9TH MEETING

HELD AT

DEPARTMENT OF PETROLEUM
SHASTRI BHAWAN, NEW DELHI

ON

FEBRUARY 26, 1985

9th

MINUTES OF THE 9TH METTING OF THE SCIENTIFIC ADVISORY COMMITTEE HELD ON 26TH FEBRUARY, 1985.

List of persons attended the meeting attached.

Minutes of the 8th meeting, already circulated to the members, were confirmed.

Initiating the discussion, Prof. Sharma, Chairman welcomed the committee members and enquired from Indian Petrochemicals Corporation Limited whether the technical advisory committees as discussed earlier in the 8th meeting, had been constituted for the proposed research facilities (with Oil Industry Development Board support) at Indian Petrochemicals Corporation Limited. It was confirmed that the technical advisory committees had been constituted. Subsequently, the various agenda items were taken up for discussion.

9.1 Proposal on Dearomatisation of Bombay High Naphtha and Kerosene by "Liquid Membrance Process."

The proposal was presented by Indian Institute of Petroleum. It was indicated that the pilot plant as proposed is to understand the emulsification and deemulsification steps as well as the problems relating to the integrated operation of this process. This proposal was discussed at length and it was finally noted that this process may not be economical for rich streams and the cost of emulsifier and deemulsifier would be relatively very high. Hence, it was desired that a proper feasibility report should be prepared before taking a decision on this proposal. Finally, Indian Institute of Petroleum was requested to come up with a comprehensive paper for further discussion.

9.2 Optimum utilization of C3 fraction from FCC Unit at Mathura Refinery.

Adviser(PC) explained in brief the reasons for taking up the subject matter once again in the meeting. Regarding the 22,000 MTA PP Plant, as proposed by the State Government in Mathura, the committee strongly felt that the size proposed is sub-optimal and keeping in mind the recent decision taken on MGCC for 60,000 MTA PP Plant, and also the economies of scale, a plant of 22,000 MTA would not be viable.

9.3 Optimum way of production of Alpha Olefins

The reasons for taking up this issue once again were explained in brief by Adviser(PC). The committee members expressed that all the matters relating to alpha-olefins

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production have been examined in detail earlier and taking into consideration the pros and cons, it was finally recommended that alpha-olefins should be produced from ethylene. Since the position regarding alpha-olefins production has not changed subsequent to the earlier decision, the Scientific Advisory Committee once again reiterated its earlier decision that alpha-olefins production should be based only on ethylene.

9.4 Polymer additives - Inter-substitutability and programme for indigenous production

Chairman complimented Indian Petrochemicals Corporation Limited for producing a comprehensive report. Shri Venktasubramanium of Indian Petrochemicals Corporation Limited explained in brief the content of report and desired that decision has to be taken about the methodology of production of polymer additives. While discussing the various aspects, it was brought out the there are no specifications as well as legislation for fire retardants for synthetic fibres as well as childrenware. The committee noted that the UV stabiliser and antioxidant are very important and requested Indian Petrochemicals Corporation Limited to give a note indicating the recommended antioxidants and UV stabilisers required for thermoplastics and rubbers. The committee requested Indian Oil Corporation Limited also to give a comprehensive note on additives for fuel products notables gasoline, diesel, kerosene, etc. Subsequently, a final decision would be taken by the Scientific Advisory Committee.

9.5 Oil Field Chemicals

Dr. Baruah of RRL, Jorhat gave a brief presentation on the work done by RRL on Pour Point Depressants (PPD) and flow improvers (FI). He pointed out some of the problems encountered by them in the indigenous effort :-

9.5.1 Some hesitation on the part of oil producing organisations to use the indigenous R&D products in critical areas.

9.5.2 Reluctance of the oil producing agencies to make a relative assessment of indigenous product with other additives (imported) in use for a detailed assessment of the performance under similar conditions.

9.5.3 Non-availability of the detailed feedback information on the laboratory and field performance of the R&D products.

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Dr. Baruah suggested the following in order to overcome the problems relating to indigenous efforts:-

(1) The oil producing agencies should be requested to test the R&D products in comparison with the approved product in use;

(2) All R&D efforts arising from Public funding should be treated as national efforts and oil producing agencies should actively participate in the development as well as in the field investigation of the laboratory products;

(3) Uniform test methods for all the oil producing agencies may be evolved.

Dr. Doraiswamy of NCL gave a brief presentation on the work done by NCL on the Drag Reducing Agents. He indicated that NCL would be able to develop composition equivalent to ARCO's very soon and other composition superior to ARCO (within 2 to 2½ years). He recommended the following steps for developing and testing of Drag Reducing Agents at NCL :-

(i) Required quantities may be ordered from ARCO for the next year or so. (It was noted that ARCO samples have yet to pass some commercial transport tests).

(ii) NCL will be in a position to supply equivalent compositions which can be made by Indian Oil Corporation Limited or Lubrizol India Limited and passed on to Oil & Natural Gas Commission and Oil India Limited for use. The cost of these compositions will be less than that of the imported one.

(iii) NCL will then fully develop its own composition which is at present under test in 1/4" and 2" pipelines and which is expected subsequently to be tested in the 8" pipeline of Indian Oil Corporation Limited. Complete requirements of the country can then be met by creating manufacturing facilities for these compositions.

(iv) Under the circumstances it is strongly recommended that no manufacturing arrangements should be made with ARCO at present.

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It was also brought to the notice of the members that the ARCO's product also initially failed to meet the requirement and subsequently only ARCO could develop proper product.

Adviser (Refinery) indicated that the another committee namely, Tauro's committee where all these aspects are being examined and if desired, feedback data on the results obtained from the field can be obtained from this committee. The Scientific Advisory Committee endorsed the views presented by RRL, Jorhat and NCL.

9.6 Recovery of Naphthalene from Petroleum fractions

It was noted that a lot of work has been done by the group consisting of Dr. Kothari and Mr. Kurien on this subject. Scientific Advisory Committee, however, felt that the aromatic fractions itemwise in the different boiling ranges of Kerosene and ATF fraction have to be analysed and in this connection requested IIP/RRL/IPCL/IOC to get this fraction analysed for ascertaining the naphthalene potential. Dr. Kothari would coordinate with the laboratories for getting the samples analysed in detail.

It was finally decided that the next meeting would be held at Baroda on 3rd May, 1985.

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Annexure-I

List of participants who attended the Scientific Advisory Committee meeting held on 26th February,1985 in Shastri Bhawan, New Delhi.

Members

1. Prof.M.M.Sharma, Chemicals Engineering, Deptt.of Chemical Technology, Bombay.
2. Dr.I.B.Gulati, Director, Indian Institute of Petroleum, Dehradun.
3. Dr.P.K.Mukhopadhyaya, Director,IOC(R&D), Faridabad.
4. Dr.L.K.Doraiswamy, Director, NCL, Pune.
5. Shri V.B.Gupta, Professor of Textile Engg.,IIT, New Delhi.
6. Dr.J.N.Baruah, Director, RRL, Jorhat.

Invitees

7. Dr.N.C.Kothary, IPCL/OIDB
8. Shri R.Krishnamurthy, Engineers India Limited.
9. Shri D.N.Rihani, -do- (R&D)
10. Shri R.A.Rao, Lubrizol India Limited.
11. Shri K.L.Malik, -do-
12. Shri K.N.Venkatsubramanian, IPCL, Gujrata
13. Dr.G.C.Joshi, Indian Institute of Petroleum, Dehradun.
14. Shri B.Subrahmanyam, RRL, Jorhat.
15. Shri R.Krishna, IIP, Dehradun.

Ministry of Petroleum

16. Dr.K.Aghoramurthy, Adviser(PC)
17. Dr.G.Jayaramarao, Adviser(R)
18. Shri M.P.Modi, JS(PC)
19. Smt.Lalitha B.Singh, Project Officer
20. Shri L.S.Sundresan, Project Officer.

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