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1.0 SCOPE

This specification covers the requirements for 5% biodiesel blend (B5) used as motor vehicle fuel in California.

2.0 APPLICABLE LAWS and INDUSTRY STANDARDS

Specifications, standards and regulations referenced in this document in effect on the opening of the invitation for bid, form a part of this specification.

2.1 LAWS and REGULATIONS

- 2.1.1 California Code of Regulations (CCR) Title 4, Division 9, Chapter 6, Article 5, Section 4148
- 2.1.2 CCR, Title 13, Division 3, Chapter 5, Article 2, Sections 2281, 2282, 2284
- 2.1.3 CCR Title 17, Division 3, Chapter 5, Article 3, Subarticle 2, et seq
- 2.1.4 CCR Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 7, et seq

2.2 INDUSTRY STANDARDS

- 2.2.1 ASTM D7371
- 2.2.2 ASTM D6751
- 2.2.3 ASTM D975
- 2.2.4 ASTM D5773
- 2.2.5 ASTM D4057

3.0 TECHNICAL REQUIREMENTS

- 3.1 Biodiesel blend (B5) shall consist of 5.0±1% (by volume) biodiesel blend stock (B100) with remainder being grade 2D, S15 diesel. The concentration of blend stock (B100) shall be determined by EN 14078 (or ASTM D7371).
- 3.2 Biodiesel blend stock (B100) shall be grade 1B, S15 complying with the latest edition of ASTM D6751 (table 1) with the exception of the following property: Minimum oxidation stability of six hours, per test method EN 15751.
- 3.3 Biodiesel blend (B5) shall meet the requirements of CCR §4148: Specifications – Biodiesel Blends (ASTM D975 for grade 2D, S15) with the exception of the following property: Cloud point of -10°C (14°F) or lower per test method ASTM D2500 or ASTM D5773.
- 3.4 Biodiesel blend (B5) shall meet the requirements of CCR, §2281: Sulfur Content of Diesel Fuel, §2282: Aromatic Hydrocarbon Content of Diesel Fuel, and §2284: Lubricity of Diesel Fuel.
- 3.5 Biodiesel blend (B5) and blend stock (B100) shall meet the requirements of CCR, Title 13, Division 3, Chapter 5, Article 3, Subarticle 2, et seq: Commercialization of alternate diesel fuels).
- 3.6 Biodiesel blend (B5) shall meet the requirements of CCR Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 7, et seq: Low Carbon Fuel Standard (LCFS).
Note: The State of California is the end user and will not assume the role of regulated party as described in the LCFS.
- 3.7 The delivered biodiesel blend (B5) shall be visually free of undissolved water, sediment, or suspended matter.

- 3.8 Upon request, supplier shall provide Safety Data Sheet (SDS) for biodiesel blend (B5) and additives.
- 3.9 Red dyes (if utilized) mixed into fuel for identification must meet current requirements of the U.S. Environmental Protection Agency or Internal Revenue Service as applicable.
- 3.10 At the time of delivery, biodiesel blend (B5) shall comply with all current laws and regulations (federal and California).

4.0 STORAGE LIFE

Fuel should not deteriorate at a rate significantly faster than industry average expectations (with consideration for environmental conditions) nor should it form excessive gum, resins, or deposits when properly stored.

5.0 QUALITY ASSURANCE PROVISIONS

- 5.1 Upon request from the state, supplier shall provide test data showing compliance to requirements of Section 3.0.
- 5.2 The state of California, at its discretion, may take a sample of the delivered fuel at the time of delivery prior to transferring fuel to a site storage tank. The sample may be tested for compliance to this specification. The state reserves the right to reject noncompliant fuel.
If the test analysis of sampled fuel indicates non-compliance, the supplier shall be responsible for all costs related to the test analysis, removal, and disposal of non-compliant fuel from affected site storage tanks. It shall be understood if site storage tanks are contaminated by a delivery of non-compliant fuel, the existing fuel shall be replaced.
- 5.3 The supplier shall take measures to prevent contamination of fuel by ensuring all vessels used to transport fuel are clean prior to transporting new fuel to the state.
- 5.4 The producer of the biodiesel shall be certified to BQ-9000 through the National Biodiesel Board (NBB) or at a minimum have an internal quality control system with the following elements:
 - 5.4.1 Document control: Producer of biodiesel shall maintain a document control system. Only approved processing and operating procedures may be used in production. All document changes must be approved by the quality control manager (or similar authority) before they are released to production.
 - 5.4.2 Lot traceability: All delivered lots to customer shall be traceable to its source and its feedstock.
 - 5.4.3 Record keeping: Producer of biodiesel shall maintain a record of an analyst's training, equipment calibration, and test results. Records shall be kept at least for five years. The state shall have the right to review records.
 - 5.4.4 Sampling: Production lot shall be sampled per ASTM D4057. A portion of the sample shall be kept for a minimum of 60 days.
 - 5.4.5 Testing: All production lot samples shall be tested to ensure that product meets or exceeds the bid specifications.
 - 5.4.6 Storage: If the producer's biodiesel storage tank has no activity for thirty days, a sample shall be taken to test for water, sediment and oxidation stability ensuring that the fuel still meets the bid specifications.

- 5.4.7 Test laboratory: On-site or third party test laboratory shall be used for testing purposes. The test laboratory shall adhere to good laboratory practice (e.g. use of regularly calibrated equipment, record keeping, and qualified staff for testing etc.). Test laboratory shall execute a documented program to verify their test results by sending out duplicate test samples to an independent laboratory. Such verifications shall be performed a minimum of every four months.
- 5.4.8 Certificate of Analysis (COA): COA shall be generated for each production lot. The COA shall provide test results for properties specified in invitation for bid and the product specification. Lot numbers and test dates shall be identified on the COA.
- 5.4.9 Internal audit: Producer of biodiesel shall have internal audit system to ensure that employees follow procedures and processes. Internal audits shall be done at least once a year. At a minimum, the audit shall focus on the accuracy of processing procedures, non-conforming reports, and corrective actions.
- 5.4.10 Non-conforming product: Producer of biodiesel shall have procedures for the disposition of non-conforming lots to ensure that customer does not receive product. Producer shall perform root cause analysis on non-conforming product and apply corrective actions. Producer shall confirm effectiveness of corrective actions through careful monitoring.