California Environmental Protection Agency AIR RESOURCES BOARD	BAE SYSTEMS PLATFORM SOLUTIONS	EXECUTIVE ORDER A-365-0001 New On-Road Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Class

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: The following hybrid electric on-road motor vehicles with a manufacturer's GVWR over 14000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

Gasoline, LPG, Alcohol Vehicles			HYBRID DRIVE SYSTEM			VEHICLE DESCRIPTION				
Evaporative		Fuel Cap. (gal.)	FAMILY	MODEL	CODE	VEHICLE MODEL YEAR	INTENDED SERVICE CLASS [2]	VEHICLE MAKE & MODELS	ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)
Family	UL (Km/L)									
*	*	*	6BAEH05.9CMM	Hybri-Drive	*	2006	Hybrid Electric UB	Orion VII	5.9	ISB 260H / 0429;FR91894 (260)

ENGINE DESCRIPTION								
MANUFACTURER	EXECUTIVE ORDER	MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE [1]	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS [2]	ECS & SPECIAL FEATURES [3]
CUMMINS, INC.	A-021-0398	2006	6CEXH0359BAC	5.9	Ultra Low Sulfur Diesel (<15 ppm Sulfur)	Diesel	MHDD	ECM, DDI, TC, CAC, CTOX

* =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; L=liter; K=1000 miles; hp=horsepower; kw=kilowatt;

1 CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;

2 L/MH HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;

3 ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; CTOX – Continuous Trap Oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SFI/MFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; IDI/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR=exhaust gas recirculation; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series; (2005november30)

Following are: 1) the FTP exhaust emission standards or family emission limit(s), as applicable, under 13 CCR 1956.1 (urban bus) or 13 CCR 1956.8 (other than urban bus); 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, in g/bhp-hr, for this hybrid drive family. "Diesel" CO, EURO and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [ ] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.1 or 13 CCR 1956.8 are in parentheses.) [4]

	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.5	0.5	1.8	1.8	*	*	15.5	15.5	0.01	0.01	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.1	0.03	1.7	*	*	*	0.0	0.0	0.00	0.01	*	*
NTE	0.625		2.25		*		19.375		0.0125		*	

4 g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle; NTE=Not-to-Exceed emission limit; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde;

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels) and 13 CCR 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: Certification to the FEL(s) listed above is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for all compliance purposes. However, engines in this engine family shall not participate in any averaging, banking, or trading (ABT) programs.

BE IT FURTHER RESOVED: The listed engine models are conditionally permitted, under California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Class (Interim Hybrid Bus / Heavy-Duty Vehicle Procedures), to be used in the two-party certification of hybrid electric urban buses for sale to transit districts that are exempted by the Executive Officer under 13 CCR Section 2023.1(c)(9). The permission is conditional on final approval by the Office of Administrative Law of the amendments to the Fleet Rule for Transit Agencies and New Requirements for Transit Fleet Vehicles (13 CCR Sections 1956.1, 2023, and 2023.1-2023.4) that were approved by the Board at a February 24, 2005 public hearing. In the event that the amendments do not become effective, engines in this engine family that are used in hybrid electric buses will be deemed uncertified.

BE IT FURTHER RESOLVED: The certification of this engine family is also subject to the following terms, limitations and conditions: (i) the manufacturer must take appropriate measures to ensure that all vehicles equipped with engines covered by this Executive Order bear appropriate labels in the vehicle fuel tank filler area and the driver's dashboard area disclosing the low sulfur (15 ppm maximum) fuel requirement, (ii) the manufacturer must take appropriate measures to ensure that all vehicles equipped with engines covered by this Executive Order are sold only to fleets with central fueling capability for low sulfur diesel fuel, and (iii) the manufacturer must require these fleet owners to sign agreements which require the fleet owner to use appropriate low sulfur diesel fuel and stipulate that the fleet owner is at risk of voiding the warranty for use of improper diesel fuel.

BE IT FURTHER RESOLVED: The listed hybrid drive family has been certified under Section C of the Interim Hybrid Bus / Heavy-Duty Vehicle Procedures.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.
The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 15TH day of December 2005.

Allen Lyons, Chief
Mobile Source Operations Division