

**FOURTH AMENDMENT TO FUNDING AGREEMENT NO. 013-DMV-05/06-11
WITH THE EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION**

This Fourth Amendment to Agreement No. 013-DMV-05/06-11 made and entered into the 25th day of October, 2005, and the First Amendment made and entered into the 26th day of September, 2006, and the Second Amendment made and entered into the 29th day of April, 2008, and the Third Amendment made and entered into the 29th day of September, 2009 by and between the **EL DORADO COUNTY AIR QUALITY MANAGEMENT DISTRICT**, a county Air Quality Management District formed pursuant to California Health and Safety Code section 40100, et seq. (hereinafter referred to as "AQMD"); and the **EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION**, a political subdivision of the State of California (hereinafter referred to as "COUNTY") hereby amends the Agreement to read as follows;

1. PROJECT

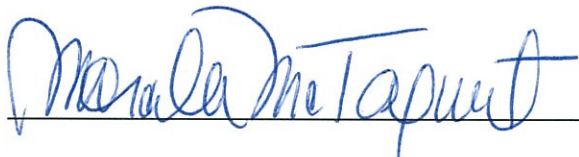
The project description shall be amended to include the attached "Amendment IV to the Proposal for the Diesel Fleet Retrofits," marked Exhibit "A" incorporated herein and made by reference a part hereof.

2. PERIOD OF PERFORMANCE/TIMETABLE

Shall be amended to extend the time within which to complete the **Diesel Fleet Retrofits** for eighteen (18) additional months, expiring on June 30, 2012.

All other sections of the Agreement dated the 25th day of October, 2005, the First Amendment dated the 26th day of September, 2006, the Second Amendment dated the 29th day of April, 2008, and the Third Amendment dated the 29th day of September, 2009 shall remain unchanged and in full force.

CONTRACT ADMINISTRATOR CONCURRENCE:

By:  Dated: 09-13-2010

Marcella McTaggart
Air Pollution Control Officer
County of El Dorado Air Quality Management District

REQUESTING DEPARTMENT CONCURRENCE:

By:  Dated: 09-13-2010

Marcella McTaggart
Air Pollution Control Officer
County of El Dorado Air Quality Management District

IN WITNESS WHEREOF, the parties hereto have caused this Amended Agreement to be executed as of the day and year first herein below written.

COUNTY

EL DORADO COUNTY
DEPARTMENT OF
TRANSPORTATION

Date: _____

By: _____

James W. Ware
Director of Transportation

AQMD

EL DORADO COUNTY
AIR QUALITY MANAGEMENT
DISTRICT

Date: _____

By: _____

Norma Santiago
Chair

Attest:
Suzanne Allen de Sanchez
Clerk of the Board

Date: _____

By: _____

EXHIBIT "A"

Amendment IV to the Proposal for the Diesel Fleet Retrofits

Amendment IV to Proposal for the Diesel Fleet Retrofits

Motor Vehicle Emission Reduction Project

This Amendment IV is to the **Diesel Fleet Retrofits** proposal submitted by the El Dorado County Department of Transportation to reduce diesel emissions through the installation and proper use of pollution control technologies retrofitted on thirty-two (32) vehicles in the heavy equipment fleet.

The El Dorado County Air Quality Management District (EDCAQMD) agreed to provide funding in the amount of \$487,076 under Agreement No. 013-DMV-05/06-11 for the Diesel Fleet Retrofits emissions reduction project, based on the proposal submitted by the El Dorado County Department of Transportation in June of 2005.

The Diesel Fleet Retrofits proposal was prepared using the most current information available at the time; however, emission control technology has not developed as industry experts had predicted.

Amendment I to the proposal was executed on September 26, 2006 and included the following changes:

1. addition of the Cleaire Horizon as an emission control device eligible to meet the project objectives;
2. addition of spare filters and a filter cleaning device required for effective use of the Horizon device;
3. addition of one (1) unit of equipment to the project scope; and
4. extension of the term through October 24, 2008.

Amendment II to the proposal was executed on April 29, 2008 and included the following changes:

1. addition of the Huss Umwelttechnik FS-MK series device as an emission control device eligible to meet the project objectives;
2. addition of spare filters for the Cleaire Longview and Huss devices;
3. addition of two (2) new vehicles to the project scope; and
4. elimination of seven (7) vehicles from the project scope based on lack of cost effective technology available for these vehicles.
5. extension of term through October 24, 2009

Amendment III to the proposal was executed on September 29, 2009 and included the following changes:

1. addition of two (2) vehicles (#25-11 and #25-12) that were eliminated in Amendment II
2. extension of the term through December 31, 2010.

Amendment IV to the proposal is to include the following change:

1. extension of the term through June 30, 2012

The Diesel Fleet Retrofits proposal is amended as follows:

Project Description

The funding under the amended project budget will allow the Department to retrofit a total of thirty-two (32), instead of the originally approved thirty-four (34) diesel powered on-road vehicles. As detailed on the attached schedule marked "Exhibit D – Amendment IV – Project Budget (Revised 08-31-2010)" five (5) units of equipment have been eliminated from the original proposal due to unavailability of economically feasible verified technology from the California Air Resources Board (CARB). The year and use of this equipment would require the installation of two devices on each unit of equipment resulting in a cost that is twice the original estimate. One (1) existing vehicle was added with Amendment I and two (2) new vehicles were added with Amendment II, which have been purchased since the original proposal was submitted, and added to the retrofits list.

Project Organization/Background

Based on the criteria established for the project, the emission control devices selected are the Cleaire Longview, the Cleaire Horizon and the Huss FS-MK Series emission control devices. The Cleaire Horizon and the Huss FS-MK Series devices both reduce PM10 while the Cleaire Longview system reduces both PM10 and NOX. The Cleaire Longview device is effective when used with engines manufactured between 1994 and 2002 and some non-EGR motors through 2006. The Cleaire Horizon device and the Huss FS-MK Series devices are effective when used with engines manufactured in 2006 or earlier. The Cleaire Longview device and the Huss FS-MK Series device do not require the equipment to be out of service during the cleaning cycle. The Cleaire Horizon device requires cleaning through the use of electricity or a cleaning unit. It is only feasible to use the Cleaire Horizon device on equipment that may be taken out of service for five (5) hours at a time to allow for the cleaning cycle. The cleaning unit for the Horizon device and spare filters for all three types of devices have been added to the Diesel Fleet Retrofits proposal.

Emission Benefits/Cost Effectiveness

As shown on "Exhibit D – Amendment IV – Project Budget (Revised 08-31-2010)," a total of thirty-two (32) on-road diesel fueled vehicles will be modified to reduce NOx and PM10, and two cleaning units for use with the Cleaire Horizon device and spare filters for all devices will be purchased. The El Dorado County Air Quality Management District funding dollars of \$487,076 will remain the same and the Road Fund matching funds will remain the same at \$162,358. The reduction of NOx and PM10 has been reduced from the original proposal primarily due to the elimination of five (5) vehicles with high baseline pollution rates and significant reduction in pollutants with the application of the filtering devices. The five (5) vehicles have been eliminated from the proposal because the technology to retrofit them would be too costly to warrant the investment in aging equipment. The revised project (32 vehicles total) could potentially result in NOx emissions reductions of 1,235 pounds per year, and PM10 emissions reductions of 376.62 pounds per year, with a revised cost effectiveness of funding dollars per pound of \$32.00 (up from \$30.83 after Amendment II to the proposal).

Amended Work Statement

As of the date of this letter, thirty (30) vehicles have been retrofitted: twelve (12) units with the Longview device, ten (10) units with the Horizon device, and eight (8) units with the Huss device. The following Amended Work Statement provides the time frame for completing the retrofit project for the remaining two (2) units (2004 International Dump Trucks, Equipment ID 25-11 and 25-12), will be retrofitted as soon as a CARB verified Level 3 device is available, which will be no later than June 30, 2012.

Funding Request/Breakdown of Cost

The attached schedule titled "Exhibit D – Amendment IV – Project Budget (Revised 08-31-2010)" provides a list of thirty-two (32) units of on-road diesel fueled equipment that are eligible for the emissions reduction retrofit. The original proposal contained thirty-four (34) vehicles; one (1) vehicle was added with Amendment I; two (2) vehicles were added and seven (7) vehicles were removed with Amendment II; two (2) vehicles that were eliminated with Amendment II, were added back with Amendment III, since economically feasible retrofit technology was expected to be verified by CARB in the near future. The total cost under the amended proposal remains the same at \$649,434, with \$487,076 in AB2766 DMV Surcharge funds being used and the match of \$162,358 being provided by the Road Fund. The unit cost for each retrofit device is provided in "Exhibit D – Amendment IV – Project Budget (Revised 08-31-2010)." Actual unit costs are effective as of the date of this Amendment IV. The contribution of \$487,076 in AB2766 DMV Surcharge funds from the EDCAQMD will remain the same regardless of changes in unit costs.

El Dorado County Department of Transportation
Cost Effectiveness of Emission Benefits

Exhibit D - Amendment IV - Project Budget (Revised 08-31-2010)

No.	Equip #	Description	Life	VMT	D	DMV Funding Request ²	Year Completed	ROG	NOX	PM10	NOX	PM10	NOX	PM10	NOX	PM10	NOX	PM10	NOX	(NE)/(NOx+PM) = Cost Effectiveness of Funding \$ PER POUND			
						Matching Funds	Total Cost		Baseline ³	Reduced to ⁴	Baseline ³	Reduced to ⁴	Baseline ³	Reduced to ⁴	Baseline ³	Reduced to ⁴	Baseline ³	Reduced to ⁴	Baseline ³	Reduced to ⁴	Capital Recovery Factor		
25-04		1990 International Dump Truck	12	0	\$	\$	\$	N/A	0	1.6	0	0.24	0.000	0.000	0.000	0.100	\$						
25-05		1990 International Dump Truck	12	0	\$	\$	\$	N/A	0	1.6	0	0.24	0.000	0.000	0.000	0.100	\$						
33-02		1990 Peterbilt Tractor	12	0	\$	\$	\$	N/A	0	1.6	0	0.24	0.000	0.000	0.000	0.100	\$						
25-06		1991 International Dump Truck	12	0	\$	\$	\$	N/A	0	1.6	0	0.24	0.000	0.000	0.000	0.100	\$						
25-07		1992 International Dump Truck	12	0	\$	\$	\$	N/A	0	1.6	0	0.24	0.000	0.000	0.000	0.100	\$						
1	34-06	1991 International Water Truck	12	10000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	15.26	0.100	\$	105.58					
2	34-17	1992 International Dump Truck	12	30000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	45.79	0.100	\$	35.19					
3	23-18	1992 International Dump Truck	12	30000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	45.79	0.100	\$	35.19					
4	34-07	1992 International Water Truck	12	10000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	15.26	0.100	\$	105.58					
5	89-03	1993 Ford Paint Striper	12	5000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	7.63	0.100	\$	211.17					
6	39-02	1993 International PB Patcher	12	10000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	15.26	0.100	\$	105.58					
7	39-03	1993 International PB Patcher	12	10000	\$	5,372	\$ 16,117	Huss	N/A	N/A	0	0.07	0.007	0.000	15.26	0.100	\$	105.58					
8	25-09	1996 International Dump Truck	12	30000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	214.758	0.100	\$	6.19					
9	24-04	1996 International Dump Truck 4x4	12	30000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	214.758	0.100	\$	6.19					
10	38-03	1996 International Herbicide Sprayer Truck	12	2520	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	18.040	0.100	\$	73.64					
11	23-19	1997 International Dump Truck	12	10000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	71.588	0.100	\$	18.56					
12	23-20	1997 International Dump Truck	12	10000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	71.588	0.100	\$	18.56					
13	24-05	2000 International Dump Truck	12	10000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	71.588	0.100	\$	18.56					
14	23-22	2001 International Dump Truck	12	10000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	71.588	0.100	\$	18.56					
15	23-21	2001 International Dump Truck	12	10000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	71.588	0.100	\$	18.56					
16	71-04	2001 Schwarze Sweeper	12	20000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	143.172	0.100	\$	9.28					
17	71-05	2001 Schwarze Sweeper	12	20000	\$	4,775	\$ 14,326	Longview	N/A	N/A	13	9.75	0.3	0.045	143.172	0.100	\$	9.28					
18	25-10	2002 International Dump Truck	12	10000	\$	4,775	\$ 14,326	Longview	N/A	N/A	11.7	5.2	0.06	0.000	3.08	0.100	\$	9.80					
19	21-06	2003 Ford F550 Dump Truck	12	22000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	11.63	0.100	\$	96.37						
20	21-07	2003 Ford F550 Dump Truck	12	22000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	11.63	0.100	\$	96.37						
21	21-08	2003 Ford F550 Dump Truck 4x4	12	22000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	11.63	0.100	\$	96.37						
22	28-08	2003 International Shop Service Truck	12	7000	\$	4,775	\$ 14,326	Longview	N/A	N/A	0	0.06	0.000	3.70	0.100	\$	387.14						
23	28-10	2004 Ford F550	12	22000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	11.63	0.100	\$	96.37						
24	28-11	2004 Ford F550	12	22000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	11.63	0.100	\$	96.37						
25	28-09	2004 Ford F550 Truck	12	22000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	11.63	0.100	\$	96.37						
26	25-11	2004 International Dump Truck	12	30000	\$	4,775	\$ 14,326	TBD	N/A	N/A	0.3	0.06	0.000	15.86	0.100	\$	90.33						
27	25-12	2004 International Dump Truck	12	30000	\$	4,775	\$ 14,326	TBD	N/A	N/A	0.3	0.06	0.000	15.86	0.100	\$	90.33						
28	39-04	2004 International PB Patcher	12	20000	\$	3,736	\$ 11,208	Horizon	N/A	N/A	0.3	0.06	0.000	10.57	0.100	\$	106.01						
29	79-02	2004 Vector Truck	12	20000	\$	4,944	\$ 14,944	Horizon	N/A	N/A	0.3	0.07	0.007	12.36	0.100	\$	90.70						
30	35-01	1987 Ford Water Truck	12	10000	\$	4,944	\$ 14,944	Horizon	N/A	N/A	0.3	0.045	0.045	0.000	0.000	0.100	\$	90.70					
31	21-09	2006 Ford	12	22000	\$	4,944	\$ 14,944	Horizon	N/A	N/A	0.3	0.045	0.045	0.000	0.000	0.100	\$	90.70					
32	32-04	2006 Ford	12	22000	\$	4,944	\$ 14,944	Horizon	N/A	N/A	0.3	0.045	0.045	0.000	0.000	0.100	\$	90.70					
		Horizon device cleaning unit/spar filters			\$	60,867	\$ 15,168																
		Project Total Calculation ¹			550520	\$ 649,434	\$ 162,358															0.10	\$ 30.22

Eliminated based on lack of technology available
Huss Device
Longview Device
Horizon Device
Level 3 Device TBD

Notes
Calculation of cost effectiveness based on total project cost and total emissions reduction
(10 x \$487,076) / (1235 + 376.62) = \$32.00 cost per pound reduced
² Cost of retrofit system less 25% County match
³ Baseline emission factors provided by Jeff Weir, Transportation Strategies Group, Air Resources Board (916) 445-0098
⁴ Reduction factors for the Clearie Longview retrofit system - 25% NOx reduction, 85% PM reduction per manufacturer's specifications
Reduction factors for the Clearie Horizon 85% PM reduction per manufacturer's specifications