

State Of California

AIR RESOURCES BOARD

Executive Order G-714-ADF05A

Certification of Alternative Diesel Fuel Resulting in Emissions Equivalence with Diesel

BEST Corp. – BC-EC1c

***Note: This Executive Order (EO) G-714-ADF05A supersedes and replaces the previously issued EO G-714-ADF05, which contained a typographical error. This EO correctly reflects the additive treat rate of low saturation B20 at 20 ppmv. All related treat rates are properly adjusted.***

Pursuant to Sections 39600, 39601, 43013, 43018, and 43101 of the Health and Safety Code, the California Air Resources Board (CARB) adopted the Alternative Diesel Fuel regulation (ADF regulation) under title 13, California Code of Regulations (CCR), section 2293 et seq. Effective since January 1, 2016, the ADF regulation establishes a comprehensive, multi-stage process administering the commercialization of alternative diesel fuels in California. The ADF regulation governs the introduction and use of innovative alternative diesel fuels in California while preserving or enhancing public health, environmental and emission benefits of the existing motor vehicle diesel-fuel regulations. The ADF regulation includes specific provisions designed to control potential increases in oxides of nitrogen (NOx) emissions that could otherwise be caused by the use of biodiesel under certain circumstances. Those provisions include a process for certification of additives or alternative diesel fuel formulations that have been shown to mitigate NOx increases from the use of biodiesel.

BEST Corp has requested approval and certification of an additive, BC-EC1c, as an emissions equivalent additive under Appendix 1 of the ADF regulation.

The initial test protocol, prepared by Southwest Research Institute (SwRI®) was submitted to CARB staff on February 20, 2018, and the final test protocol was submitted on March 7, 2018. Staff found the final submission complete and approved it on April 11, 2018. Testing pursuant to the approved test protocol was conducted by SwRI starting April 23, 2018, and the testing was completed on May 1, 2018. The Final Report, dated December 31, 2018, prepared by SwRI® with the additive treat rate of low saturation B20 at 20 ppmv was submitted on March 27, 2019.

The B20 Candidate Fuel was comprised of 20 percent biodiesel (B100 blendstock) meeting the requirements specified in Table A.8 of the ADF regulation and 80 percent reference diesel meeting requirements specified in Table A.9, Appendix 1, of the ADF regulation.

The information contained in Attachment 1 hereto was designated by BEST Corp to be confidential business information and must not be disclosed except as provided under 17 CCR section 91022.

The candidate fuel was properly tested in accordance with Appendix 1(a)(2)(F) of the ADF regulation. The candidate fuel emissions tests showed NOx emissions were equivalent and a particulate matter emissions reduction of 18 percent compared to the CARB reference diesel. The candidate fuel emissions satisfied all of the requirements under Appendix 1(a)(2)(G) of the ADF regulation.

NOW, THEREFORE, (IT IS ORDERED AND RESOLVED) that the additive BC-EC1c is approved and certified pursuant to Appendix 1(a)(2)(H) of the ADF regulation as an emissions equivalent additive for use with biodiesel blends B20 and below or for use with biodiesel blendstock when applied in accordance with the following conditions:

BC-EC1c Concentrations for Biodiesel B20 and Below Blends

<b>Biodiesel Saturation Level<sup>1</sup></b>	<b>Biodiesel Blend Level</b>	<b>Volume ppm, Minimum</b>
Low Saturation	>B5 to <B10	10
	B10 to <B15	15
	B15 to B20	20
High Saturation	B10 to <B15	5
	B15 to B20	10

1 Low Saturation refers to biodiesel blendstock Cetane Number of below 56; High Saturation refers to biodiesel blendstock with Cetane Number of 56 and above. Cetane Number is determined using the applicable test methods in the Alternative Diesel Fuels regulation.

BC-EC1c Concentrations for Biodiesel Blendstock B100 or B99

If BC-EC1c is to be added to the biodiesel blendstock, it must be blended to the specified levels in the table below.

<b>Biodiesel Saturation Level</b>	<b>Biodiesel Blendstock</b>	<b>Volume ppm, Minimum</b>
Low Saturation	B100 or B99	100
High Saturation	B100 or B99	50

Biodiesel blends B20 and below blended in accordance with the conditions specified above meet the NOx mitigation requirements in section 2293.6(a)(2) of the ADF regulation.

CARB reserves the right in the future to review this Executive Order and the certification provided herein to assure that the certified fuel meets the standards and procedures of Title 13, California Code of Regulation, section 2293, et seq.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order, and may subject BEST to other enforcement actions as provided for under State law.

Executed at Sacramento, California, this 29<sup>th</sup> day of March, 2019.

  
Floyd Vergara  
Chief, Industrial Strategies Division