S.N 238

Government of India
Ministry of Railways
INDIAN RAILWAYS ORGANIZATION FOR ALTERNATE FUELS
12th Floor, Core – 1, Scope Minar, District Centre, Laxmi Nagar, Delhi –110092.
Phone No.: 011- 22024683 Fax No.: 011 – 22024696
email : cmebd@iroaf.gov.in

No. IROAF/3/CME/BD/Railways Dated 08/12/2014

Chief Mechanical Engineer,
All Indian Railways,

Sub: Use of Bio-Diesel-storage, blending and issue.
Ref: Meeting at Railway Board on 04/12/2014.

During the CME's conference on 12/11/2014, some Railways had requested for comprehensive guideline on the subject of Bio-Diesel procurement, storage and dispensation. As per the decision taken in that meeting, a special meeting on this subject was convened by the Board on 04/12/2014. The decisions taken on various aspects are under issue by the Board. It was decided in the meeting that IROAF would circulate guidelines in regard to storage, marking, blending of Bio-Diesel with petro diesel and issue of B5 Bio-Diesel to locos. Accordingly the undernoted guidelines are being circulated:

1. Decanting, storage & marking
   a. While blending with Bio-Diesel is to be globally implemented, in the first phase, it needs to be implemented on those fuel installations which meet the following requirements:
      - Have road approach enabling oil tankers to arrive upto decanting point
      - Having a daily issue of at least 20KL of diesel
      - A spare storage tank that can be earmarked for storage of Bio-Diesel

   b. The storage tank identified for exclusive storage of Bio-Diesel (B100) should be marked with prominent green color bands. In case of underground storage tanks the pipeline from the control valves into and out of this Bio-Diesel storage tank should be painted green.
   c. In the existing pipeline layout, all the storage tanks are connected to the common decanting pipeline, with the inflow to individual tank controlled by its valve. On receipt of Bio-Diesel supply through the road tanker, the same will be decanted at the existing decanting terminal and pumped into the (B100) Bio-Diesel tank. No change in the decanting infrastructure is required.

2. Blending
   a. Best blending, without assistance of any mechanical stirring arrangement, will be achieved by mixing petro diesel into Bio-Diesel.

b. At a time one of the empty storage tanks will be used to prepare B5 Bio-Diesel. For this purpose the discharge valves of B100 Bio-Diesel tank and that of the empty storage tank would be opened and B100 Bio-Diesel equal to 5% capacity of the empty storage tank would be pumped into the empty storage tank. After that the discharge valves of both these tanks would be closed.
c. The balance volume of the empty storage tank would then be filled with petro diesel through the decanting pipeline. The splash of petro diesel into the Bio-Diesel already available in the tank would provide the requisite blending. Once blended, they will have no tendency to segregate.
d. Similarly other storage tanks can also be filled with B5 blend of Bio-Diesel, one by one.

3. Issue of blended Bio-Diesel

a. The 5% Bio-Diesel mixture prepared as per the steps indicated in item 2 above would be ready for issue to the locomotives.
b. The issue to the locomotives will be made following the existing practices with petro diesel.

(B.K.Agrawal)
Chief Mechanical Engineer/BD

Copy to : EDME/Traction, Railway Board, New Delhi
Copy to : Sr. ED/Engine Development (CNG), RDSO, Lucknow