit 800+ school buses with DOCs in the metro St. Louis area	Yes
9	City of Houston	TX	Part of the City of Houston's Emission Reduction Plan.	Yes
10	State of WA	WA	Part of the Washington State Clean School Bus Program	Yes
11	Ann Arbor Transportation Authority	MI	Use of ULSD	No
12	Gilbert Unified SD, Phoenix, AZ	AZ	N/A	No
13	San Francisco Bay Area	CA	Bay Area Transit Project (AC Transit and County Connector); transit bus retrofit equipped with LNC/DPF	Yes
16	Coca Cola Co.	GA	Approximately 1600 diesel trucks using FBC additive	Yes (limited)
18	Dallas Area Rapid Transit	TX	Retrofitting 371 Dallas Area Rapid Transit buses with low pressure EGR/DPF system. Buses will be fueled with ULSD	Yes
19	Laketran Transit	OH	Use of emulsified fuel	No
20	Chevron	Various	SEP; Diesel retrofit in various locations	No
21	ALCOA	Various	SEP; School bus retrofit in metro Austin, TX and other areas. MAY INCLUDE PROJECT 80	No
22	VEPCO/Dominion	Various	SEP; Diesel retrofit and other emission reduction projects in CT, Washington DC, MD, DE, PA, VA, WV, and NY	No
23	Boston Public Schools	MA	Retrofit Boston school buses with DPFs and fuel the school buses with ULSD	Yes
24	Philadelphia, PA Dept of Health	PA	Philadelphia Diesel Difference Program; various diesel retrofit projects including up to 140 DOC+FBC	Yes (limited)
25	Various Transit Agencies	Various	Diesel retrofits resulting from the diesel engine manufacturers Consent Decree	No
27	GA DEP	GA	Retrofits for construction equipment used at Hartsfield International Airport, Atlanta, GA	No
28	MA SHA	MA	MA Clean Air Construction Initiative/Big Dig Program; Approx. 250 DOCs on diesel construction equipment fueled with highway diesel fuel (350ppm sulfur)	Yes
29	3M/PA DEP	PA	School bus retrofits in various PA locations	Partial

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				duplication with No. 39
30	Toyota	Various	SEP; School bus retrofits with DPFs and ULSD in various locations	Yes
30.1	Toyota SEP; Sevier County TN	TN	Retrofit 101 school buses with DPFs and ULSD	Yes
31	CSX Rail	MD	Retrofit of APU for locomotive idle reduction	No
32	IL EPA	IL	Clean School Bus Program; retrofit of school buses in various IL locations	Yes
33	City of New Haven	CT	New Haven School Bus Retrofit Project to retrofit 181 school buses with DOCs and CCVs. All school buses will run on ULSD	Yes
34	MA Bay Transportation Authority, Boston	MA	MBTA commuter rail system. Install DOC on 1 locomotive and use ULSD (18ppm sulfur) and LSD (260ppm sulfur)	Yes
35	City of Boston Air Pollution Control Commission	MA	Part of the Voluntary Diesel Retrofit Program. Retrofit all diesel powered tourist trolleys in the City of Boston with DOCs	Yes
36	NYS DOT & NYS Thruway Authority	NY	2 active diesel retrofit projects in association with HDD snow plow vehicles. Project 1 involved DOC retrofit on Long Island. Project 2 involved HDD vehicles to be retrofitted in Hudson Valley	Yes
37	WMATA	DC	WMATA - transit buses, lean NOx catalysts, DPF, ULSD	No
38	Maryland Dept of the Environment	MD	MD Mass Transit Administration - 165 transit buses, ULSD (1 year)	No
39	State of Pennsylvania DEP, 3M	PA	Retrofitting 31 buses with DPFs and 14 buses with DOCs and fueling the Wissahickon School District's 75 vehicles with ULSD	Yes
40	Alabama DEM	AL	70 school buses were retrofitted in City of Birmingham with DOCs	Yes
41	State of GA, GEPD	GA	Retrofitting 60 school buses in the Clayton County school bus fleet with DOCs. Conventional on-road low sulfur No.2 diesel is used (<500ppm sulfur)	Yes
42	Mecklenburg County, Charlotte	NC	Install DOCs on school buses as part of the Voluntary Diesel Retrofit Program. Standard highway diesel fuel with sulfur content up to 500ppm is used	Yes
43.1	City of Chicago Dept of Environment	IL	Retrofitting 4 refuse trucks and 4 street sweepers with DPFs and rebuild 3 fire truck engines	Yes
43.2	City of Chicago Dept of Environment	IL	Install DOCs on 75 City of Chicago refuse trucks. No. 2 diesel fuel (<500ppm sulfur) was used	Yes
44	IN Department of Environmental Management	IN	Retrofit 20 school buses with DOCs (Hammond) and use the remaining funds (\$20,000) on Portage school buses. Hammond Schools are currently using B20	Yes
45	Hamilton County, Cincinnati	OH	Retrofit 34 school buses with DOCs. Fuel 74 school buses with B20	Yes

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46	Santee Cooper	SC	SEP; School bus retrofit in SC	Yes (implementing)
47	Denver Regional Air Quality Council	CO	Part of the DIRT Program. Retrofit DOCs and CCVs for off-road diesel engines	Yes (limited - in planning stage)
48	South Coast AQMD	CA	Port of Long Beach 25 yard hustlers with DOCs	No
49	Sacramento Metro AQMD	CA	Install PM control devices on vehicles participating in the Sacramento Emergency Clean Air Transportation Fleet Modernization Program. All vehicles will use CARB diesel or Federal diesel fuel	Yes (limited - in planning stage)
50	AK Department of Environmental Conservation	AK	Retrofitting 74 Anchorage School District buses with DOCs and fuel with conventional on-road diesel (<500ppm sulfur)	Yes
51	AK Department of Environmental Conservation	AK	Using fish oil-derived biodiesel in stationary power generators outfitted with DOCs in Denali National Park. DEC is supporting efforts to develop a local source of affordable ULSD. Biodiesel intended for use is B100.	Yes (limited - in planning stage)
52	Community Planning Association of SW Idaho	ID	Ada County Highway District; 17 dump trucks, DOC only	Yes (limited)
53	Oregon DEQ	OR	Beaverton School District; 12 school buses, DPF, ULSD	No
55	Puget Sound Clean Air Agency	WA	Diesel Solutions Initiatives - Emerald City Disposal - no retrofits (see comments)	No
56	Puget Sound Clean Air Agency	WA	Everett School District: Proj. 1) demonstrate effectiveness of DPFs, DOCs, and ULSD. Proj. 2) 1 DPF and 4 DOCs. Proj. 3) 5 DPFs and cover the cost of ULSD (<15ppm sulfur)	Yes
58	Puget Sound Clean Air Agency	WA	Diesel Solutions Initiatives: Retrofit DOCs on Kitsap Transit vehicles	No
59	Puget Sound Clean Air Agency	WA	Kent School District. Retrofitting school buses with DOCs. A second phase is planned to retrofit DPFs. ULSD fuel is being used	Yes
60	Northshore School District	WA	Project involved retrofitting 32 DOCs on school buses. During the first year, school buses were fueled with ULSD and fueled with B20 in the 2nd year	Yes
61	Puget Sound Clean Air Agency	WA	N. Kitsap School District. Retrofit up to 48 buses with DOCs and operating the buses on standard highway diesel fuel	Yes
62	Washington DOT	WA	Move entire WA ferry fleet (24 vessels) from high sulfur diesel (3500ppm) to LSD (350ppm) and include a program testing ULSD (15-30ppm sulfur) and biodiesel blended 20% biodiesel and 80% LSD	Yes
64	Puget Sound Clean Air Agency	WA	Everett School District - 20 school buses, DOC, DPF, ULSD	Duplicate with No. 56
65	Puget Sound Clean Air Agency	WA	Puyallup School District - Retrofitting up to 80 school buses with DOCs. ULSD (<15ppm sulfur) and B20	Yes

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66	NY Dept. of Sanitation/Queens Clean Air Project/Clean Air Communities	NY	Retrofit 60 refuse trucks with 50 DPF systems and 10 LNC+DPF systems	No
68	Northwest Air Pollution Authority, Mt. Vernon	WA	Retrofit 34 WHATCOM transit buses with DPFs and run the entire fleet of 44 buses on ULSD	Yes
69	National Park Service	WA	Mount Rainier National Park - 18 nonroad and dump trucks, DOC, DPF (potential), biodiesel/ULSD blend	Yes (limited)
70	City of Medford	MA	Retrofitting Vocell's bus fleet with 31 DPFs and approximately 40 DOCs. ULSD is being used along with the retrofits	Yes (limited - implementing)
71	ME Department of Environmental Protection	ME	Project is designed to retrofit up to 300 school buses from as many as 27 school districts	Yes (limited – implementing)
72	Corning-Painted Post Area School District	NY	Retrofit Corning-Painted Post School District bus fleet with DPF/DOC using ULSD (<15ppm sulfur)	Yes
73	North Allegheny School District	PA	District installed DOCs on school buses and fueled by ULSD	Yes
74	General McLane School District	PA	Retrofit 40 school buses with DOCs	Yes
75	Columbus Municipal School District	MS	Install catalysts on 47 school buses	No
76	Western NC Regional Air Quality Agency	NC	Retrofit 437 school buses with DOCs in Buncombe, Haywood, Madison and Transylvania Counties. No. 2 diesel fuel was used for the project (<500ppm sulfur)	Yes
77	Illinois Environmental Protection Agency	IL	Provide funds for installing retrofit products on school busses in IL	No
78	Regional Air Pollution Control Agency	OH	Retrofit 38 school buses in the MRDD School district and 25 school buses in the City of Springfield School District. Regular highway fuel is being used	Yes
79	Cleveland Municipal School District	OH	DPF/ULSD	No
80	Texas State Energy Conservation Office	TX	Part of the Adopt-A-School Bus Program involving retrofitting DOCs on school buses and using Texas LED (15ppm ULSD). Program also includes engine ECM reflash to reduce NOx	Yes
81	Regional Air Quality Council, Denver	CO	Part of the Clean Yellow Fleet for Blue Skies Program to retrofit school buses with DOCs, Spiracles and cover incremental cost of B20	Yes (limited – implementing)
82	Salt Lake Clean Cities Coalition	UT	CNG Replacements	No
83	Paradise Valley Unified School District #69	AZ	Project consisted of retrofitting 20 Paradise Valley School District school buses with DPFs and operating the entire diesel fleet on ULSD	Yes
84	Clovis Unified School District	CA	Retrofit school buses with DPFs and DOCs and use emulsified fuel (500ppm sulfur) and ULSD (15ppm sulfur)	Yes
85	Puget Sound Clean Air Agency	WA	Western Washington Clean Buses, Health Kids Retrofit Project. Involves DOC retrofits in 4 districts and DPF retrofits in 2 districts. Use of ULSD is planned for 2	Yes

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			districts	
86	National School Transportation Association	Various	Replacements, retrofits with DOCs , DPFs, FBC, and ULSD	Yes
87	Warwick Public School Department	RI	Fuel school buses with ULSD with B20 soy methyl ester in conjunction with exhaust retrofit technology	Yes (limited – implementing)
88	New Hampshire Department of Environmental Services	NH	A total of up to 45 school buses in Manchester and Nashua will be retrofitted with DOC plus CCV systems. Conventional highway diesel fuel will be used	Yes (limited - in planning stage)
89	NYSERDA	NY	Retrofit 474 buses in 14 school districts with DOCs	No
90	Vineland Public Schools	NJ	Retrofit 90 school buses with DOCs, CCVs and ECM reflash	Yes
91	Upper Darby School District	PA	Project will involve 58 school buses being retrofitted with DOCs and DPFs. ULSD will be used to fuel the entire fleet of 116 buses	Yes (limited – implementing)
92	Georgia Department of Natural Resources	GA	Establish Adopt-a-School Bus program using DOCs, DPFs, ULSD in 10 school districts, starting with Atlanta area	No
93	Moss Point Public School District	MS	Retrofit 31 buses with DOCs	No
94	Hillsborough City Environmental Protection Commission	FL	Project involved purchasing and installing 170 or more DOCs on the School District of Hillsborough County (SDHC) school buses, implement idling program. Conventional highway diesel fuel will be used (500ppm sulfur)	Yes (limited – implementing)
95	Chattanooga/Hamilton County	TN	The Chattanooga-Hamilton County Air Pollution Control Bureau and First Student, Inc. will equip school buses with DOCs and fueled with highway diesel fuel	Yes (limited – implementing)
97	City of Chicago	IL	Bus driver education, DOC retrofits	No
98	Ann Arbor School District	MI	Retrofit 110 school buses (Ann Arbor) with DOCs and 3 school buses with DOCs and CEC. Ann Arbor will fuel with highway diesel fuel. Approximately 30 school buses (Manchester) will be fueled with B20	Yes (limited – implementing)
99	Okemos School District	MI	Program goal was to retrofit 78 school buses in Lansing area with DOCs. St. John's Public Schools is using B20. Emulsions were used in 1 school district	Yes
100	NM Energy, Minerals and Natural Resources Dept	NM	Purchase 3 new CNG buses	No
101	Lincoln Public Schools	NE	Retrofit 101 school buses with DOCs	Yes
102	State of IA DNR	IA	Retrofit 180 school buses with DOCs, fuel 3 school districts with B10 and B20, and replace 3 school bus engines	Yes (limited – implementing)
103	Missoula City/County Health Department	MT	Eight school buses (4 - Missoula City and 4 - Frenchtown) will be fueled with B20.	Yes
104	Littleton Public Schools	CO	Fuel 67 buses with B20 and 33 buses with DOC retrofits	Yes (limited – implementing)
105	SCAQMD	CA	Through a subgrant program, fund cost differential of new CNG buses	No
106	San Diego County Air Pollution	CA	DPFs meeting CARB verified Level 3 are	Yes (limited –

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	Control District		being installed on up to 189 vehicles and ULSD is being used	implementing)
107	Lane Regional Air Pollution Authority	OR	Establish infrastructure for ULSD in Lane County and build demand for ULSD to reduce price	No (implementing)
108	USPS	Various	N/A	No
109	U.S. DOD	Various	N/A	No
110	Westchester County DOT	NY	N/A	No
112	Silver Eagle Distributors	TX	N/A	No
113	CARB	CA	Retrofit of irrigation pumps used in agriculture	No
114	CALTRANS	CA	Use of ULSD in CALTRANS transit fleets	Duplicate with No. 119
115	CT Transit	CT	N/A	No
116	NESCAUM	CT	41 Norwich School District buses were retrofitted with 32 DOCs and 9 DPFs	Yes
117	UPROSE Clem's Snacks	NY	Retrofit 6 UTZ Potato Chip delivery trucks with DOCs. Four trucks will be refurbished and 2 will be repowered with a new engine or replaced with a used vehicle. Highway diesel fuel was used	Yes
118	NESCAUM	CT	Retrofit 74 Hartford school buses with DOCs and DPFs. Fuel with ULSD	Yes
119	CALTRAN	CA	Retrofit over 290 of its fleet vehicles with DOCs, DPFs or LNC/DPF systems. Vehicles are fueled with California ULSD	Yes
120	Hertz Equipment Services	CA	Part of the ECD Program. Goal was to evaluate performance of passive DPFs with ULSD in heavy-duty vehicle applications. Same fuel was used in the ECD Program	Yes
123	LA City Sanitation Truck Fleet	CA	Part of the ECD Program. Goal was to evaluate performance of passive DPFs with ULSD in heavy-duty vehicle applications. Same fuel was used in the ECD Program	Yes
124	LA School Districts	CA	Part of the ECD Program. Goal was to evaluate performance of passive DPFs with ULSD in heavy-duty vehicle applications. Same fuel was used in the ECD Program	Yes
125	Manchester NH Airport Retrofit Program	NH	Retrofit 30 ground service vehicles for NOx reduction	No
126.1	NJ DOT/DEP	NJ	Retrofit up to 40 NJ transit buses with DPFs and using ULSD (<30ppm sulfur)	Yes
126.2	NJ DOT/DEP	NJ	Retrofit up to 300 NJ transit buses with DPFs and using ULSD (<30ppm sulfur)	Yes (limited – implementing)
127	Port of Houston Retrofit Program	TX	Retrofit various equipment at the Port	No
128	Ralph's Grocery	CA	Part of the ECD Program. Goal was to evaluate performance of passive DPFs with ULSD in heavy-duty vehicle applications. Same fuel was used in the ECD Program	Yes
129	Fairfax Public Schools	VA	Retrofit 537 school buses with DOCs and ECM reflash, where possible	Yes
130	South Washington County School District	MN	Retrofit 71 school buses with DOCs	No
131	Cummins SEP	NJ	DPFs on transit buses & refuse trucks	Yes
132	MACK SEP	NY	Mack's consent decree emission reduction	Yes

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			projects. Project 1: (SCR project), Project 2: (DOC/DPF project). Retrofit up to 150 refuse trucks with DOCs, up to 30 refuse trucks with DPFs, 5 long haul trucks with SCR, 3 long-haul trucks with DPF/SCR and 2 refuse trucks with DPF/SCR. Diesel fuel with <350ppm sulfur content was used	
133	WTC Project-NESCAUM	NY	Retrofit 8 pieces of construction equipment with technologies to reduce PM and NOx and use ULSD (<30ppm sulfur)	Yes
134	NESCAUM	NY	Assist NYSERDA and NY DOT in retrofitting emission control technologies on vessels from 1 of 4 operating fleets. Evaluation of LSD (<500ppm sulfur) and ULSD (<30ppm sulfur). FBCs are being considered	Yes (limited – implementing)
136	MASSPORT	MA	DOCs on nonroad engines	Duplicate with No. 144
137	IN Department of Public Works	IN	Retrofitting at least 38 DPW refuse trucks and 9 off-road engines with DOCs. Vehicles and equipment are fueled with conventional highway diesel fuel	Yes
138	Transit Windsor	Canada	Use of emulsified fuel in transit operations	No
139	Tri-Delta Transit	CA	Use of emulsified fuel in transit operations	No
140	DELDOT	DE	Use of emulsified fuel in transit operations	No
141	Bay Area Transportation Authority (BATA)	MI	Retrofitting 8 transit buses with PM emission control technology (flow-through filter). Conventional No 2 diesel fuel is used	Yes
142	Southgate, Kentucky Fire Department	KY	Retrofit 2 fire trucks with DPFs	No
143	MASSPORT	MA	MASSPORT fueled its diesel buses with B20 fuel from 1993 to 1999	Yes
144	MASSPORT	MA	Retrofitting DOCs on 20 trucks, DOCs on off-road equipment including 5 reach stackers, 4 rubber tire gantry cranes, and 12 tractors. Vehicles will be fueled with ULSD	Yes
145	FAA-LEAV/VALE Projects	Various	Airport Emission Reduction Projects	Yes
146	Puget Sound Clean Air Agency	WA	Retrofitting DOCs and DPFs on school buses and operating the school buses on ULSD. First school bus program under the State School Bus Program that will involve DPFs. Bainbridge school buses have been operating on ULSD since Fall 2003	Yes
147	South Kitsap School District	WA	Project involves retrofitting up to 49 school buses with DOCs (21) and DPFs (28). ULSD has been used since Sept 2004	Yes
148	Puget Sound Clean Air Agency	WA	Chief Leschi School bus DOC retrofit	Yes (limited)
149	Waste Management, Inc	WA	Project involved retrofitting 12 DPFs on refuse trucks serving the communities of Redmond and Kirkland. Refuse trucks were fueled with ULSD (<15ppm sulfur)	Yes
150	King County Solid Waste	WA	DPF retrofit on 12 vehicles and ULSD and B20	Yes (limited)
151	Lake Washington School Bus	WA	Bus retrofit	No

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152	City of Tacoma Solid Waste	WA	Install DOCs on 50 refuse trucks	Yes (limited)
153	Seattle Passenger Ferries Only	WA	Possible strategies that will be considered include ULSD, biodiesel, DOCs and water injection	No (in very early planning stage)
154	Port of Seattle	WA	Retrofit DOCs and use ULSD and/or biodiesel on cargo handling equipment, highway trucks, and heavy-duty equipment	Yes
156	Port of Tacoma	WA	Retrofit DOCs on 30 Port of Seattle straddle carriers. The port has been using ULSD (<15ppm sulfur)	Yes (limited – implementing)
157	Port of Seattle Property	WA	Possibly ULSD and some retrofits	No (in very early planning stage)
158	Community Transit	WA	Retrofit up to 138 transit buses with DPFs and fuel the transit buses with ULSD (<15ppm sulfur)	Yes
159	King County Metro Transit	WA	Retrofit up to 369 King County Metro Transit buses with DPFs and fuel with ULSD (<15ppm sulfur)	Yes
160	Boeing	WA	4 DOCs installed	Yes (limited)
161	City of Seattle	WA	Retrofit a mix of DOCs and DPFs on 300 vehicles in City of Seattle fleet, including utility vehicles and dump trucks. 95% of vehicles were to be equipped with DOCs and 5% were to be equipped with DPFs. Fleet is being fueled with B20/ULSD	Yes
162	McCord Air Force Base	WA	Biodiesel B20	Yes (limited)
164	PSCAA	WA	Retrofit 52 Seattle School District school buses with DOCs, 15 buses with DPFs, and operate fleet on ULSD	Yes
165	City of Seattle Waste	WA	ULSD scheduled to begin in Apr 2005	No
166	Kirkland Solid Waste	WA	N/A	Duplicate with No. 149
167	Bellevue Solid Waste	WA	N/A	No
168	Gray Line	WA	N/A	No (Not clear project will go forward)
169	SCAQMD	CA	Retrofitting DPFs on school buses and being fueled by ULSD (<15ppm sulfur)	Yes
170	Sound Transit	WA	Retrofit up to 391 Sound Transit buses with DPFs and fuel with ULSD (<15ppm sulfur)	Yes
171	SCAPCA	WA	Retrofit all district-owned school buses serving Spokane County with DOCs or DPFs and CCVs. DPFs will not be installed until ULSD is available. All districts are using conventional highway diesel fuel. Central Valley school district is using B20	Yes
172	Skagit Transit	WA	Retrofit 18 Skagit Transit buses with DPFs and using ULSD (max 30ppm sulfur, avg. 15ppm sulfur)	Yes
173	Northwest Air Pollution Authority	WA	Resulted from an administrative order requiring Georgia-Pacific to retrofit DPFs on 10 school buses. Fuel is regular highway diesel fuel (<500ppm sulfur)	No
173	Bellingham School Bus	WA	N/A	No

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174	ORCAA School Bus	WA	Designed to retrofit 24 school buses in the Aberdeen and Hoquiam School Districts with DOCs	Yes
176	Port of Seattle Retrofit	WA	Retrofit DOCs on cargo handling equipment, on-road trucks, and heavy-duty equipment	No (in planning stage)
177	Port of Seattle Airport	WA	Phase 1 involved using emulsified fuels on 3 dual-bed dump trucks. Phase 1 lasted 1 week. Phase 2 was initiated fueling highway and off-road vehicles with ULSD. Phase 3 is being planned and involving the retrofit of up to 10 off-road engines with DOCs	Yes
179	Port of Oakland	CA	Retrofits for tug operations heavy-duty vehicles and ground support equipment.	No
180	Port of Los Angeles	CA	Retrofits for ground support equipment; truck idle reduction.	No
181	Port of San Francisco	CA	Retrofits for tug/ferry operations	No
182	Las Vegas Government Fleets	NV	Biodiesel B20 for Las Vegas, N. Las Vegas and Hudson Gov't. Fleets	No
183	Las Vegas Valley Water District Fleet	NV	Biodiesel B20	No
184	Somerset Development/Q & D Construction Equip.	NV	Biodiesel B5 to start but may progress to B10 or B20.	No
185	City of Fresno	CA	80 LNC+DPF on buses, trucks and offroad equipment	Yes (limited)
186	NorCal Waste, Inc.	CA	Retrofit 80 refuse trucks with LNC/DPF systems	Yes (limited)
187	Sacramento Metropolitan Utility District	CA	Retrofit 30 utility vehicles with LNC/DPF systems and fuel with California ULSD (<15ppm sulfur)	Yes
188.1	City of Houston	TX	Part of the City of Houston's Emission Reduction Plan. Project involves retrofitting 33 rubber tire excavators with SCR. 1 SCR was installed on a dump truck. Also retrofitted 30 to 40 off-road engines with DOCs and plans to retrofit up to 63 refuse trucks with low pressure EGR/DPF. A portion of the fleet is operating on ULSD	Yes
188.2	City of Houston	TX	Retrofit up to 63 refuse trucks with low pressure EGR/DPF systems. City also retrofitted approximately 30 to 40 off-road engines with DOCs. A portion of the fleet is operating on ULSD	Yes

189	Houston METRO	TX	Retrofitting EGR/DPF systems on up to 543 transit buses, repowering a number of buses with lower NOx emitting engines, repowering 5 LNG buses with Allison hybrid electric powertrains. Fuel the entire fleet with ULSD (<15ppm sulfur)	Yes
190	WMATA	DC	Retrofit 8 Orion and Thomas buses with EGR systems	No
191	West Coast Diesel Emission	Various	Various retrofit projects for highway and	Yes

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	Reduction Collaborative		offroad applications	
192	NJ state-wide	NJ	Proposed legislation targeting certain on-road trucks, commercial buses, school buses, sanitation vehicles and offroad diesel equipment to use best available retrofit technologies on vehicles in fleets of 10 or more.	Yes (limited - legislation proposed)
194	PA DEP	PA	Retrofit up to 140 beverage trucks, refuse trucks, and landfill equipment with FBC/DOCs	Yes (limited)
195	SMAQMD	CA	Retrofit commuter rail locomotives running between Sacramento and Oakland	Yes (limited)
196	Los Angeles Department of Public Works	CA	Retrofit DPFs on highway and nonroad engines and fuel with ULSD	Yes (limited)
197	Regional Air Quality Council, Denver	CO	Retrofit DOCs and CCVs on nonroad vehicles	Yes (limited)
198	Town of Trumbull	CT	Repower 3 refuse trucks with CNG	Yes (limited)
199	Miami-Dade County DERM	FL	Purchase cleaner diesel fuel and install DOCs on community service buses. Cleaner fuel will be available for 500 fleets	Yes (limited)
200	Idaho DEQ	ID	Retrofit agricultural equipment with DOCs	Yes (limited)
201	Maryland DEM	MD	Retrofit fire trucks and ambulances with DOCs and CCVs	Yes (limited)
202	City of Cambridge	MA	Retrofit DOCs, DPFs, ULSD, biodiesel, CCV, cetane enhancers on refuse and dump trucks, bobcats, backhoes, and front loaders	No
203	Massachusetts Port Authority	MA	Retrofit container delivery vehicles with DOCs and retrofit nonroad engines with DOCs. ULSD will be used	No
204	American Lung Association of Missouri	MO	Retrofit 44 refuse trucks with DOCs and CCVs	Yes (limited)
205	NESCAUM	NY	Retrofit refuse trucks with DOCs and CCVs in the South Bronx area. ULSD will be used	Yes (limited - in planning stage)
206	Cleveland School District	OH	Retrofit school buses with DPFs and fuel with ULSD	Yes (limited - in planning stage)
207	Port of Houston Authority	TX	Retrofit rubber-tired gantry cranes and terminal tractors with DOCs and emulsions	Yes (limited - in planning stage)
208	County of Fairfax	VA	Retrofit solid waste collection vehicles, transfer tractors, and dump trucks with DOCs	Yes (limited - in planning stage)
209	Yakima Regional Clean Air Authority	WA	Retrofit utility fleet of highway and nonroad vehicles with DOCs	Yes (limited - in planning stage)
210	Port of Tacoma	WA	Retrofit port straddle carriers with DOCs	Yes (limited - in planning stage)

211	Milwaukee City	WA	Retrofit waster haulers with DOCs	Yes (limited - in planning stage)
212.1	West Coast Diesel Emission Reduction Collaborative	WA	3 new truck stop electrifications and a program to install on-board power systems to reduce idling along the I-5 corridor	Yes (limited)
212.2	West Coast Diesel Emission Reduction Collaborative	OR	3 new truck stop electrifications and a program to install on-board power systems to reduce idling along the I-5 corridor	Yes (limited)
212.3	West Coast Diesel Emission Reduction Collaborative	CA	3 new truck stop electrifications and a program to install on-board power systems	Yes (limited)

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			to reduce idling along the I-5 corridor	
213	West Coast Diesel Emission Reduction Collaborative	CA	Install anti-idling technology on switcher locomotives in the San Joaquin Valley	Yes (limited)
214	West Coast Diesel Emission Reduction Collaborative	CA	Conduct a 1 year demonstration project to evaluate the use of emulsions in marine applications	Yes (limited)
215	West Coast Diesel Emission Reduction Collaborative	WA	Connect cruise ships' electrical networks to electrical distribution equipment	Yes (limited)
216	West Coast Diesel Emission Reduction Collaborative	CA	San-Diego-Tijuana Diesel Emissions Reduction Demonstration Project will investigate the costs and effectiveness of retrofits on heavy-duty vehicles	Yes (limited)
217	Bay Area Air Quality Management District	CA	Purchase 4 new school buses and retrofit 11 school buses with DPFs	Yes (limited)
218	New York Power Authority	NY	Retrofit between 1500 and 2000 school buses and fuel with ULSD	Yes (limited)
219	City of Detroit	MI	Retrofit 25-40 refuse trucks with DOCs	No
220	FedEx Freight East, Inc.	TX	Phase 1 involved fueling 20 trucks with ULSD (<15ppm sulfur) from December 1, 2003 until January 5, 2004. Phase 2 consisted of retrofitting DPFs on the trucks	Yes
221	Illinois EPA	IL	Install DOCs on equipment used in the Dan Ryan Expressway Construction Project	Yes (limited)