August 14, 2015

Mr. Stephen Sonni  
Senior Executive Account Manager  
NRE, Global Holdings, Inc.  
5064 Midas Avenue  
Rocklin, California 95677

Dear Mr. Sonni:

This letter responds to NRE, Global Holdings, Inc's. (referred to as "NRE", previously known as National Railway Equipment Company) request for Air Resources Board (ARB) verification of the NREX 2015 GenSet locomotive. NRE is the manufacturer of the NREX 2015 GenSet locomotive, a single, two, or three engine switcher class locomotive designed to achieve United States Environmental Protection Agency (U.S. EPA) Tier 4 emission levels.

As noted in your application, the NREX 2015 GenSet locomotive that was tested is powered by two Cummins QSX15 Tier 4 diesel engines rated at 600 horsepower each, or a total of 1,200 horsepower. The U.S. EPA had previously certified the Cummins QSX15 engine for locomotives.

The Cummins QSX15 engine utilizes cooled exhaust gas recirculation (EGR) along with a combustion system that has been optimized for low oxides of nitrogen (NOx), particulate matter (PM), and hydrocarbon (HC) emissions. In addition, this engine uses a diesel oxidation catalyst combined with a catalyzed diesel particulate filter for HC, carbon monoxide, and PM control. Active regeneration is used to maintain the diesel particulate filter. The NREX 2015 is part of the N-ViroMotive product line.

The N-ViroMotive product line consists of ultra-low emitting four and six axle road and switcher locomotives that feature one or more self-contained modular power plants (MMP) or power on demand (POD) technology. Each MMP/PODs contain an engine, generator/alternator and engine cooling system designed for installation and subsequent removal and replacement as one entity on a locomotive frame. Based on ARB staff's evaluation of the application, the test data, and additional
information provided, ARB staff hereby verifies that this locomotive configuration and technology achieves U.S. EPA Tier 4 emission standards. Specifically, ARB staff has verified the NREX2015 GenSet locomotive at switch NOx and PM emission levels at or below 1.0 and 0.01 g/bhp-hr, respectively. This verification will be applicable to NREX 2015 GenSet locomotives with one, two, or three engine configurations, within a range of 600 to 1,800 horsepower. If you have any questions about this matter, please contact Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or Harold.Holmes@arb.ca.gov.

Sincerely,

Cynthia Marvin, Chief
Transportation and Toxics Division

cc: Mr. Dennis Johnson, Director
Technology Assessment Center
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 6406J
Washington, D.C. 20460

Mr. Harold Holmes, Manager
Rail Strategies Section
Transportation and Toxics Division
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bcc: Mr. Keith Batley  
Assistant Vice President  
Domestic Sales  
NRE, Global Holdings, Inc.  
908 Shawnee Street  
Mt. Vernon, Illinois 62864

Mrs. Britney J. McCoy, Engineer  
United States Environmental Protection Agency  
Technology Assessment Center  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Mail Code: 6406A  
Washington, D.C. 20460

Mr. Lawrence P. Oeler, Engineer  
United States Environmental Protection Agency  
Office of Air and Radiation  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Mail Code: 6403J  
Washington, D.C. 20460

Mrs. Connie Day  
Program Supervisor  
Technology Advancement Office  
South Coast Air Quality Management District  
21865 East Copley Drive  
Diamond Bar, California 91765

Mr. Randall Pasek, Manager  
Mobile Source Division  
South Coast Air Quality Management District  
21865 East Copley Drive  
Diamond Bar, California 91765

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bcc: (continued)

Mr. Joseph Steinberger, Principal
Environmental Planner
Strategic Incentives, Grants
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Mr. Aaron Tarango, Supervisor
Strategies & Incentives Department
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg
Fresno, California 93726

(via email)

Erik White, MSCD
Doug Ito, TTD
Heather Arias, TTD
Lucina Negrete, MSCD
Scott Rowland, MSCD
Elizabeth Yura, TTD
Karen Buckley, TTD
Barbara VanGee, TTD
Peter Christensen, MSCD
Nicole Dolney, AQPSD
Dave Salardino, MSCD
Shawn Daley, ECARS
Ken Bhatti, MSCD
Stephen Cutts, TTD
Michael Jaczola, TTD
Earl Landberg, MSCD

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