December 23, 2020

Sen “Jack” Zhang  
Product Management Leader  
Director of Product Management, Modernization  
General Electric Transportation,  
Wabtec Company  
2901 East Lake Road  
Erie, Pennsylvania 16531

Dear Mr. Zhang:

This letter responds to the General Electric Transportation (GET), a Wabtec Company (together as Wabtec), request for a California Air Resources Board (CARB) locomotive verification for the ET23 locomotive. CARB verifies that the Wabtec ET23 Locomotive achieves the United States Environmental Protection Agency (U.S. EPA) Tier 4 locomotive emission levels. This verification is applicable to the ET23 Locomotive.

The ET23 may be a new locomotive, or it may be a modernized locomotive built from several types of Motive Power Industries, National Railway Equipment, Electro Motive Diesel, or General Electric locomotives. It is powered with a GE Evolution (GEVO) inline six-cylinder diesel engine. The engine features two stage turbo charging with intercooler and after-cooler, high cylinder pressures, a high pressure common rail fuel injection system, an optimized air intake system, an upgraded control system, and cooled exhaust gas recirculation to meet the U.S. EPA Tier 4 standard.

Exhaust emission testing was conducted by Wabtec at the Erie, Pennsylvania plant. Wabtec also provided additional data for exhaust emission testing and durability for the GEVO Tier 4 technology platform product line. In addition, Wabtec obtained a U.S. EPA Tier 4 Certificate of Conformity in November 2019 (Engine family name: LGETG0958T4K for 2020 production, and MGETG0958T4K for 2021 production). For the most current EPA Certificate of Conformity, please see the EPA website at https://iaspub.epa.gov/otaqpub/.

Based on CARB staff evaluation of the application, exhaust emission data, and additional information provided, CARB staff hereby verifies that this locomotive configuration and technology achieves U.S. EPA Tier 4 locomotive oxides of nitrogen (NOx), particulate matter (PM), carbon monoxide (CO), and hydrocarbon (HC) exhaust emission levels.
If you have any questions or comments, please email Thomas Olson, Manager, Freight Approvals Section at thomas.olson@arb.ca.gov or Mike Jaczola, Staff Air Pollution Specialist, Freight Approvals Section at michael.jaczola@arb.ca.gov.

Sincerely,

Richard Boyd
Assistant Division Chief
Transportation and Toxics Division

cc: Dennis Johnson, Director
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Mail Code: 6406J
Washington, D.C. 20460

(via email)

Tom Olson, Manager
Freight Approvals Section
Freight Activity Branch

Mike Jaczola
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