



RESOLUTION

AUTHORIZING THE DIRECTOR OF THE DEPARTMENT OF FACILITY MAINTENANCE OR THE DIRECTOR'S DESIGNEE TO ENTER INTO AN INTERGOVERNMENTAL AGREEMENT WITH THE HAWAII STATE DEPARTMENT OF HEALTH FOR THE RETROFIT OF OLDER CITY DIESEL FUELED TRUCKS WITH DIESEL PARTICULATE FILTERS TO REDUCE EXHAUST POLLUTANTS FROM DIESEL FUELED VEHICLES.

WHEREAS, Chapter 1, Article 8, Revised Ordinances of Honolulu 1990, as amended, requires that any intergovernmental agreement or amendment thereto, which places an obligation on the City or any department or agency thereof, receive the review, consent, and approval of the Council of the City and County of Honolulu; and

WHEREAS, the Hawaii State Department of Health has received funds from the United States Environmental Protection Agency from the Diesel Emissions Reduction Act; and

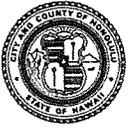
WHEREAS, the Hawaii State Department of Health desires to provide some of these funds for a program to subsidize the procurement of parts and installation services for the retrofit of older City vehicles with Diesel Particulate Filters (DPFs); and

WHEREAS, the Hawaii State Department of Health has offered a grant of up to \$133,000.00 in the form of reimbursement for the project to the Department of Facility Maintenance (DFM), the City agency responsible for maintaining the diesel trucks used by the City; and

WHEREAS, the acceptance of this program will benefit the City and County of Honolulu by further reducing vehicle exhaust pollutants resulting in improved air quality for the duration of the program; and

WHEREAS, the Hawaii State Department of Health is aware and understands that City Council approval is required prior to expenditure of funds, and that funding for these activities will only be spent starting from the date of approval; and

WHEREAS, the draft Subrecipient Agreement is attached hereto as Exhibit A and by reference made a part of this resolution; now, therefore,



RESOLUTION

BE IT RESOLVED by the Council of the City and County of Honolulu that the DFM Director or the DFM Director's designated representative is hereby authorized to:

1. Enter into the Subrecipient Agreement with the Hawaii State Department of Health; and
2. Execute any incidental or related agreements and documents in furtherance of the agreement so long as such agreements and documents do not incur additional obligations on the part of the City; and
3. Accept, administer, and/or expend funds awarded pursuant to the Subrecipient Agreement; and

BE IT FINALLY RESOLVED that the Clerk is directed to transmit a certified copy of this Resolution to the Office of the Mayor and the Director of the Department of Facility Maintenance at 1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707.

INTRODUCED BY:

[Handwritten signature] (br)

DATE OF INTRODUCTION:

SEP 18 2013
 SEP 18 2013

Honolulu, Hawaii

Councilmembers

SUBGRANT
BETWEEN
THE DEPARTMENT OF HEALTH
STATE OF HAWAII
AND
CITY AND COUNTY OF HONOLULU
DEPARTMENT OF FACILITY MAINTENANCE
THROUGH
AUTOMOTIVE EQUIPMENT SERVICE DIVISION

1. THIS SUBGRANT made and entered as of the __ day of September 2013 by and between the DEPARTMENT OF HEALTH, STATE OF HAWAII, hereinafter referred to as (“DOH”), and the CITY AND COUNTY OF HONOLULU, DEPARTMENT OF FACILITY MAINTENANCE, through its AUTOMOTIVE EQUIPMENT SERVICE DIVISION, hereinafter together referred to as (“DFM/AES”), for the purpose of committing the funds that were awarded to and received by the DOH via the United States Environmental Protection Agency (“U.S. EPA”) States Clean Diesel Program, assistance identification number DS-96968001-0, under the federal Diesel Emissions Reduction Act (“DERA”) of 2008, to the DFM/AES to be used to retrofit some of its higher polluting refuse diesel trucks.
2. The purpose of this SUBGRANT is to provide federal funding to the DFM/AES to reduce air pollution from diesel fueled refuse collection trucks, throughout the City & County of Honolulu, via a program of retrofitting, as specified in the attached WORKPLAN, Section 2.3B, Phase III, Retrofits,*for existing higher polluting diesel trucks, as listed in Table 5 of Section 2.3B, Planned DFM/AES-County Refuse Vehicles for Retrofit, with diesel exhaust filter retrofits.
3. Period of Performance. This SUBGRANT covers the period beginning as of the effective date of this SUBGRANT and ending on December 31, 2013.
4. Modifications. Any extensions, changes, or alterations to the SUBGRANT by the subgrantee shall be agreed to by both parties in writing before being undertaken and the same shall be evidenced by written amendments to the workplan and relevant attachments to this SUBGRANT.
5. Project Budget. The DOH will provide up to \$133,000.00 to the DFM/AES, as stated in the attached WORKPLAN, Section 2.3B, Retrofits.

6. Method of Payment. The funds were awarded and received by the DOH from the federal government via a U.S. EPA Grant under the federal DERA of 2008. Both the DOH and the DFM/AES shall be bound by the terms and conditions of the U.S. EPA DERA Grant. As expenditures are incurred, funds shall be transferred by check by the DOH, Appropriation Account No. S238H 0000 0000 000 328 440 840/FF to the DFM/AES Account No. _____ upon receipt of an invoice, or a Bill for Collection, from DFM/AES, related to the retrofitting.

The DFM/AES shall submit the invoice or the Bill for Collection, along with a description of the expenditure to:

Robert Tam
Clean Air Branch/DOH
919 Ala Moana Boulevard, Room 203
Honolulu, HAWAII 96814

7. The DFM/AES must begin the process of retrofitting its diesel fueled fleet immediately after this SUBGRANT becomes finalized. The priority should be the retrofitting of the City & County of Honolulu's diesel fueled refuse trucks that are listed in Table 5 of Section 2.3B of the WORKPLAN, Planned DFM/AES-County Refuse Vehicles for Retrofit. A sustainability intern will provide recommended administrative support as detailed in the attached WORKPLAN. The DFM/AES must follow all of the applicable procurement laws and procedures of the State of Hawaii in purchasing these retrofits. For this SUBGRANT, the deadline for the retrofits is December 31, 2013. Any monies/funds contained in this SUBGRANT's Project Budget, which are not expended by December 31, 2013, shall be returned to the U.S. EPA.
8. Termination. Either party may terminate this Agreement without statement of cause at anytime by giving the other party thirty (30) calendar day's written notice before the effective date of such termination, provided that DFM/AES shall be reimbursed for any and all costs that both parties have reasonably agreed that DFM/AES has incurred in fulfilling the terms of this Agreement as of the date of receipt of the written notice of termination.
9. General Terms and Conditions. Any and all applicable DERA requirements shall apply to this SUBGRANT. The DFM/AES must comply with all DERA requirements when purchasing the retrofits. Any and all DERA Reporting Requirements for Recipient Reporting conditions shall apply to this SUBGRANT. The DOH shall retain responsibility for complying with the federal DERA reporting requirements. The DFM/AES shall immediately inform the DOH of any purchase it makes and immediately provide the DOH with all of the documentation generated as a result of any purchase. The DFM/AES must follow all of the applicable procurement laws and procedures of the State of Hawaii. The attached WORKPLAN is made part hereof and attached hereto this agreement.

WITNESS IN WHEREOF, the parties hereto have executed this Subgrant Agreement effective as of the day and year first above written.

DEPARTMENT OF HEALTH,
STATE OF HAWAII

By _____
Loretta J. Fuddy, A.C.S.W., M.P.H.
Director of Health

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF FACILITY MAINTENANCE

By _____
Ross S. Sasamura, P.E.
Director and Chief Engineer

APPROVED AS TO FORM AND LEGALITY:

William F. Cooper
Deputy Attorney General

Hawaii Diesel Retrofits and Vehicle
Replacement
EPA Grant # 96968001-0

WORK PLAN AND BUDGET

Prepared for:

US EPA

National Clean Diesel Campaign

FY11 State Clean Diesel Grant Program

Prepared By:

Hawaii State Department of Health
Environmental Health Administration
Environmental Management Division
Clean Air Branch

Amended: March 18, 2013

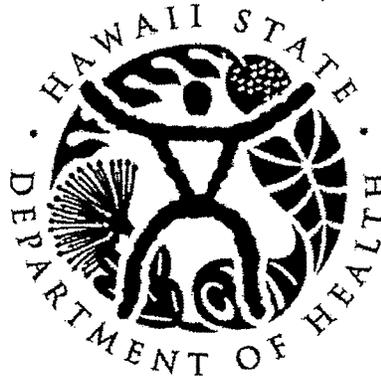


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Section 1: Project Summary

The Diesel Retrofits and Vehicle Replacements Projects will reduce diesel emissions in the State of Hawaii by retrofitting older diesel-fueled trucks owned and operated by the Honolulu Board of Water Supply (BWS) and the City and County of Honolulu's Department of Facility Maintenance (DFM), through the Automotive Equipment Services Division (AES) used in and around residences and rural areas on the largest (by population) island in the state of Hawaii. Additionally, three vehicles—one BWS vehicle, one Hawaii State Department of Education (DOE) vehicle, and one Department of Transportation Airport Division (DOT-A)'s vehicle—will be replaced in order to further reduce diesel emissions.

The Hawaii Department of Health (DOH) Clean Air Branch (CAB) is utilizing Environmental Protection Agency (EPA) Diesel Emission Reduction Act (DERA) funding that was awarded as outlined in Table 1. This work plan includes all work being funded with FY 2008 through FY 2011 funds.

Table 1: DERA Project Budget

	<i>Phase 1</i>	<i>Phase 1</i>	<i>Phase 2</i>	<i>Phase 3</i>	
	FY 2008	FY 2009	FY 2010	FY2011	Totals
EPA allocation	\$ 196,880	\$ 226,412	\$ 235,294	\$ 189,000	\$ 847,586
State match	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
EPA match	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Project Total	\$196,880	\$226,412	\$ 235,294	\$ 189,000	\$847,586

This project will utilize appropriate and verified diesel retrofit technologies as well as three vehicle replacements as the diesel emission reduction solutions. Project specifics are outlined in Section 2, outcomes and impacts of the project are estimated and explained in Section 3, and the budget allocations are outlined in Section 4.

Section 2: Project Description

The DOH CAB Diesel Retrofits and Vehicle Replacements Projects marks the first time the State of Hawaii has utilized EPA funding to reduce diesel emissions. DOH CAB has designed an approach that will use three phases that will run together to conduct both vehicle retrofits and vehicle replacements. The following is an overview of the phases, which are explained in more detail in the following subsections:

- **Phase I:** The first phase of this project will target the BWS, which operates a large fleet of on road diesel vehicles in residential and rural areas on the island of Oahu. EPA DERA funds from FY 2008 and 2009 will be utilized to retrofit a goal number of 13 heavy duty on road vehicles from BWS and to fund the RISE-DEIRA Intern, as explained in Section 2.1 Phase I: Diesel Retrofits.

- **Phase II:** The second phase of this project will use EPA DERA 2010 funds for replacing two heavy duty diesel vehicles; one at the BWS and one with DOE, and some monies will be used to continue employment of RISE-DERA Intern. Section 2.2 Phase II: Vehicle Replacements details these efforts.
- **Phase III:** The third phase of this project will use EPA DERA 2011 funds for replacing one medium duty vehicle at DOT-A Section 2.3 . Seven heavy-duty refuse vehicles from DFM/AES will be retrofitted. Phase III: Retrofits and Replacement details these efforts. Some monies will be used to continue employment of RISE-DERA Intern.

All phases of these projects will be facilitated by the use of the RISE-DERA Intern, which has been secured through DERA FY 2008 administration funding, and will be continued with through to the FY 2011 administrative funding, as described in Section 2.5 Project Team: Roles and Responsibilities.

2.1 Phase I:

A. Diesel Retrofits

The targeted fleet for diesel retrofits is BWS-owned diesel vehicles used for water service related issues in residential and rural areas on the island of Oahu. Because newer vehicles already have reduced emissions, only vehicles older than model year 2005 were considered. Vehicles were then prioritized using based on the following criteria:

- Heavier duty vehicles got top priority for retrofits, based on class size and in part by the gross vehicle weight rating (GVWR)
- Vehicles with a high utilization rate in terms of gallons of fuel used were then prioritized in order to target the vehicles that, once retrofitted, will have the largest impact on diesel emissions.

Table 2 below provides an overview of the planned 18 vehicles that will be targeted for a retrofit, as well as four vehicles that will be back-ups for retrofit in case some of the top 18 vehicles are not available for retrofit.

Table 2: Planned BWS Vehicles for Retrofit								
#	Class	GVWR	License#	Model Year	Make	Model	Mileage Reading*	CY 2009 Fuel Gallons
1	8	62,000	BWS711	2004	INTL	5600	48,151	4,694
2	8	60,600	BWS713	2001	PETE	R 378	91,410	2,790
3	8	60,600	BWS783	1998	PETE	R 377	92,913	2,696
4	7	33,000	BWS856	2002	GMC	C7500	62,663	3,632
5	7	30,000	BWS884	2000	GMC	C7500	39,099	3,118

6	7	31,000	BWS853	2002	INTL	4900	44,421	2,990
7	7	30,000	BWS890	2001	GMC	C7500	29,928	1,734
8	7	33,000	BWS895	2000	GMC	C6500	38,186	1,254
9	7	30,000	BWS891	2001	GMC	C7500	20,891	998
10	7	30,000	BWS883	2000	GMC	C7500	27,545	838
11	7	30,000	BWS885	2000	GMC	C7500	47,913	460
12	7	33,000	BWS794	2001	GMC	C7500	39,736	400
13	5	17,500	BWS852	2003	FORD	F550	45,706	1,400
<p>* All vehicles have their original engine in the vehicle; therefore, the model year is the same as the engine year. ** This is the odometer reading is life to date in 2009.</p>								

The vehicle retrofits will utilize Diesel Particulate Filters (DPFs) that are verified by the EPA/California Air Resource Board (CARB). Some vehicles will be more appropriate to have the Diesel Oxidation Catalyst (DOC) and perhaps a combination of DOC, Closed Crank Ventilation (CCV) and B20 biodiesel as the retrofit. Some vehicles may utilize the Flow Through Filter (FTF) retrofit. Matching the vehicle with the retrofit type will be determined before procurement of retrofits and services. All retrofits will utilize verified technologies according to EPA/ CARB.

Diesel retrofit equipment will meet the following requirements before being contracted by BWS:

1. Products must meet state and federal safety requirements of the original equipment mufflers.
2. Products must be installed with no exhaust leaks at the seams and welds.
3. Products must not void any part of the engine warranty or vehicle warranty.
4. Products must have a 5 year/100,000 mile parts and labor warranty.
5. Products must be installed without structural modifications to existing vehicle chassis or components. Prior approval shall be received from the designated BWS representative before any structural modifications can commence.
6. Products installed that require cleaning for effective operation shall have that cost included.
7. All warranty claims, repairs and services must be provided on the island of Oahu.
8. The installer will document that the device will run on the vehicle for at least 5 years.

In order to select the contractors for the BWS retrofit parts, the following criteria will be met:

1. the contractor must have a permanent place of business on Oahu;
2. the contractor offering the lowest price during the BWS bidding process; and
3. the contractor that offers the combination of retrofit technologies resulting in the most emissions reduced based on the EPA's Emission Reduction Quantifier calculations.

B. Intern Funding

The second target of the funding is to employ the RISE-DERA intern for a year with a portion of funds from the 2009 and 2010 monies by sub granting Kupu Hawaii for administrative support. The funding allocated for the administrative support totals \$29,532 for 2008 and \$33,962 for 2009 and meets the EPA 15% maximum use of funding for administrative costs. This amended workplan also includes a 6 month term of an intern for Phase III A. See Section 2.5 for details.

2.2 Phase II:

A. Vehicle Replacements

The purpose of Phase II is to reduce diesel emissions in the state of Hawaii by providing monies for replacements of older diesel-fueled trucks used on and around the campuses of the DOE. In addition, a BWS truck will be replaced. The main target of Phase II is the replacement of older diesel fueled vehicles. The vehicles to be replaced are listed in Table 3 below.

#	Class	GVWR	VIN#	YEAR	Make	Model	Annual Miles Traveled	Annual Diesel Fuel Usage
1	7	33,000	1HTGBPBR8NH434773	1992	INTL	2554	8,500	425
2	7	33,000	1NPZH7X73D714835	2002	PETE	Dump	2,760	456

Vehicle Replacements will utilize funding from FY 2010 (as explained in Section 4: Budget Narrative) in order to replace older vehicles with newer, cleaner vehicles that meet more stringent sets of engine emissions standards. Funds have been carried over from FY to help fund the replacement vehicles cost. The DOE has allocated up to \$208,959 for their truck procurement. The BWS truck is being allocated \$153,959. These two vehicles replacement costs include delivery to the island where the vehicle is to be used, and may include related disposal costs.

Both vehicles that will be replaced meet EPA requirements of being older than the 2004 model year and will meet EPA 2010 emission standards. Both vehicles also meet EPA requirements for attrition. The model year 1992 BWS vehicle specifically has had only low cost repairs and maintenance history, and is expected to remain in the fleet indefinitely and therefore would not have been replaced within the next five years. The replaced vehicles will have the body and chassis scrapped by drilling a hole in the engine block and manifold and disabling the chassis, with evidence of the disposal being reported to the EPA. Annual reporting to DOH of vehicles miles traveled for the on-road vehicles and fuel consumption of all vehicles is required for a minimum of three years.

All projects will be awarded through a competitive bidding process and will comply with State of Hawaii procurements rules and guidelines.

B. Intern Funding

The second target of the funding is to continue to employ the RISE-DERA intern for another year with a portion of funds from the 2010 monies by sub granting Kupu Hawaii for administrative support. The funding allocated for the administrative support totals \$35,294 for 2010 and meets the EPA 15% maximum use of funding for administrative costs. See Section 2.5 for details.

2.3 Phase III: Retrofits and Replacement

A. Replacement

The purpose of *Phase III: Replacement* is to reduce diesel emissions in the state of Hawaii by providing monies for replacement of an older diesel-fueled truck used on and around the Airports and Highways on Oahu. The main target of Phase III is the replacement of an older diesel fueled vehicle with a 2010 diesel vehicle. The vehicle to be replaced is listed in Table 4 below.

Table 4: Planned DOT-A Vehicle for Replacement								
#	Class	GVWR	VIN#	YEAR	Make	Model	Annual Miles Traveled	Total Miles
1	7	26,001	1HTSCABN52H582061	2003	INTRNL	4700 Sweeper	3,793	30,344

The DOT-A has been allocated \$149,000.27 to vehicle replacement and will draw down monies from FY 2011 (as explained in Section 4: Budget Narrative) in order to replace older vehicles with newer, cleaner vehicles that meet more stringent sets of engine emissions standards for criteria and green house gas pollutants. Replacement cost includes delivery to the island where the vehicle is to be used, and may include related disposal costs.

The vehicle that will be replaced meets EPA requirements of being older than the 2004 model year and will meet EPA 2010 emission standards and EPA requirements for attrition. The vehicle has low miles and an excellent maintenance record dictating that the new vehicle will remain in the fleet till the end of its life expectancy. The replaced vehicle will have the body and chassis scrapped by drilling a hole in the engine block and manifold and disabling the chassis, with evidence of the disposal being reported to the EPA. Annual reporting to DOH of vehicle miles traveled and fuel consumption of is required for a minimum of three years.

This project will be awarded through a competitive bidding process and will comply with State of Hawaii procurements rules and guidelines.

B. Retrofits

Phase III.A is the retrofitting of refuse trucks that were delivered without a DPF in 2007. The target fleet is the DFM's/AES refuse trucks listed below in Table 5 with the first 7 as the target vehicles with 3 listed as backup in case the data logging results exclude any of the first 7 vehicles. The retrofits will use funds of up to \$133,000; some from excess funds allotted to the replacement vehicles but not spent due to lower than expected bid results. This will increase the amount of emission reductions achieved by the grant. This project will be awarded through a competitive bidding system, comply with state rules and guidelines, and meet the same requirements, guidelines and criteria as in Section 2.1, Phase 1:A, Diesel Retrofits.

Table 5: Planned DFM/AES-County Refuse Vehicles for Retrofit								
#	Class	GVWR	License#	Engine Year	Make	Model	Mileage Reading*	CY 2011 Fuel Gallons
1	8	58,000	7434	2006	CUMM	ISL05	17,202	5,989.00
2	8	58,000	7531	2006	CUMM	ISM 320V	17,240	5,556.70
3	8	58,000	7443	2005	CUMM	ISL 310	14,760	5,525.70
4	8	58,000	7446	2005	CUMM	ISL 310	17,188	4,818.10
5	8	58,000	7471	2006	CUMM	ISM 320V	17,437	3,829.40
6	8	58,000	7496	2006	CUMM	ISM 320V	13,511	3,723.20
7	8	58,000	7487	2006	CUMM	ISM 320V	16,611	5,266.90
8	8	58,000	7528	2006	CUMM	ISM 320V	13,585	5,324.20
9	8	58,000	7432	2006	CUMM	ISL 05	9,424	3,182.90
10	8	58,000	7530	2006	CUMM	ISM 320V	1,663	462.90

C. Intern Funding

The third target of the funding is to continue to employ the RISE-DERA intern for another 6 month term with a portion of funds from the 2011 monies by sub granting Kupu Hawaii for administrative support. The funding allocated for the administrative support totals \$28,350 for 2011, \$12,000 for 2013 and meets the EPA 15% maximum use of funding for administrative costs. See Section 2.5 for details.

2.4 Project Timeline and Milestones

Table 2 shows major project tasks and goal deadlines for completing the diesel retrofits and vehicle replacements. Both Phase I and Phase II will be completed by September 31, 2011. Phase III will be completed by March 31, 2013. Phase 3A will be completed by December 31, 2013.

Date	Milestone Description	Quarter(s)/Due Date for Quarterly Report
November 30, 2009	<i>Phase I:</i> Press event; Candidate list of BWS retrofit vehicles undergoing review by DOH and EPA	1 st Quarter/ Jan. 2009 – 4 th Quarter/ Dec. 2010
December 31, 2010	<i>Phase I and II:</i> Sub-grant agreement with Kupu for RISE-DERA Intern completed and signed for administrative support to DOH <i>Phase I:</i> Finalize list of BWS vehicles for retrofit	4 th Quarter/ Dec. 2010
January 31, 2011	<i>Phase I:</i> Submit finalized list of BWS vehicles for retrofit to EPA for review <i>Phase II:</i> BWS and DOE vehicles to be replaced finalized and submitted to EPA for review and approval	1 st Quarter/ March 2011
February 28, 2011	<i>Phase I and II:</i> RISE-DERA Intern h	
March 31, 2011	<i>Phase I:</i> Finalize and sign sub-grant agreement with BWS for retrofit vehicles. Evaluation of matching retrofits to vehicles begins <i>Phase II:</i> Finalize and sign sub-grant agreement with BWS and DOE for vehicle replacements	
June 30, 2011	<i>Phase II:</i> BWS orders replacement vehicle	2 nd Quarter/ June 2011
July 31, 2011	<i>Phase II:</i> DOE orders replacement vehicle	3 rd Quarter/ September 2011
October, 2011	<i>Phase I:</i> Data logging begins	4 th Quarter/ December 2011
December 31, 2011	<i>Phase I:</i> Data logging ends, vehicle retrofits selected for each BWS vehicle. BWS completes process for receipt of funds. <i>Phase III:</i> Candidate vehicles finalized	
March 31, 2012	<i>Phase III:</i> Sub grant agreements routed and signed	1 st Quarter/ March 2012
April 30, 2012	<i>Phase I:</i> Procurement phase of retrofits begins	

		2 nd Quarter/ June 2012
August 31, 2012	Phase I: Installation of retrofits begins Phase II: Delivery of replacement vehicles should happen anytime in this quarter. Upon delivery of the vehicle, BWS and DOE scrap replaced vehicles. BWS and DOE send invoices to DOH with proof of scrappage of replaced vehicles and proof of new vehicles' purchase	3 rd Quarter/ September 2012
September 30, 2012	Phase I: Continuation of retrofits Phase II: Drawdowns completed	
December 31, 2012	Phase I and ii: Completion of RISE-DEIRA intern portion.	4 th Quarter/December 2012
February 28, 2013	Phase III: Delivery of DOE/A vehicle, destruction of old vehicle, drawdown request begins routing.	1 st Quarter/ March 2013
March 31, 2013	Request for extension submitted	
April 30, 2013	Phase 3.A: Sub grant agreement with C&C of Honolulu DFM completed, routed for approval and signatures Fleet list reviewed and approved by EPA Procurement phase for DEIRA intern begun	
May 31, 2013	DEIRA intern hired Procurement phase for retrofits begun	
June 30, 2013	Retrofit vendor selected	2 nd Quarter/July 2013
July 31, 2013	Retrofit project awarded, data logging begun	
September 30, 2013	Data logging completed, retrofitting phase begun	3 rd Quarter/October 2013

December 31, 2013	<i>Retrofits completed, drawdown requests routed</i> <i>Final reports drafted and finalized</i>	
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2.5 Project Team: Roles and Responsibilities

The Project Team that will be administering and reporting all DERA activities includes DOH, Kupu, BWS, DOE, DFM/AES and DOT-A as described below.

The DOH will retain all reporting responsibilities required by the original grant and EPA. DOH will also provide assistance and guidance as needed to the other Project Team members (BWS, DOE, DOT-A, DFM/AES (and the RISE Intern) so that they may accomplish their tasks in a timely manner.

DOH has sub-granted funding to Kupu to provide administrative support to the DERA-funded projects. Kupu is providing one Rewarding Internships for Sustainable Employment (RISE) intern (henceforth called the "RISE-DEIRA Intern") in order to take charge of all administrative tasks related to the DERA grant. The RISE-DEIRA Intern shall assist DOH with drafting or amending workplans, quarterly reports, and other administrative tasks as needed.

The BWS and DFM/AES will be responsible for procuring the retrofits for their own vehicles. BWS and DFM/AES shall seek bids for one or more vendors as appropriate for the following tasks:

1. Prior to commencement of the project, submit a projected work plan and timeline listing all and any activities in chronological order to be undertaken for the purpose of procuring and retrofitting diesel-fueled vehicles operated by the BWS and DFM . The retrofitting of vehicles must be done using EPA or CARB-verified diesel retrofit technologies. Data logging costs may be included in the pricing for Class Three retrofits, or separated out, by BWS and DFM/AES to ensure competitiveness in the bid process.
2. The emission reduction retrofits must have a 5-year/ 100,000 mile parts and labor warranty.

BWS, DOE and DOT-A will be responsible for procuring the replacement vehicles, scrapping the replaced vehicles, and providing proof of activity to DOH. All organizations will also designate one point of contact each with knowledge of the DERA-related activities as they associate to their organizations. The points of contact will respond to queries and provide non-sensitive information to other organizations undertaking diesel retrofit and vehicle replacement projects from the beginning of the project and one year after its conclusion. The points of contact will present information to interested groups and the media on the retrofit and replacement projects during the same period. Upon installation of the retrofits, the BWS and DFM/AES shall maintain

records for a minimum of 3 years, for each vehicle the vehicles miles travelled monthly, fuel consumption, and any other records agreed upon by the department relating to air emissions or required by EPA for the DERA grant. These records will be summarized monthly and submitted quarterly to the DOH.

Section 3: Environmental Results

The Hawaii Diesel Retrofits and Replacements project will improve air quality and protect public health in Hawaii by reducing emissions from existing diesel vehicles and replacing gross polluting vehicles in the fleet. The following subsections outline the environmental benefits of the DERA-funded retrofits.

3.1 Outputs

The expected outputs of the program have been quantified by the expected number of retrofits and replacements, and estimated emissions reductions. The targeted number of vehicles that could be retrofitted with DPFs, DOCs, CCVs and B20, and FTFs is 21.

The second quantifiable output is the estimated emissions reductions due to exhaust retrofits and replaced heavy duty vehicles. The EPA Diesel Emissions Quantifier (DEQ) was used to estimate the reduction of criteria pollutants. In order to use the DEQ, assumptions had to be made about the number of vehicles retrofitted, the retrofit type, the number of vehicles replaced, the average model year, the average vehicle miles traveled (VMT) and the average idle time. The summary of results from the DEQ is provided in Table 6 below and the input values are located in Appendix B. All of the assumptions will be revised to include the actual data from the final list of installed retrofits when they are completed.

Table 6a: DERA EPA Diesel Emission Quantifier Tool Results

Type	Number of Vehicles Retrofitted	Amount Reduced per Year(NOx, tons)	Lifetime Amount Reduced (NOx, tons)	Capital Cost Effectiveness (\$/ton), Retrofitted Vehicles (NOx)	Amount Reduced per Year(NOx, short tons)	Lifetime Amount Reduced (PM2.5, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (PM2.5)	Amount Reduced per Year(HC, short tons)	Lifetime Amount Reduced (HC, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (HC)
FY13 Totals		0.18144	2.1959	490,813.10	0.084	0.1022	10,544,990.35	0.0161		
Class 8a DPF	7	0.18144	2.1959	490,813.10	0.084	0.1022	10,544,990.35	0.0161		
FY11 Totals		0.0242	0.3297		0.0127	0.1842		0.0211	0.3062	
Class 7 to Class 5 Replacement	1	0.0242	0.3297	303,302.16	0.0017	0.0232	4,317,595.41	0.003	0.0409	2,446,637.40
FY10 Totals		0.2751	2.4664		0.0112	0.1008		0.0107	0.1007	
Class 6 Replacement	1	0.0259	0.3137	490,813.10	0.0012	0.0146	10,544,990.35	0.0023	0.0281	5,473,871.19
Class 8a Replacement	1	0.02592	0.3137	490,813.10	0.0012	0.0146	10,544,990.35	0.0023	0.0281	5,473,871.19
FY08-09 Totals		0	0		0.0341	0.4366		0.0708	0.9077	
Class 7 DPF 2000	1	0	0	0	0.0002	0.003	2,701,803.35	0.0007	0.0088	907,752.51
Class 7 DPF 2000	7	0	0	0	0.0097	0.1233	454,277.60	0.0309	0.3935	142,314.05
Class 8a DPF 2001	1	0	0	0	0.0053	0.0694	259,348.18	0.0068	0.0887	203,045.54
Class 7 DPF 2001	2	0	0	0	0.002	0.0257	1,403,102.26	0.0046	0.06	599,873.47
Class 8a DPF 2001	2	0	0	0	0.0121	0.1584	227,314.37	0.0155	0.2023	177,992.89
Class 7 DPF 1997	2	0	0	0	0.003	0.035	1,029,571.19	0.0038	0.0448	803,485.87
Class 7 DOC and Biodiesel 1997										
Class 6 DOC and Biodiesel 1997	2	0	0	0	0.0004	0.0042	1,918,412.39	0.001	0.0123	650,363.65
Class 6 DOC and Biodiesel 2001										
2001 R.A. W. 01 Plan and Budget				0	0.0014	0.0176	226,990.67	0.0075	0.0973	41,092.07

Table 6b: DERA EPA Diesel Emission Quantifier Tool Results

Type	Number of Vehicles Retrofitted	Amount Reduced per Year(CO, short tons)	Lifetime Amount Reduced (CO, short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (CO)	Amount Reduced per Year(CO ₂ , short tons)	Lifetime Amount Reduced (CO ₂ , short tons)	Capital Cost Effectiveness (\$/short ton), Retrofitted Vehicles (CO ₂)
FY 13 Totals	7	0.3941	3.4868	429,244.02	0	0	0
Class 8a DPF	7	0.3941	3.4868	429,255.02	0	0	0
FY11 Totals		0.0121	0.1649		3.7296	50.8126	
Class 7 to Class 5 Replacement	1	0.0121	0.1649	606,604.31	3.7296	50.8126	\$1,968.02
FY10 Totals		0.0664	0.6086		0	0	0
Class 6 Replacement	1	0.0101	0.1218	1,264,139.84	0	0	0
Class 8a Replacement	1	0.0563	0.4868	429,255.02	0	0	0
FY08-09 Totals		0.3405	4.3759		0	0	
Class 7 DPF 2000	1	0.0029	0.0371	215,642.23	0	0	0
Class 7 DPF 2000	7	0.1299	1.6564	33,807.58	0	0	0
Class 8a DPF 2001	1	0.0461	0.6005	29,973.41	0	0	0
Class 7 DPF 2001	2	0.0185	0.2415	149,089.50	0	0	0
Class 8a DPF 2001	2	0.1051	1.3701	26,275.15	0	0	0
Class 7 DPF 1997	2	0.0172	0.202	178,197.28	0	0	0
Class 7 DOC and Biodiesel 1997	2	0.0028	0.0333	240,396.34	0	0	0
Class 6 DOC and Biodiesel 2001	1	0.018	0.235	17,021.36	0	0	0

3.2 Project Sustainability

Hawaii has no mandated vehicle retrofitting or any pending legislation for other diesel reduction technology for the target fleet. Therefore, the retrofits and replacements would not have occurred during the project period had DERA involvement not been provided. Sustainability of the program will depend on acquiring additional funding, examining the interest in the community and finding project partners.

It is expected that the emission reductions will continue well beyond the life of this project, as 3 years will be specified as the minimum life of the retrofit including replacements and servicing.

Section 4: Budget Narrative

All DERA funding will be sub-granted from DOH to the project team members (Kupu, BWS, DOE, and DOT-A), and therefore fall into the "Other" budget category. The official project budget that outlines FY 2008- FY 2011 funding is included in Appendix A. More specifically, each year's funding will be utilized to reduce diesel emissions through the following projects:

- **FY 2008 – \$196,880:** \$174,239 will go towards Phase 1: Diesel Retrofits (See Section 2.1). Retrofits are estimated to cost approximately \$16,100 each for a total of \$209,300, including all costs for contracting parts and services. \$22,641 was used in part (of \$98,788) as a subcontract to Kupu to hire the RISE-DERA Intern that will support DOH CAB efforts in executing the DERA funding
- **FY 2009 – \$226,412:** \$165,314 is for Phase II, Vehicle Replacements, as detailed in Section 2.2. \$35,061, is for Phase I, Diesel Retrofits as detailed in Section 2.1. \$26,037 was used for the subcontract to Kupu.
- **FY 2010 – \$235,294:** \$65,413 will go toward Phase III: Vehicle Retrofits. **\$137,191** will go toward Phase II: Vehicle Replacements of this project, as explained in Section 2.2. \$33,060 was used for the subcontract to Kupu.
- **FY 2011 – \$189,000:** \$151,587 will go toward Phase III-A: Vehicle Retrofits (59,00) and Replacements (\$100,750) (See Section 2.3). \$29,050 will be used for the subcontract to Kupu.

Revised Actual/Projected Budget Worksheet

Workplan Phase	Total	FY 2008	FY 2009	FY 2010	FY 2011
		\$196,880	\$226,412	\$235,294	\$189,000
Phase I	\$209,300	\$174,239	\$35,061		
Phase II	\$302,505.36		\$165,314	\$137,191	
Phase III	\$149,000			\$65,413	\$151,587
Kupu Subgrant	\$98,788	\$22,641	\$26,037	\$32,060	\$28,050
Expected amount of unused funds				\$0,630	\$4,363

Appendix A: Project Budget (Original)

Budget Category	FY 2008			FY 2009			FY 2010			FY 2011		
	EPA Allocation											
1. Personnel	29,532		33,962		35,294		28,350					
2. Fringe Benefits												
3. Travel												
4. Supplies												
5. Equipment												
6. Contractual												
7. Program Income												
8. Other	167,348		192,450		200,000		160,650					
9. Total Direct Charges	196,880		226,412		235,294		189,000					
10. Indirect Charges												
Grand Total	196,880		226,412		235,294		189,000					

Appendix B: Diesel Emissions Quantifier Input Data (Revised)

Funding Year	Type	Target Fleet	Class/ Equipment	Number of Vehicles Retrofitted	Model Year	Retrofit Year	Fuel Type	Fuel Volume	Veh. Miles Traveled	Idling Hours per year	Technology Type
2013	On Highway	Utility Vehicle	Class 8a	7	2006	2013	Diesel (ULSD), 15 ppm			800	Diesel Particulate Filter
2011	On Highway	Ports and Airports	Class 7	1	2003	2011	Diesel (ULSD), 15 ppm	841	3,793	102	Vehicle/ Equipment Replacement
2011	On Highway	Ports and Airports	Class 7	3	2006	2011	Diesel (ULSD), 15 ppm	6426	8196	133	Diesel Particulate Filter
2010	On Highway	Utility Vehicle	Class 8A	1	1992	2012	Diesel (ULSD), 15 ppm	850	8500	1040	Diesel Particulate filter
2008-2009	On Highway	Utility Vehicle	Class 7	7	2000	2011	Biodiesel 20	7,277	4,988	81	Partial Flow Filter
2008-2009	On Highway	Utility Vehicle	Class 8A	1	2001	2011	Diesel (ULSD), 15 ppm	1,395	7,325	119	Diesel Particulate Filter

As stated above, there were several assumptions made in the figures:

1. The actual emissions reduced are dependent upon the emission reduction technology applied vehicle miles traveled (VMT), speed, and the hours in use.
 2. The exact number of vehicles replaced is dependant upon availability and price.
 3. The average model year for the replacement vehicles was estimated as well as the average VMT.
 4. For the replaced vehicles, the DEQ did not provide a full vehicle replacement option, so the option to replace the engine was selected in lieu.
 5. Hawaii has no data available in the DEQ for the Health Benefits tool to work, but it is assumed that there are some health benefits related to Miami Dale, Florida due to similar climate
 6. Price is estimated on vehicles until they get purchased from dealers. Prices are an estimate and not an actual value.
- * Due to lack of data available on idling at the airports, HDOH has used the EPA MOBILE6 SmartWay Program SmartWay Fleet Model for default idling estimates.

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII
C E R T I F I C A T E

RESOLUTION 13-228

Introduced: 09/19/13 By: ERNEST MARTIN (BR)

Committee: INTERGOVERNMENTAL
AFFAIRS AND HUMAN
SERVICES

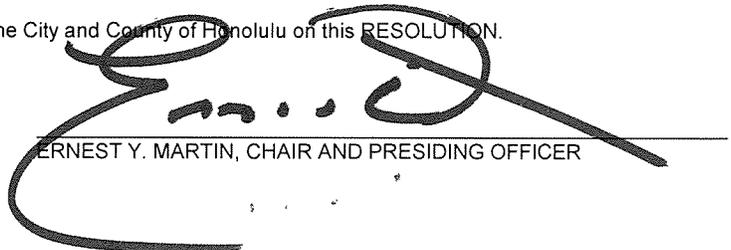
Title: RESOLUTION AUTHORIZING THE DIRECTOR OF THE DEPARTMENT OF FACILITY MAINTENANCE OR THE DIRECTOR'S DESIGNEE TO ENTER INTO AN INTERGOVERNMENTAL AGREEMENT WITH THE HAWAII STATE DEPARTMENT OF HEALTH FOR THE RETROFIT OF OLDER CITY DIESEL FUELED TRUCKS WITH DIESEL PARTICULATE FILTERS TO REDUCE EXHAUST POLLUTANTS FROM DIESEL FUELED VEHICLES.

Voting Legend: * = Aye w/Reservations

09/26/13	INTERGOVERNMENTAL AFFAIRS AND HUMAN SERVICES	CR-306 – RESOLUTION REPORTED OUT OF COMMITTEE FOR ADOPTION.
10/09/13	COUNCIL	CR-306 AND RESOLUTION 13-228 WERE ADOPTED. 9 AYES: ANDERSON, CHANG, FUKUNAGA, HARIMOTO, KOBAYASHI, MANAHAN, MARTIN, MENOR, PINE.

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this RESOLUTION.


BERNICE K. N. MAU, CITY CLERK


ERNEST Y. MARTIN, CHAIR AND PRESIDING OFFICER