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DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

INDIA: IFFCO FERTILIZER PROJECT
386-24-231-416
386-H-201

AID-DLC/P-851

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D.C. 20523

UNCLASSIFIED

AID-DLC/P-851
June 19, 1969

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: India: IFFCO Fertilizer Project

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed $15,000,000 to the Indian Farmers Fertilizer Cooperative Ltd., a cooperative organized under the laws of India, for the purpose of building fertilizer manufacturing facilities in India.

The Capital Assistance Paper includes reference to Extended Risk Guaranties for $29,700,000 which are submitted for concurrence in principle with terms and conditions subject to specific concurrence at a later date.

This loan proposal is scheduled for consideration by the Development Loan Staff Committee at a meeting on Wednesday, June 25, 1969.

Rachel C. Rogers
Assistant Secretary
Development Loan Committee

Attachments:
- Summary and Recommendations
- Project Analysis
- ANNEXES I-VII

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INDIA: IFFCO FERTILIZER PROJECT

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India: IFFCO Fertilizer Project

SUMMARY AND RECOMMENDATIONS

1. Borrower: Indian Farmers Fertilizer Cooperative Ltd. (IFFCO), a cooperative organized under the laws of India "to promote the economic interests of its members by undertaking manufacture of chemical fertilizers and allied products/by-products and their conversion, storage, transportation, and marketing". 1/

2. Amount of AID Development Loan: $ 15,000,000.

3. Amount of U.S. Financial Institutions Loan and AID Guarantees: $33,000,000 of which $29,700,000 will have an AID Extended Risk Guarantee (ERG). The $3,300,000 balance will be covered by an AID Specific Risk Guarantee (SRG).

4. Project: The design and construction of modern petrochemical fertilizer facilities in the state of Gujarat consisting of a 910 metric ton per day ammonia unit, 1200 metric ton per day urea unit and an NPK-complex unit with a daily throughput capacity of up to 360 metric tons per hour of complex fertilizer. The annual fertilizer nutrient production on a 330 stream day basis will be on the order of 229,000 metric tons of nitrogen, 122,000 metric tons of phosphate and 62,000 metric tons of potash.

5. Total Project Cost: $112,000,000 of which $48,000,000 (39.3%) is the estimated foreign exchange cost (to be financed by the AID and U.S. Financial Institutions Loan). The local currency cost of $64,000,000 equivalent will be financed by IFFCO equity of $36,000,000 equivalent ($12,000,000 equivalent will be subscribed by IFFCO members as regular common while $24,000,000 equivalent will be subscribed by the Government of India (GOI) as redeemable common) and by a loan from the GOI of $28,000,000 equivalent. The GOI will guarantee the AID Extended Risk Guarantee and will directly guarantee to the lenders the Specific Risk Guarantee portion of the U.S. Financial Institutions Loan.

1/ "Bye-Laws of Indian Farmers Fertilizer Cooperative Limited", Section 3(a).

6. Background: The demand for fertilizer in the IFFCO marketing area substantially exceeds production. It is economically prudent to meet that demand by erecting additional production capacity at Kalol and Kandla.

7. Purpose: The project will increase domestic production of fertilizer which is one of the critical agricultural inputs required to increase yield per acre and thereby narrow and eventually eliminate the gap between production and consumption of food in India.

8. Issues: None of the issues is considered to be an impediment to loan or guarantee authorization. A discussion of the major issues investigated in the course of review of the project appears in various sections of this paper. An index to the issues appears in Section IX.

9. Proposed Loan Terms:

(a) The GOI will repay the Development Loan (DL) to AID over a period of 40 years from the date of first disbursement of loan funds. The repayment period will include a grace period of ten years; the repayments to AID will be in 61 semi-annual installments beginning ten years after the date of first disbursement. The loan will bear interest at the rate of two percent (2%) per year during the grace period and three percent (3%) per year thereafter.

(b) IFFCO will repay to the GOI the rupee equivalent of the DL and the U.S. Financial Institutions over a period of 15 years from the date of first disbursement. This repayment period includes a grace period covering three years of construction and $1\frac{1}{2}$ years after start-up; the repayment by IFFCO will be in 22 annual installments beginning $4\frac{1}{2}$ years after the date of first disbursement.

(c) The interest rate to IFFCO will be $8\frac{1}{2}$ percent per year on the rupee equivalent of the DL to the GOI. The interest rate on the Financial Institutions Loan is yet to be determined.

10. Export-Import Bank Clearance: Received on March 7, 1968.

11. Statutory Requirements

All applicable criteria for the AID loan have been met and all applicable criteria for the Extended Risk Guarantee will have been met when eligible investors have agreed to make the U.S. Financial Institutions loan and satisfactory terms thereof, including interest rates, have been determined. Statutory checklists are attached as Annex I A and I B.

12. Mission Views and Certification: The Mission supports the project and recommends approval of the loan. The Mission Director's certification pursuant to Section 611(e) of the Foreign Assistance Act of 1961, as amended, is attached as Annex I C.

13. Recommendation: That the proposed AID Development Loan of $15,000,000 be approved on the terms and conditions set forth in the draft Loan Authorization attached as Annex I D.

Project Committee

Loan Officers: Thomas L. Cranmer, USAID/India and
George H. Wales, Jr., NESA/CDE, AID/W

Extended Risk Guarantee Officer: John K. Culman, PRR/PIC/FD

Counsel: Robert Meighan, GC/NESA and
Charles Lipman, GC/PRR

Engineer: Philip W. Simmons, NESA/CDE/ENGR

Economist: Dickson K. Smith, NESA/SA

I. BRIEF PROJECT DESCRIPTION

1.1 Indian Farmers Fertilizer Cooperative Ltd. (IFFCO) plans to erect and operate a modern petrochemical fertilizer facility in Gujarat, India. A 910 metric ton per day ammonia plant and a 1200 metric ton per day urea plant will be built at Kalol near Ahmedabad while a diammonium phosphate (DAP) complex facility with a capacity of up to 1820 metric tons per day will be erected at Kandla. The design of the process units will employ the most recent proven technologies.

1.2 The nitrogen plant (the ammonia and urea units) will be located in Kalol to be near the natural gas feedstock source. The complex unit will be located at the port of Kandla (some 200 miles west of Kalol) in order to facilitate the importation of phosphoric acid (the source of P_2O_5). In order to manufacture DAP and other grades of NPK complex fertilizer at Kandla, some of the ammonia production must be shipped by rail from Kalol to Kandla. The balance of the ammonia will be converted to urea. DAP will be produced by chemically reacting water solutions of ammonia and phosphoric acid. Urea and potash may be added to the solution to produce various grades of complex fertilizer.

1.3 The urea and complex fertilizer produced by IFFCO will be distributed over a ten-state market area, although 50 percent of production is planned to be sold in two states - Punjab and Uttar Pradesh. The existing network of Indian agricultural coops will distribute IFFCO's production.

II. BACKGROUND AND BORROWER

Early Studies

2.1 Since 1966 AID has encouraged, financed and generally assisted in a major portion of the feasibility studies and negotiations of this project as part of its efforts to (a) promote fertilizer production facilities in the private sector of India, (b) mobilize rural resources and (c) encourage farmer self-help. The result has been the application of new concepts in financing and the close collaboration of private U.S. and Indian citizens.

2.2 In the fall of 1966 representatives of the U.S. cooperative movement studied the existing Indian cooperative fertilizer marketing and credit facilities and concluded that the potential capabilities for the cooperatives to develop fertilizer manufacturing facilities was strong. 1/ At that time the Indian cooperatives were distributing (but not manufacturing) almost all of the chemical fertilizer and institutional agricultural credit to Indian farmers, and had been for about 15 years. They had extensive (a) financial resources (over $1.0 billion) (b) physical facilities (610,000 metric tons capacity for wholesale storage and 1.1 million metric tons capacity at the retail level) and (c) membership (27 million farmers covering 43 percent of the agricultural population and 90 percent of the villages).

2.3 By early spring 1967 the U.S. cooperatives decided that they would be willing to donate one million dollars to the development of fertilizer production facilities in India as part of their private initiative to aid the farmer-owned cooperatives in less-developed countries. The U.S. cooperatives discussed an equity investment but found that they were prohibited from making direct investments by their by-laws and by a philosophical inclination not to make U.S. or foreign investments which do not result in agricultural inputs for their members.

2.4 In April 1967 the U.S. cooperatives sent the presidents of the three largest cooperative fertilizer manufacturers to India to meet with leaders of the Indian cooperatives and GOI officials to determine the direction of future efforts. Since U.S. cooperatives now distribute and manufacture at least three times as much as the fertilizer presently consumed in India, the Indian cooperators agreed 2/ that the U.S. cooperators should plan, construct and operate the first fertilizer plant and provide advice on modernizing the existing distribution facilities and methods.

1/ Report of the Cooperative Fertilizer Team to India. December 1966. Task Order No. 17, PIO/T 386-000-3-60-135

2/ Report of the International Cooperative Development Association Team's Trip on the Cooperative Fertilizer Project for India, May 10. 1967.

2.5 The project's basic organization, technology, location, and market strategy was made fairly firm by an AID financed study during June and July 1967 by American specialists (the Thomas Report)3/ and subsequent discussions of the presidents of the three top U.S. cooperatives, GOI officials and cooperative leaders from almost all states in India.

Location

2.6 A port site was chosen as most desirable because the costs of transporting raw materials are substantially higher than the costs of transporting the finished fertilizer. A deep water port was regarded as necessary to handle ships carrying phosphoric acid which will draw 30 or more feet of water. The use of phosphoric acid requires the plant site to be as close as possible to the dock. These requirements eliminated all ports except for Kandla in Gujarat and Visakhapatnam (Vizag) in Andhra Pradesh.

2.7 The Kandla site was chosen primarily because the marketing area includes the strongest Indian cooperatives; marketing and raising equity should be easier in this area than elsewhere in India. Since funds were limited, further consideration of a second plant at the Vizag location was postponed.

Choice of Technology

2.8 A centrifugal-compressor ammonia plant with a rated capacity of 910 metric tons per day was chosen because a U.S. plant of this size can produce ammonia at the rate of $17-20 per ton, which is the lowest cost of production proven possible. 4/ A 545 metric tons per day centrifugal-compressor plant produces ammonia in the U.S. at the rate of $23-26 per ton this is the smallest plant that can use centrifugal-compressors. Smaller plants use reciprocal compressors. A 318 metric tons per day plant would produce ammonia at approximately $30-33 per ton. "Package" plants of 136 tons per day produce ammonia at a cost of $45-48 per metric ton and package plants with 91 metric tons per day capacity produce ammonia at a cost of over $50 per ton. Some plants are being built throughout the world with greater than 910 metric tons per day capacities, but the U.S. cooperatives consider that these plant are not sufficiently proven. On October 19, 1967,

3/ Thomas, D.H. et al: Economics Analysis of the Cooperative Fertilizer Project for India. International Cooperative Development Association, Washington, D.C. August 2, 1967. 120 pages. Financed under Task Order No. 6, PIO/T 386-367.1-3-70309.

4/ All cost figures are based on internal financial statements and analyses of plants which Central Farmers Fertilizer Company operates or has operated.

the GOI gave IFFCO a Letter of Intent (approval in principal) for the plant which the American specialists recommended.

The Borrower

2.9 On November 3, 1967 IFFCO was registered as a cooperative and organized along the lines of the Thomas Report and subsequent discussions. The Bye-Laws which are satisfactory to AID and the Bank of America, required that the GOI appoint a Board of Directors for no more than five years (see Annex II B for relevant sections of the Bye-Laws and the names and affiliations of the directors). The GOI has exercised a similar right in the case of about 60 large manufacturing cooperatives and has consistently kept GOI officials to less than 30 percent of the Boards of Directors.

2.10 On March 11, 1968 the GOI appointed ten voting members of the Board of Directors (out of 11 members permitted under the Bye-Laws) and one Chairman (a cooperative leader) who votes in case of a tie. Of the voting Board members six are cooperative leaders, three are GOI officers and one is an industralist. The GOI has agreed to appoint any nominee of the U.S. financial institutions after the foreign exchange loans are committed. IFFCO's Managing Director is an ex officio Board member but cannot vote. The GOI has agreed to maintain the present balance on the Board of Directors as resignations are tendered.

2.11 The six cooperative Board members and the Chairman represent cooperatives in seven out of ten states which plan to buy fertilizer from IFFCO. The main types of cooperative members (IFFCO's bye-laws do not permit sale of IFFCO shares to individuals) are state wholesalers, local wholesalers and retail societies. IFFCO management projects an eventual membership of between 40,000 and 60,000 cooperatives. IFFCO, in accord with a provision of its by-laws, is planning to allot fertilizer to its members in proportion to their share holdings. A more complete discussion of IFFCO's marketing plans is presented in Section V.

2.12 When all equity has been paid-in over a four-year period Indian cooperatives will hold $12 million equivalent of IFFCO common while the GOI will hold $24 million equivalent of redeemable IFFCO common. (The GOI stock will be redeemed by IFFCO in 1985 after repayment by IFFCO of the term loans.) In terms of shareholders votes, the IFFCO bye-laws allot one vote to the GOI for every $13,333 equivalent which equals a maximum total of 1,800 votes. There are projected to be a minimum of 40,000 village level societies who will be IFFCO shareholders and each will have at least one vote under the by-laws. Control of IFFCO voting shares clearly rests with the Indian coops and not with the GOI. (See Annex II B for the relevant exerpt from IFFCO's Bye-Laws.)

2.13 IFFCO and CFI are developing a staffing plan for the plant management. CFI will have control over hiring from the plant. A market division staffing plan has been approved by IFFCO's Board and CFI. The only Indian presently in a senior management position is Paul Pothen, Managing Director. He was manager of the Fertilizers and Chemicals Travancore Ltd (FACT) engineering group consisting of 250 people (150 engineers). Pothen was also the former engineering manager of FACT. A civil engineer by training he worked in every department of FACT in his 25-year career. CFI intends that the IFFCO plant will be staffed with the highest quality engineers available in India. IFFCO's Board has indicated a guideline policy of a fairly low salary structure in comparison to other private sector firms. However IFFCO's Board has agreed to pay whatever is necessary to obtain qualified men. Well trained, intelligent young engineers are in surplus supply in India but tend to need training. Thirty-nine expatriates under CFI will operate the plant up to five years, until they each believe that they have adequately trained an Indian and appropriate support staff to replace them.

U.S. Technical and Managerial Assistance

2.14 The U.S. cooperatives chartered Cooperative Fertilizers International (CFI). On September 25, 1967, CFI's members/sponsors (see Annex II A) pledged $1.0 million in cash and considerable expertise to support CFI. These funds may be drawn down by CFI at $250,000 per year, but BofA has required that CFI spend only $100,000 per year to give CFI continued involvement and flexibility. That involvement was formalized in a contract ("Cooperation Agreement") signed on July 10, 1968 by CFI and IFFCO which was approved by AID the GOI and BofA (all of whom had participated extensively in the negotiations). The authority of CFI to plan, construct and operate the plant up to five years after start-up is explained in Section 7.1. While there exist contractual requirements for CFI's members to contribute to CFI and for CFI to use such funds for IFFCO's benefit, the key factor to determining continued U.S. cooperative involvement is their widely publicized determination (and moral obligation) to keep the project going.

2.15 In October 1967 AID determined that 90 percent of the loans from private U.S. financial institutions (about 66 percent of the U.S. Financial Institutions Loan plus the Indian cooperative equity) could be covered by an Extended Risk Guarantee. On this basis, in October 1967, Bank of America (BofA) agreed to raise funds for all dollar costs of the project subject to satisfactory reports on technical processes and marketing, management, and local financing.

Special Studies

2.16 The major reports prepared (with AID financing) by independent authorities during 1968 for the benefit of BofA, CFI and IFFCO, were a technical study,5/ a market study6/, a subsoil investigation 7/ and a study of compensation necessary for expatriates8/. On December 30, 1968 the Indian Institute of Management, Ahmadabad, Gujarat (affiliated with Harvard University and partially financed by the Ford Foundation) commented at the request of BofA that the Market Study "be accepted as a basis for the further implement of the project" following a detailed review during October through December. In early 1969 the technical study was revised by the project sponsors and reviewed by a BofA and AID independent technical consultant. In addition a wide array of detailed studies on matters of lesser import were completed in 1969.

Conclusion

2.17 The project can now be considered as jelled. Every aspect of the project has been exhaustively and satisfactorily studied. As is usual for a large project of this nature before AID signs a loan agreement and disburses, IFFCO will need to provide formal evidence that satisfactory arrangements have been made to carry out, operate, and maintain the project as planned (i.e. legal opinions, firm contracts, etc.). Such documentation, can probably be provided within the two to five months.

5/ Chemical Construction Corporation (Chemico): Engineering and Capital Investment Cost Report for a Mixed Fertilizer Complex for Indian Farmers Fertilizer Cooperative Limited, Kandla, Gujarat, India. September 9, 1968.

6/ Cranmer, T.L. et al: Study of the Market for Fertilizer to be Produced by Indian Farmers Fertilizer Cooperative Limited: U.S. Agency for International Development, New Delhi. September 1968.

7/ Rodio Foundation Engineering Ltd. and Hazarat & Co.: Final Report on Subsoil Investigation for the Proposed Fertilizer Plant at Kandla, February 9, 1968.

8/ Arthur Young & Co.: Cooperative Fertilizers International Overseas Personnel Program. March 1968.

III. TECHNICAL DISCUSSION

3.1 The principal aspects of the project with which this analysis is concerned are (1) processes, (2) feed materials, utilities and ancillaries, (3) capital cost estimates.

3.2 The Processes. This project entails the construction of a 910 metric ton per day (1,000 short tons per day) ammonia unit, a 1,200 MT/D urea unit, and a complexing unit which can make 1,820 MT/D of diammonium phosphate (DAP) or various NPK grades. In nutrient terms (based on a 330 day year) these figures represent annual capacities of marketable fertilizer after allowance for losses of 229,000 MT of nitrogen and 122,000 MT of phosphorous pentoxide (phosphate). About 62,000 MT of potassium oxide (potash) will be blended with nitrogen and phosphate to produce complex formulations - probably 92,800 MT of 10-26-26, 92,800 MT of 12-32-16 and 189,900 MT of 14-36-12.

3.3 The exact processes will not be known until contracts for the constituent units are let. However, a general description of the processes follows.

3.4 Ammonia

A. The Ammonia Unit will incorporate one of the latest production technologies in which natural gas (gas) from the immediate area is used as a feedstock. It will be designed in a single train, using centrifugal compressors, but utilizing two ammonia convertors since a single convertor may be too large to allow transport over land to the Kalol site. The compressors and other large power-consuming equipment will be driven by steam, thus minimizing possible uncontrolled shutdowns caused by electric power outages. No offsite power is required for any critical equipment item.

B. Synthesis Gas Manufacture. The natural gas is processed in four major steps to form raw synthesis gas: desulfurization, primary reforming, secondary reforming and shift conversion. The natural gas is passed through a vessel filled with activated carbon which removes the sulfur, then the gas, combined with superheated steam, is passed over a nickel catalyst which reduces the methane (CH_4) from 90 percent to about 10 percent. The partially reformed gas and steam are combined with air (to introduce nitrogen) and passed again through a bed of nickel catalyst which further reduces the methane to about 0.34 percent. The reformed gas effluent is cooled in two waste heat boilers from about 1826° to 700°F which generates 1,500 psig. saturated steam. Many of the power plants in India use steam pressures in this range. The gas goes through a shift converter which removes carbon monoxide and hydrogen sulfide. After cooling, where most of the water condenses and is removed, raw synthesis gas remains.

C.- Carbon Oxide Removal. The raw synthesis gas (at 146°F and about 400 psig.) is processed for the removal of carbon dioxide and carbon monoxide to yield an hydrogren-nitrogen synthesis gas in a very high state of purity. The raw synthesis gas is bubbled through a 20 percent aqueous solution of MEA to remove CO_2. The gas is then preheated to 600°F and passed through a methanator, a vessel containing a bed of a high activity nickel base catalyst that is very effective for reacting CO, CO_2 and O_2 with hydrogen to form methane and water.

D. Compression and Ammonia Separation. After cooling in the methanator effluent the purified synthesis gas, containing hydrogen and nitrogen in a volumetric ratio of three to one plus a small amount of inert gas (methane and argon) is compressed in a turbine-driven two-case centrifugal compressor, which results in a concentration of 12 percent ammonia (NH_3). The use of centrifugal compressors results in substantial operating and investment cost savings over smaller plants. 1/ The product has water removed, is recycled with fresh feed and enters an ammonia separation at 10°F where 98 percent of the ammonia separates. The balance of the gas enters two ammonia synthesis converters, is passed over catalysts. Ammonia concentration of about 12 percent is obtained, which is chilled and separated out.

3.5 Urea. Ammonia and carbon dioxide are reacted at elevated pressures to form ammonium carbamate. The carbamate is simultaneously dehydrated to produce urea. After decomposition of the carbamate, the urea solution is concentrated in evaporators and sprayed down a prill tower. The urea pellets or "prills" are formed during the free-fall through the prill tower.

3.6 The DAP-NPK plants combine potash, and ammonium phosphate slurry (which is made at the complex plant from Kalol ammonia and imported phos acid) with filler and a coating agent. Evenly sized homogenous granules are produced by combining the materials in a rotary drum granulator where the rolling action promotes the formation of granules. Ammonia is sprayed below the bed of rolling materials and reacts with diammonium phosphate. The heat of the reactions evaporates water. The product moves to a dryer and cooler and is then screened to achieve uniform granule size.

3.7 Technology. All of the technology, processes and equipment to be used in this project have been proven reliable in the United States.

1/ See paragraph 5.6 and Annexes V 4 and V 5 of the Capital Assistance Paper "India-Trombay Fertilizer Expansion", AID-DLC/P-702 for a fuller discussion of the reasons for the use of centrifugal compressors.

3.8 The Ancillaries, Off-sites, Utilities and Feed Materials. The ancillaries and off-sites will all be located on land to be purchased or leased by IFFCO at Kandla and Kalol. Land at both sites is available, and contracts are being negotiated. Permission for rights of way for transportation of raw and finished products is reportedly available. More than ample electricity and water are available at the Kalol site. The availability of utilities and requirements at Kandla needs further attention, but initial studies indicate that utilities will be available in sufficient quantity on a timely basis.

At Kandla, ample power is obtainable. However, the availability of an adequate water supply is dependent upon completion of construction of an aqueduct to Kandla by Guysiat state authorities. This conduit is expected to be completed by year end 1970, well in advance of the earliest possible commissioning date of the NPK facility. Appropriate assurances from state officials regarding the water supply arrangements will be obtained.

3.9 Port Facilities. IFFCO plans to use an existing public jetty as a berth for ships bringing in the phos acid. A pipe trestle (less than 1,000 feet long) will be constructed from the jetty to the site's phos acid storage. The cost of this trestle is included in the capital cost estimate. To offload the imported potash supply, IFFCO intends to utilize the public wharf and truck the material to the plant site. IFFCO will pay a wharfage fee (currently being negotiated) to the Kandla Port Trust for the use of these two facilities.

3.10 Phosphoric Acid. IFFCO will import phosphoric acid directly or through a GOI agency. IFFCO's site is on the water, next to a jetty which will allow transportation of the acid from ships to the plant site with a minimum of handling problems. The financial calculations take into account the recently imposed 27½ percent import duty on phosphoric acid.

3.11 Natural Gas. The Ministry of Petroleum and Chemicals on February 6, 1969 approved the allocation of 0.7 to 0.75 million cubic meters per day of natural gas from the Kalol/Nawagam (Sanand) gas fields. Subject to further analysis, IFFCO and CFI believe that this quantity of gas is sufficient to run the proposed plant at its capacity. The New Orleans firm of Atwater, Cowan, Carter & Miller (ACCM) studied the exploration records of the Indian Oil and Natural Gas Commission (ONGC) and observed field tests in India. ACCM concluded that "there are sufficient gas reserves in the ONGC Kalol and Sanand fields to pay out loans from U.S. lenders (15/16 years of full operations), and that the ONGC Kalol can supply gas of suitable quality at rates required for plant operation." However, it was assumed "that all gas reserves, free and associated, in the two fields will be available to the proposed plant." A gas contract is presently being negotiated with ONGC and will be reviewed by A.I.D. before it is signed. It is expected that the term of the contract will be for 10 years with 5 year renewable options. The gas price has been fixed and is about the same price of gas in the Gulf Coats of the U.S.

3.12 Capital Cost Estimates. The capital cost estimates were compiled by Chemical Construction Corp. (Chemico) as an independent consultant and were subsequantly revised by CFI and IFFCO when gas feedstock was allocated to the project necessitating the shift of the nitrogen facilities to Kalol. A.I.D.'s consultant, James Chemical Engineering, New York, concluded on May 19, 1969: "The (revised engineering report) indicates sufficient capital funds for implementation of the project. If anything, the figures used appear to be on the high side." These capital cost estimates are presented in paragraph 5.1.

3.13 Ammonia Transportation to Kandla. The daily requirement of ammonia for DAP-based grades of NPK product is about 200 metric tons. This requirement translates into 25 railroad tank cars (eight tons capacity each) daily. A unit train can cover the distance between Kalol and Kandla in a day. Allowing a six day turnaround, a fleet of 150 tank cars is required by IFFCO. IFFCO must have fabricated suitable tank wagons; however, the railway authority will supply the under-carriage. (This cost is provided for in the capital cost estimate set forth in paragraph 6.1.) Negotiations between IFFCO and the railway authority are now in progress.

IV. ECONOMIC ANALYSIS

GOI Agricultural Policy

4.1 One of India's most urgent and immediate needs is to grow more food. In 1965 India adopted a dynamic new strategy for agriculture designed to bring about a rapid increase in goodgrain production by combining the use of new high-yielding varieties of seed with the application of sufficient quantities of fertilizer in selected areas having suitable soil and timely and adequate supplies of water.

4.2 The World Bank made a careful study of India's new strategy for agriculture in 1965 and again in 1966. The Bank found a significant shift in Indian attitude during the time period between the two reports. In its 1965 report 1/ the Bank expressed doubt about the feasibility of setting a high growth rate for agriculture and pointed out that it would be a difficult task to close the gap between the GOI's high targets for agriculture and actual performance in this Sector by the end of the Fourth Five Year Plan. The Bank Team questioned "whether the full implications of priority for agriculture have been realized or studied." It cited as a factor critical to future performance the organizational will and capacity to carry plans through.

4.3 The development of this organizational will and administrative capacity is the major change identified by the Bank Team in 1966 2/. The Team attributed the change to (i) the effect on national awareness of two successive years of drought (1965/66 and 1966/67), (ii) the realization that economic growth is dependent on achievement in agriculture, and (iii) the acceptance, or conviction, that the technical means exist for achieving significant increases in agriculture output. In particular, the Team noted that Indian planners not only accept the fact that growth in agriculture is essential to economic development but have begun to emphasize the connection between agriculture-related industries such as the manufacture of fertilizer, plant protection materials, and tubewell equipment.

4.4 The A.I.D. Mission estimates that by the application of this strategy--the high-yielding varieties program--in suitable areas and continued gradual improvement of farm practices and inputs in other areas planted to foodgrains, production will increase at an annual rate of at least 5 percent beginning in 1968. The 1967/68 crop substantially exceeded a base estimate of 92 million tons, and a growth

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1/ Report to the President of the International Bank for Reconstruction and Development on India's Economic Development Effort ("Bell Mission report), Volume II, Agricultural Policy.

2/ Indian Economic Policy and the Fourth Five Year Plan, Volume II, Agricultural Policy in India, March 7, 1967.

rate of 5 percent per year would mean total foodgrain production of about 106 million tons in 1970-71. Although domestic output at this level would not eliminate foodgrain import requirements, it would reduce them substantially, and a sustained growth rate of 5 percent per year would accomplish the objective of self-sufficiency by the mid-1970s.

4.5 A rapid increase in the use of fertilizers will be needed to obtain optimum results from the high-yielding varieties program, increase the yield from traditional varieties of seed, and raise the output of cash crops. The use of large quantities of fertilizer, even if much of it must be imported, is essential if India is to reduce its present dependence on imported foodgrains. The application of one additional ton of fertilizer nutrient will yield at least ten tons of additional foodgrains from traditional seeds and an average of 13.5 tons from the high-yielding varieties of seed.[1] Imports of $100 worth of fertilizer in the form of urea (45% nitrogen, c.i.f. cost $95 per ton) will provide 0.46 tons of nitrogen nutrient. The additional yield from this fertilizer will be 4.7 tons of foodgrains, which will save $356 of foodgrain imports at $80 per ton, C+F Indian Ports.

4.6 Increases in fertilizer consumption in a range of 15 to 20 percent per year will be necessary to sustain a 5 percent growth rate in food production in the 1970s. To meet the 5 percent growth rate in food production in the 1970s fertilizer consumption should increase 15 to 20 percent per year, and nitrogen nutrient requirements should increase from 2.4 million tons in 1970-71 to 4 million tons in 1974-75 and the consumption of other fertilizer nutrients is expected to grow at a similar rate.

4.7 Both the World Bank study and the A.I.D. Mission's independent analysis of India's agricultural policy and prospects lead to the following conclusions:

(a) The GOI has adopted and begun to carry out this strategy for agriculture based on sound scientific principles.

(b) The GOI agencies responsible for carrying out this strategy are rapidly developing the necessary organizational will and administrative capacity.

(c) Both the record of actual accomplishment and the response of Indian farmers since the new strategy was adopted have been good.

1/ The World Food Problem, Volume II, pp. 694-698, Report of the President's Science Advisory Committee, May 1967; also Annex B to FY 1969 Program Memorandum for India.

(d) The prospects for a sustained agricultural growth rate of 5 percent per year beginning in 1968 are favorable.

(e) An important constraint on the achievement of this growth rate will be the limited supply of fertilizer.

(f) The GOI has made a number of significant concessions to encourage private foreign investment in fertilizer projects.

(g) The response has been excellent and some 14 private sector fertilizer plants are now under construction, in the planning stage, or in operation.

(h) Despite the favorable response of private investors, additional public sector capacity will be needed to narrow the gap between anticipated fertilizer consumption and production in the 1970s.

4.8 The results of the new strategy for agriculture to date indicate that, despite two successive years of drought, implementation of the strategy is off to a good start. The record of accomplishment with high-yielding varieties of seed (particularly the dwarf wheat varieties) has been impressive. The use of fertilizer is growing rapidly with most of the increase provided through imports. The Ministry of Finance willingly allocates large amounts of scarce foreign exchange for fertilizer imports in keeping with the Government's earlier policy decisions.

GOI Fertilizer Policy

4.9 The GOI is trying to increase domestic production of fertilizer by construction of public sector plants and grants of special concessions to investors in private sector plants. There are eight major government-owned plants in operation, five under construction, and two in the planning stage. Private sector plants now in operation include three large units--Coromandel, Delhi Cloth Mills and Gujerat State Fertilizer and a large number (30-40) of small units. In addition, as a result of major policy changes made by the GOI to encourage private foreign investment in fertilizer projects, two foreign companies (one U.S. and one British) are participating in the ownership and management of large fertilizer plants now under construction, and five other foreign firms are involved in fertilizer projects which have been issued letters of intent.

4.10 At the end of 1966 the nitrogen producing capacity of major private plants in India was zero: by the end of the new Fourth Plan (April 1974) the A.I.D. Mission expects it to be about 2.04 million tons/year representing an investment in nitrogen facilities alone of about $836,400,000 (figured at $410/ton of N).

4.11 The estimated total production of the plants now in operation, under construction, and planned for completion in 1970-71, will be well below consumption requirements; the shortfall in nutrients, estimated at 881,000 tons of nitrogen and 373,000 tons of P_2O_5 in 1970-71, will have to be imported. The nitrogen import requirement, i.e. the gap between consumption and production, will remain significant into any period for which projections continue to have meaning.

Economic Rationale of the Project

4.12 There are numerous choices of raw materials and processes for fertilizer production in India. For nitrogenous fertilizers, raw materials include natural gas, coal, naphtha, and imported ammonia. A detailed analysis of these raw materials alternatives in the recent A.I.D. Trombay Fertilizer Expansion loan paper [1] concluded that the most economical raw material is domestic natural gas. India's natural gas reserves are limited in size and restricted in location to the states of Assam in eastern India and Gujerat which is the state in which the IFFCO project is located. IFFCO has an allocation of natural gas from the Oil and Natural Gas Commission of the GOI which is sufficient to meet its requirements. Since natural gas is the most economical raw material for nitrogen production, a detailed examination of the alternative raw materials has not been undertaken by A.I.D. for this project.

4.13 Until the recent discovery of phosphate deposits near Udaipur in neighboring Rajasthan state, the import substitution potential for phosphatic fertilizers in India was much less significant than for nitrogenous fertilizers. A large portion of the cost of indigenously produced phosphatic fertilizers has been for imported raw materials--either phosphoric acid (to be used in the IFFCO plant) or phosphate rock and sulphur. The analysis of phosphate raw materials in the Trombay loan paper concludes that it is less expensive to

1/ A.I.D.-DLC/P-702, May 3, 1968

import phosphoric acid than to manufacture it in India from imported rock and sulphur.

4.14 Even if the recently discovered phosphate deposits prove to be economically exploitable, India will still be a net importer of phosphate for a significant period. Should the deposits make it financially attractive to manufacture phosphoric acid rather than import it, IFFCO will arrange for the additional capital required at that time.

Economic Profitability of Project

4.15 Desirability of the project from India's national economic viewpoint has been measured by a computation of national economic profitability, taking into account both indigenous and foreign resources and expenditures. This computation is based on the following ground rules:

(a) Only economic resources such as expenditures on plant, equipment, inventory and materials are considered. Financial resources such as accounts receivable and interest paid on local debt are excluded. Taxes, duties, and other transfer payments within India are excluded.

(b) IFFCO's ex-plant sales are valued at the anticipated c.i.f. prices of imported fertilizer. Imported raw materials are also valued at c.i.f. prices.

(c) Prices for certain indigenously available material inputs, such as naphtha and fuel oil, are out-of-line with their economic value. These have been adjusted to approach more closely a realistic value.

4.16 Projections which form a basis for the national economic profitability calculation are given in Annex VI. A. These projections are based on a CFI financial analysis of the project of April 25, 1969, except that product sales (production) are valued at anticipated c.i.f. prices as follows: Urea, Rs. 610 ($81.33) in 1973, Rs. 585 ($78.00) in 1974, Rs. 560 ($74.67) in 1975 and Rs. 530 ($70.67) in 1976 and the following years. DAP imports are valued at $87.00 per ton.

4.17 The results of national economic profitability computations are given in Annex VI. B. Assuming no premium to foreign exchange above the official rate of Rs. 7.50 per $1.00, the internal rate of return for the project is nearly 9 percent. Minimum acceptable rates of return for projects in India are in the range of 10 to 15 percent. If we allow for the fact that foreign exchange is generally considered to command a premium above the official exchange rate in India we find that a premium of approximately 18 percent applied to foreign exchange expenditures would increase the internal rate of return for the project to 12 percent. If the foreign exchange premium were increased to approximately 39 percent (giving an exchange rate of slightly more than Rs. 10 per dollar, which is roughly the Hong Kong open market rate) the internal rate of return would increase to 15 percent. Since the shadow price of foreign exchange is generally considered to be within the range of the last two premia given above, the project meets minimum standards for national economic profitability.

4.18 As a comparison to these national economic rates of return results, a return on total capital (equity plus term debt) was calculated (at the official exchange rate) based upon the reduction of selling prices to 60 percent of then present levels (a more drastic price reduction assumption than those projected for the other new Indian fertilizer projects.). The result was a 12.5 percent rate of return on total capital employed or an eight year "payout" period for the project (five years after start-up).

V. MARKET ANALYSIS

5.1 On April 30, 1969 IFFCO's Board approved a Marketing Prog which was based on a detailed AID-financed Study of the Market for Fertilizer to be Produced by IFFCO. 2/ CFI has and will continue to assist IFFCO in the marketing area under a "Marketing Cooperation Agreement" which states that "The responsibility for the marketing of the products of (the) fertilizer plant shall be that of IFFCO", but "CFI will collaborate with IFFCO in all matters pertaining to IFFCO's marketing program." 3/

Strength of the Cooperative System

5.2 CFI is merely giving advice to IFFCO in its marketing program because the U.S. and Indian cooperators believe that in general the Indian Cooperatives have the proven capability and willingness to buy and market IFFCO's products. In the past 15 years the cooperatives have distributed almost all of the fertilizer and institutional agricultural credit to Indian farmers. Indian farmers have paid in $15.5 million equivalent for share capital in order to have the privilege of obtaining credit and fertilizer. State governments have paid in $15 million equivalent to supplement the share capital of farmers. The total resource position of the retail cooperatives was about $800 million on June 30, 1967. If the resources of wholesale cooperatives are added, the total financial resource position was over $1.0 billion. In addition, in 1967, the cooperatives in the IFFCO market area had 610,000 metric tons capacity for wholesale storage and 1.1 million metric tons storage capacity at the retail level. About 27 million farmers (covering 43% of the agricultural population and 90% of the villages) belong to agricultural cooperatives.

Fertilizer Consumption

5.3 Fertilizer consumption has more than doubled in response to the increased emphasis on agriculture since 1965. The total fertilizer plant capacity in operation and under construction has nearly tripled. The consumption, plant capacities and production of nitrogen for the years 1965/66 and 1968/69 are shown below.

1/ "Introduction and Objectives of the Marketing Program" which includes draft marketing agreements with IFFCO's members, comments on exceptions to the "USAID Marketing Program", implementation plans, and a survey report on one district.

2/ Cranmer, T.L. et al: Study of the Market for Fertilizer to be Produced by Indian Farmers Fertilizer Cooperative Limited. U.S. Agency for International Development, New Delhi, September, 1968. 302 pages.

3/ "Marketing Cooperation Agreement" dated July 10, 1968 between CFI and IFFCO.

Consumption, Plant Capacities and Production of Nitrogen 4/
(thousands of metric tons)

	Consumption	Production	Capacity in Operation	Capacity Under Construction
1965/66	550	238	365	410
1968/69	1,200 (est)	550	995	1,195

The trend in fertilizer consumption since 1951 is shown on Annex V-B.

Consumption of phosphate more than tripled over four years, reaching 450,000 metric tons in 1968/69; potash consumption in 1968/69 was 180,000 metric tons, 230 percent of the 1965/66 consumption

5.4 The latest projections for 1973/74 by the New Delhi office of the IBRD put consumption of nitrogen at 3.0 million metric tons, phosphate at 1.4 million metric tons and potash at 0.9 million metric tons. 5/ By 1973/74 about 15-20 major fertilizer plants in India may be producing 2.5 million metric tons of nitrogen and 1.1 million metric tons of phosphate. 6/ Potash will continue to be imported.

Competition

5.5 Since adequate fertilizer is a major requirement for the success of the Indian agricultural program, the GOI will probably meet any deficit between local production and demand with imported fertilizer (fertilizer imports can be adjusted up or down within six months after the need for such an adjustment has been identified). Although the aggregate supply will probably be in balance with the demand, local overoptimism in forecasting demand may bring about oversupply situations in a number of areas. As a result, IFFCO's management and Board of Directors recognize that they cannot afford to assume that fertilizer produced by IFFCO will be sold without effort.

4/ Bohr, Kenneth A.: "The Fertilizer Program in India", International Bank for Reconstruction and Development, New Delhi, South Asia Department, New Delhi Office, April 22, 1969. Paragraph 1 and Table I. Prepared for the meeting of the India Consortium on May 22 and 23, 1969 in Paris.
5/ Ibid. Paragraph 5.
6/ Ibid. Paragraphs 5 and 6 and Market Study, op.cit., Chapter VI "Supply of Fertilizer"

5.6 IFFCO plans to sell the following percentages of its fertilizer only through cooperatives in a ten-state market area: Punjab (25%), Uttar Pradesh (25%), Haryana (10%), Rajasthan (10%), and (5%) each in Gujarat, Maharashtra, Madhya Pradesh, Andhra Pradesh, Mysore and Madras (see Annex V-A for a map of the IFFCO market area). The proportion of sales is determined by Article 48 of IFFCO's Bye-Laws which states that the products must be allocated "to various States/Union Territories in proportion to the value of shares paid by all the societies in each State/Union Territory".

5.7 The other 15-20 fertilizer manufacturers are not bound by any set pattern of sales and will undoubtedly sell in locations and through private dealers and/or cooperatives where they can make the greatest profit. The states in which IFFCO will sell comprise about 72 percent of the all-India demand for fertilizer. 7/ As a result IFFCO will be competing with a large number of capable competitors in widely varied linguistic and agricultural areas. This will require flexibility to meet local conditions. In the mid-1970's, IFFCO will have between 15-25% of the market in Punjab, Haryana and Rajasthan, 10-15% in Uttar Pradesh and under ten percent in the remaining six states.

5.8 To decrease the risks in selling fertilizer IFFCO's management and its Board have approved a draft Agreement and Letter of Understanding between IFFCO and its members to take IFFCO's fertilizer. The key provisions which will obligate the members through March 31, 1984 are:

a. Purchase fertilizer on an annual basis in proportion to the members' share holdings as related to the total share holdings. If the member does not take the fertilizer then any losses incurred by IFFCO in disposing of the fertilizer, as computed by a chartered accountant of IFFCO's choosing, must be paid by the member within 90 days.

7/ Market Study op.cit., page 84

b. Purchase fertilizer from other suppliers only over and above the expected supplies from IFFCO.

c. Supply irrevocable confirmed revolving letters of credit against which fertilizer will be shipped.

d. Assure that the commission to retail sellers is allocated properly.

e. Provide storage satisfactory to IFFCO for 60 percent of their yearly allocation from IFFCO.

f. Participate in IFFCO's training programs to the degree IFFCO determines.

g. Display only IFFCO's promotional literature.

h. Permit access to all records of all sales of fertilizer manufactured by IFFCO and other manufacturers.

i. Allow IFFCO "the right to direct (i) distribution of the material and promotional work of its field staff to the most competent and productive (retailers) and (ii) the degree or percentage of concentration of sale of IFFCO's fertilizer through said (retailers)".

j. Allow IFFCO the right to "take over temporarily the functions discharged by state or local (wholesalers) if it has been proven to the satisfaction of the Board of Directors of IFFCO that such societies are curtailing or hindering the distribution of IFFCO's fertilizers into the sale area determined to be essential to the marketing area of IFFCO".

These contracts, if signed by the members, will give IFFCO unusually strong latitude in correcting deficiencies in the cooperative members.

5.9 The contracts obligate IFFCO to sell at competitive prices. India's tax law may force IFFCO to keep prices at a level lower than the competitive prices to avoid taxes on profits and dividends. IFFCO plans to cut prices from a projected price of 10% below current prices during 1973 thru 1975 to 40% below current price levels by 1981. The present consensus of best guesses about future prices is that the market prices may drop only 20-30% from current price levels by 1981.

The cooperatives will have the temporary advantage over private dealers by having long experience in selling fertilizer (private dealers in the primary IFFCO market area have no experience) and the more permanent advantage of being the only retailer with the capability of providing fertilizer on credit.

Cooperative Members 8/

5.10 Officers of IFFCO estimate that membership in IFFCO may be as high as 40,000 to 60,000 cooperative societies out of 180,000 cooperatives in India and 140,000 cooperatives in the ten-state IFFCO market area. Individuals are not permitted to own shares in IFFCO.

5.11 The local wholesale and retail cooperatives in each state are federated into one or two wholesalers for the state which will purchase fertilizer from IFFCO. IFFCO generally will have direct dealings with only one cooperative society in each state.

5.12 IFFCO plans to ship the fertilizer directly to local wholesalers at railheads on instruction from the state wholesaler. The fertilizer will remain the property of the state wholesaler and will be given to the local wholesalers on consignment as is the present practice. Sixty days after shipment, IFFCO will receive payment from the state wholesaler's bank against an irrevocable letter of credit. The local wholesalers will either store the fertilizer as a "buffer" stock or send it to the retail societies which are the outlets in the villages. The retailers will sell fertilizer to farmers for cash or deliver it to them as part of a loan with repayment to be made in cash at the end of the harvest season.

5.13 To meet future competition from private dealers and hold on to a half to two-thirds of the fertilizer market, the cooperatives will have to provide fertilizer to the farmers at a price equal to, or less than, the price private dealers are charging, and service as good as, or better than, that offered by the private dealers.

8/ Facts for paragraphs 5.10 - 5.17 from Market Study, op.cit.

5.14 Most of the cooperatives cannot meet the basic requirement of providing service as good as that of the private dealers because only 19 percent of the local agricultural cooperatives in the proposed ten-state IFFCO market area during 1965/66 had a full-time manager. All of the private competitors will have full-time attendants at the retail stores. IFFCO plans to sell only through the most competent retailers in the districts with the highest fertilizer sales. These retailers will be sufficient to sell more than all of IFFCO's products.*

5.15 Substantial progress in cooperative development is being made throughout India. In the eight-year period ended June 30, 1966, the state wholesalers increased the number of member societies by three times to 5,648, increased their share capital six times to $4.7 million equivalent, and total assets by over ten times to $64.0 million equivalent.

5.16 The number of local sholesalers has increased in the eight year period ended June 30, 1966 by over 50 percent to over 3,000. Membership has increased from 19,000 retailers to over 140,000 and individual membership increased from 500,000 to 22 million.

5.17 Retailers were set up originally to supply credit but now also supply fertilizer, pesticides, seeds and consumer goods. The state cooperative leaders are reducing the number of existing retail credit and fertilizer societies so that each can afford a full-time manager and make a small profit, or in other words become viable. In the ten-state IFFCO market area, the state cooperative leaders plan to reduce the 136,000 societies which were in existence in 1966/67 to 85,000 viable societies by 1973/74.

Transportation

5.18 Only five percent of IFFCO's production will be sold within 500 miles of IFFCO's plants. About 30% will be sold between 500 to 1,000 miles away and the balance (65%) will be marketed over 1,000 miles from the plant. As a result, it will be economical to ship only 5% of IFFCO's production by truck; the balance should go by railroad.

5.19 Both meter and broad gauge rail lines serve the Ahmadabad areas. A meter gauge rail line presently serves the Kandla Port, and a broad gauge line is expected to be completed during 1970. Existing meter gauge and broad gauge lines service almost all IFFCO's potential wholesalers without changing shipments to from one gauge to another or to trucks.

* These retailers presently have full time managers.

5.20 India has sufficient freight cars to meet the total aggregate demand and is exporting locally manufactured freight cars. However, the Gujarat area may not receive as many covered freight cars as are needed to transport goods out of the state. Covered freight cars are considered necessary by most fertilizer manufacturers to protect fertilizer from pilferage and moisture. 9/ CFI's Marketing Advisor and officers of the Indian Railway Board believe that open rail cars probably can be covered satisfactorily during the dry season. The Railway Board expects to be able to supply sufficient covered rail cars during the monsoon season.

5.21 The Railway Board has a policy of providing rail cars for the oldest orders first. Since the rail lines in Gujarat may be sufficient to handle the projected traffic, 10/ IFFCO will not experience shipment bottlenecks of more than a week's production. However, rail cars are likely to be supplied irregularly (as Coromandel Fertilizers Ltd., has experienced) and IFFCO probably will need facilities and labor to load 2-3 days' production in any 12-hour period.

5.22 The IFFCO Market Study team had recommended that distribution in the three southern states in the market area, Mysore, Madras and Andhra Pradesh, be reallocated to Punjab, Gujarat and Maharashtra, due to administrative difficulties, problems of competing on price, and lack of shipping facilities. If the 15 percent of IFFCO's product were reallocated from the three southern states to Punjab (the only state able and willing to put up the share capital necessary) "the saving to IFFCO would amount to $191,000 or about $1.36 per ton". 11/ However, IFFCO believes "This does not appear to be an overly significant amount when compared to the value IFFCO may someday receive by serving a large area in India, or if compared to the problems which may arise if IFFCO does not recognize its legal responsibilities to service its owner membership". 11/ IFFCO's reasoning is acceptable since the

9/ Arthur D. Little: Proposed Urea Project in Goa, India - Market Feasibility and Suggested Marketing Plan. Boston, December 1967.

10/ Market Study. op.cit. pages 145-146

11/ Market Program, op.cit. Page 21.

extra cost of serving the southern three states is less than the value of one day's production, and the benefits of broadening the (a) market, (b) sources of capital, and (c) political base are appreciable.

Storage

5.23 Throughout the ten-state market area an additional 25,000 village level (retail) societies will need a total of at least one million metric tons of storage and possibly as much as 1.6 million metric tons to meet the probable total storage requirement for all cooperative fertilizer sales. Sufficient owned storage is available at the remaining 10,000 cooperatives. The GOI and states would need to make available to the cooperative structure $14.9 to $28.8 million equivalent in capital to cover the deficiency in storage. Cooperative storage has been expanding rapidly, but may not be sufficient to store all of the fertilizer sold by cooperatives. However, considering (a) the proposed contractual obligation of IFFCO's members to provide storage 12/, (b) the fact that the cooperatives have the capacity to store five times the weight of fertilizer which IFFCO plans to produce 13/, and (c) IFFCO's fertilizer will probably have the lowest net cost and best field service of any competitor; therefore, the cooperatives will make sufficient storage available for IFFCO's fertilizer.

5.24 Nearly two-thirds of the demand for fertilizer in most of the ten-state market area is concentrated in the four-month summer season (the time of the monsoon). To help IFFCO avoid transportation, administrative and storage bottlenecks which might arise in delivering eight months' production in four months the study team recommended "deliveries at one-twelfth of the annual supply each month". 14/ IFFCO and its members and CFI's Marketing Advisor have argued that the delivery pattern should be more flexible due to probable fluctuations in production and regional differences in

11/ Market Program, op.cit. Page 21

12/ Marketing Letter of Understanding, op.cit., Section 3(a).

13/ Market Study, op.cit. pp. 160-161.

14/ Ibid. page 19.

in demand. IFFCO has worked out an acceptable alternative which is to provide off-season discounts as an economic incentive to even out fertilizer purchases and a contractual obligation to make plans mutually $1\frac{1}{2}$ months in advance for delivery of fertilizers. Past experience with the U.S. and Indian cooperatives indicates that off-season rebates can significantly help induce wholesalers to buy fertilizer as it is produced.

Credit 15/

5.25 IFFCO is directly concerned with the credit that the cooperative system has available to purchase fertilizer on a wholesale basis. The apex societies must put up 10 percent of the purchase price of the fertilizer and borrow the balance from commercial banks and state cooperative banks. By 1973/74 the state apex marketing societies will probably need to increase their equity to $27.0 million equivalent to allow the societies to increase their borrowing base which is presently $4.0 million equivalent. The apex societies are trying to obtain more share capital primarily from the state governments. IFFCO's fertilizer will be the cheapest available to the member cooperatives because it will be manufactured from the cheapest feedstock, using the latest technologies and sold essentially on non-profit basis. Therefore, the available credit will be used first to purchase IFFCO's fertilizer - and thereafter from competitors.

5.26 The retailers finance the lending of fertilizer to the farmers with the retailers own funds and credit from the local cooperative banks. The banks in turn obtain funds from the Reserve Bank of India through the state cooperative banks. When the fertilizer is sold to farmers, the state wholesalers are given credit for fertilizer sold and the loans for the fertilizer sold by IFFCO to the state wholesalers are repaid from the proceeds of cash sales or by loans to the farmers.

5.27 At least one-third of the fertilizer purchased by farmers may need to be financed by institutional credit. The cooperatives

15/ Ibid. Facts and conclusions from "Credit", Chapter X.

have been and probably will continue to be the primary source. Total loans advanced by retail societies throughout India increased from $31 million equivalent in 1950/51 to $480 million equivalent in 1966/67. The need for cooperative credit by 1973/74 may more than double. The retailers meet most of the retail credit needs by borrowing from cooperative banks, but these borrowings are limited to 10-20 percent of the value of the banks' shares held by the retailers. The share capital of the banks will need to about double from the $102 million equivalent paid in as of June 30, 1967 to increase the borrowing base. If the capability of the cooperative system to make loans is less than the demand for loans, consumption of fertilizer may be held back because farmers may have no alternative institutional sources available. Recent interviews with agricultural officers of major Indian banks revealed that under 15,000 farmers presently borrow directly from banks for short term agricultural purposes. Credit for retail sales of fertilizer directly or indirectly from fertilizer manufacturers is limited by their already strained financial resources. However, the cooperative system in the ten-state IFFCO market area is presently supplying sufficient credit to finance credit sales of two-times the value of IFFCO's fertilizer.

Marketing Program

5.28 Based on the information provided by the Market Study, IFFCO's management and Board of Directors have agreed to (1) hire sufficient staff (over 500 field representatives) to call every month on each village (retail) society selling IFFCO's fertilizer, (2) restrict the number of districts in which IFFCO's fertilizer is sold to 57 specific districts, and (3) carry out a seeding program as follows: 45,000 tons in 1969/70, 108,000 tons in 1970/71, 200,000 tons in 1971/72, 400,000 tons in 1972/73. The field representatives would be trained by IFFCO to identify local problems, suggest solutions and stimulate the retailers selling efforts during the seeding program and thereafter.

5.29 IFFCO's Marketing Program carries out the spirit of the recommendations of the market study and will be designed to (a) accomplish "efficient distribution", (b) develop "a strong cooperative distribution system capable of withstanding competition", (c) contribute a "farmer education program", and (d) "assist in the training of sales point personnel in salesmanship, service and sound management practices".

Conclusion

5.30 IFFCO's chances for success will be high if IFFCO carries out its Marketing Program as planned. The member cooperatives have proven their ability to purchase, store, sell and provide credit for substantially more fertilizer than IFFCO will produce. Marketing Program provides by far the largest program of customer service and lowest prices(effectively selling at cost which will be the lowest in the industry) compared to plans of the other fertilizer companies which will be competing with IFFCO in the early 1970's.

VI. FINANCIAL ANALYSIS

Total Costs of the Project

6.1 The total capital costs of the project are as follows:

(000,000)

	Foreign Exchange	Local Currency	Total
Ammonia Plant	$ 14.0	$ 8.0	$ 22.0
Urea Plant	8.8	6.0	14.8
NPK Plant	3.2	3.7	6.9
Offsites - Kalol	5.7	11.3	17.0
Offsites - Kandla	1.8	10.8	12.6
Additional Costs	0.9	5.3	6.2
Escalation	3.1	5.4	8.5
Contingency	1.9	2.5	4.4
Sub-Total Construction Costs	$ 39.4	$ 53.0	$ 92.4
Interest during Construction	6.3	2.7	9.0
Financing Costs	1.0	0.7	1.7
Pre-startup Costs	1.3	4.2	5.5
Initial Working Capital	---	3.4	3.4
TOTAL	$ 48.0	$ 64.0	$ 112.0

The item "Additional Costs" is made up of offsite costs identified by IFFCO and CFI after the initial estimates had been made by an independent U. S. chemical engineering firm. (See paragraph 3.12). The Escalation and Contingency line items were arrived at after careful consideration and calculation of both U. S. and Indian cost indices and their trends. The initial working capital item of $3.4 million will be supplemented by a $4.0 million short-term line of credit which will be repaid during the second year of operations. (See the Source and Application of Funds Projections - Annex V B). Thereafter cash buildup is more than sufficient to meet working capital requirements.

Financial Plan

6.2 The financial plan for the project is as follows:

(000,000)

	Foreign Exchange	Local Currency	Total
Equity (32%)			
IFFCO Members		$ 12.0	$ 12.0
GOI	---	24.0	24.0
Total Equity		$ 36.0	$ 36.0
Debt (68%)			
GOI Loan		28.0	28.0
AID Loan	$ 15.0		15.0
US Institutions			
Early Maturities	3.3		3.3
Late Maturities	29.7		29.7
Total Debt	$ 48.0	$ 28.0	$ 76.0
Grand Total	$ 48.0	$ 64.0	$ 112.0

Use of Funds

6.3 The funds raised in India through the sale of common stock to the GOI and the Indian Cooperatives and the GOI loan will be used to finance the local costs of the project. The AID Development Loan and the U. S. Institutional Loan will be used exclusively to finance U. S. procurement.

AID Guaranty

6.4 The late maturities of the U. S. Financial Institutions loan ($29,700,000) will be covered by an AID extended risk guaranty. This amount constitutes 66% of the private investment (the remaining $3,300,000 of the U. S. Financial Institutions Loan and the equity to be invested by IFFCO members) and 26.5% of the total aggregate investment for the project. Specific risk guaranties have been applied for to cover the early maturities of the U. S. Financial Institutions loan.

Equity

6.5 One-third of the equity will be purchased by Indian cooperative societies. A significant amount of this $12.0 million in equity has already been paid in. The GOI will underwrite the scheduled pay-in of this equity. The other two-thirds of the equity will be purchased by the GOI and will be redeemed after all the loans have been repaid leaving the Indian cooperatives the sole owners of the project. (See paragraph 2.5 for a discussion of voting control of IFFCO.) No dividend policy has been established and the projections do not include any dividends. Were any dividends to be paid, they would be limited by the Indian cooperative law to a six percent dividend on the equity or $2.16 million equivalent annually.

Debt

6.6 GOI Loan. The Government of India loan will be repayable beginning March 31, 1974 and ending September 30, 1984 in 22 equal semi-annual installments. Interest will be at 7 1/2 percent per annum and will be capitalized during construction. Both interest and principal will be repayable in rupees.

6.7 AID Loan. The AID Loan will be a two-step loan with AID lending the money to IFFCO which will repay the GOI on commercial terms and the GOI will repay AID on development loan terms. IFFCO will pay the GOI in Indian rupees interest at 8 1/2 percent per annum and principal in 22 equal semi-annual installments beginning March 31, 1974 and ending September 30, 1984. The GOI will repay AID in U. S. dollars over 40 years including a 10 year grace period with interest at 2 percent for the first 10 years and 3 percent thereafter.

6.8 Institutional Loan. The Institutional Loan totalling $33.0 million will be divided into early maturities totaling $3.3 million and late maturities totalling $29.7 million. The financing arrangements for the loan, which are being made by the Bank of America, have not been completed. The Bank of America expects to complete these arrangements when market conditions permit. Interest rates of 8 3/4 percent for the early maturities and 8 1/2 percent for the late maturities have been used in the projections. Also included in the projections is AID's ERG fee of 1/2 percent on the late maturities and AID's SRG fee of 1 1/8 percent on the early maturities. Repayment of the early maturities will begin March 31, 1974 and end March 31, 1975 at which time repayment of the late maturities will begin with the last payment of the late maturities due September 30, 1984. The U.S.G.'s ERG obligation ($29.7 million) on the Institutional Loan will be guaranteed by the GOI and the balance ($3.3 million) of the Institutional Loan will be guaranteed by the GOI directly to the lenders.

Overrun Agreement

6.9 An overrun agreement that will be satisfactory to both AID and the U. S. financial institutions is now being negotiated with the GOI and IFFCO.

Financial Soundness

6.10 The pro forma ratio statement (Annex V A) shows debt service ratios ranging from 1.23 to 2.47 times debt service requirements for the first five years of operations, subsequently the debt service ratio declines to 0.96 until debt is paid off. These lower ratios in the cash build-up in excess of $75 million which is more than adequate to cover any debt service requirements. This cash build-up has been projected without the payment of dividends; but even if dividends were to have been paid consistently at the legal rate of 6 percent on equity or $2.16 million per year over ten years for a total of $31.6 million, this would still leave a cash build-up in excess of $60 million. The lower debt coverage ratios are the result of the reduction in the selling price which is reduced in the fourth year of operations to 90 percent of the original selling price and then further reduced until it is 70 percent of the original price (10% below present prices) in the ninth year. These price reductions, which would benefit the IFFCO members in that it avoids dividend and corporate profit taxes, will not be permitted under provisions of the AID loan agreement if higher selling prices are required to service the debt. In spite of the projected decline in the debt service ratio the project should be able to repay all debts.

6.11 The balance sheet shows continuous improvement in all of the financial ratios reflecting the company's condition (with the exception of the debt service ratio mentioned above.) The current ratio improves from 1.08 to 5.64 the fourth year of operations and continues to improve until it is in excess of 10.0 in the eighth year of operations. The long-term debt to equity ratio shows a substantial and healthy decline from 2.28/1.00 to 1.00/1.00 in the fifth year of operations. The projections indicate that a 30 percent price reduction (the price level reached in 1981) brings operations close to the breakeven point. The project from the point of view of the IFFCO members shows a substantial growth of their initial investment of $12 million which increases to $84 million in 1985 provided no dividends are paid. In addition to this growth in their investment the members of IFFCO are expected to enjoy substantial reduction in fertilizer prices as mentioned above.

VII. IMPLEMENTATION

7.1 Overall Responsibility and Authority for Construction, Start-up and Operation

CFI has and will continue to lead the planning, negotiations and construction arrangements involving the proposed plants at Kandla and Kalol. However, IFFCO management has been and will be involved as much as possible to give them experience, utilize their knowledge and assure IFFCO's Board of Directors that CFI is not making imprudent decisions. IFFCO and CFI have agreed that as CFI's chief representative in India, the Operations Manager will be vested with all powers necessary for the installation, operation, and maintenance of the plant.1/ The only limitations on this authority are: (a) If differences of opinion on any plant-related matter arise between the Operations Manager and Managing Director, then a Special Committee of a nominee of the U.S. lenders, a nominee of the Board of Directors, the Managing Director and the Operations Manager shall be convened to consider the problem. If the Special Committee cannot arrive at an agreement, 75 percent of the Board of Directors may pass a resolution which will be binding. Until either the Special Committee or Board of Directors decide, the Operations Manager's decision shall continue.2/ However, CFI is the sole decision maker as to the direction of expatriate assistance for up to five years after completion of start-up tests and acceptance of the plant by IFFCO; thereafter CFI loses its powers, but at its option may provide advisory personnel for three more years.3/ (b) The Operations Manager cannot obligate IFFCO to more than $333,000 in any one transaction.4/ (c) The Operations Manager may hire personnel only within the personnel policy (including salaries) of the Board of Directors, and can only recommend candidates who might receive salaries of over $167 equivalent per month.5/ However, no man can be hired for plant positions paying more than $167 without the express concurrence of the Operations Manager. The foregoing restrictions on CFI's action were made with the approval of CFI and AID representatives to allow IFFCO's Board to carry out its legal responsibilities to protect the investment of IFFCO's shareholders.

1/ "Agreed Minutes of Meetings between Representatives of CFI and IFFCO held on January 13, 14, 15 and 21, 1969" Paragraph 1.
2/ "Cooperation Agreement," op. cit., Sections 3.2 through 3.4.
3/ Ibid, Section 7.2.
4/ Delegation of Authority to Operations Manager.
5/ "Agreed Minutes" op. cit., Paragraph 4.

7.2 Contracting Procedure

(a) Ammonia Plant (Kalol)

IFFCO and CFI recommend that IFFCO negotiate a contract with M. W. Kellogg Company (Kellogg) for an exact duplicate of Kellogg's second 910 MT/D ammonia unit installed for Central Farmers Fertilizer Company at Donaldsonville, Louisiana. A less satisfactory alternative would be to have competitive proposals from contractors who can supply an off-the-shelf 910 MT/D ammonia plant with minimum engineering expenditures.

(b) Urea Plant (Kalol)

IFFCO and CFI have concluded that the Stamicarbon (Dutch) and Toyo (Japanese) processes are desirable. However, the license fee (approximately $0.7-1.2 million equivalent) payable to either the Dutch or the Japanese licensor cannot be paid out of dollar loan proceeds. The GOI has indicated that it may be willing to provide sufficient free foreign exchange for this purpose.6/ A number of U.S. contractors are licensees of these two processes.

(c) NPK Plant (Kandla)

CFI and IFFCO believe that both Dorr-Oliver and Wellman-Lord are qualified to build the NPK plant at Kandla. It is useful to note that Dorr-Oliver has the contract for the Madras Fertilizers, Ltd. NPK facility now under construction and that Wellman-Lord had the contract for the now successfully operating Coromandel Fertilizers, Ltd. NPK plant.

7.3 Duplication of Central Farmers' Donaldsonville No. 2 Ammonia Plant would result in the greatest assurance of rapid start-up, reliable operation at rated capacity and maximum return on investment. The Donaldsonville No. 2 plant started up in 16 days which is believed to be a record for any centrifugal-compressor plant. Start-up periods of ammonia plants usually take one to six months. Every day which IFFCO loses in production is a loss of $250,000 equivalent in sales. Kellogg has indicated that shop drawings

6/ Should free foreign exchange be allocated by the GOI for the license fee for one of these non-U.S. processes, the estimated capital costs set forth in paragraph 6.1 would show a shift from dollar to rupee costs in the amount of the fee in question. The ERG dollar loan input would be correspondingly less.

with welding specifications and piping isometrics for the Donaldsonville No. 2 plant may be purchasable at a cost of about $50,000. A new ammonia plant design would entail from 100,000 to 200,000 man-hours of engineering while an off-the-shelf unit should need only 30,000 engineering man-hours for adaption to conditions at the Indian site. Assuming a rate of $20 per man-hour for salaries, fringe benefits, and overhead, foreign exchange savings of $1.4-3.4 million may be realized. If shop drawings are available immediately after a construction award is made, the Indian Directorate General of Technical Development can determine more readily which components must be purchased in India. Key IFFCO staff could be efficiently trained at the duplicate U.S. plant. Central Farmers has stated that if it were now to build another ammonia plant of this type, it would be an exact duplicate of the Donaldsonville No. 2 plant, and Central Farmers would again negotiate with Kellogg for the engineering and construction work.

7.4 Form of Contracts

CFI recommends that the prices for prime contracts should be based on the following plan:

(a) Home office engineering and contractor's fee: fixed price with license fees to be broken out.

(b) U.S. process equipment: guaranteed maximum price, f.a.s. U.S. port, with sharing of savings below the maximum or lump sum.

(c) Indian equipment and engineering: guaranteed maximum or lump sum as developed by discussions.

(d) Expatriate requirements for field procurement, construction management, inspections and expediting in India, and plant start-up: guaranteed maximum price with shared savings.

(e) Special erection tools imported or available locally: guaranteed maximum.

(f) Field construction labor: reimbursable at direct cost including fringe benefits, subject to customer review and control.

(g) All sub-contracts at cost subject to customer review and control.

The guaranteed maximum portion will contain a provision for sharing all underruns. Overruns, if any, will be for the contractor's account. Contractors must warrant utility consumption. As an example of the effectiveness of this form of contract, the Donaldsonville No. 2 ammonia plant was reportedly completed with an underrun of about $1.0 million below the guaranteed maximum price. The savings were shared 65 percent by Central Farmers and 35 percent by Kellogg.

7.5 A.I.D.'s Rights of Approval

A.I.D. will have the right to approve all contract terms of all contracts and major sub-contracts and all major contracting firms which supply engineering or construction services. All contracts for this project will conform to the applicable A.I.D. regulations except as discussed below. A.I.D. believes that sub-contracts with Indian engineering firms should not be imposed upon unwilling U.S. contractors, but reasonable incentives to such sub-contracting may be acceptable.

7.6 Waiver of M.O. 1443.1 (III) (D) will be considered in order to permit a single engineer-constructor to construct the ammonia plant, and perhaps the urea plant. This waiver would be granted for the following reasons:

(a) In this type of project the processes and structures are so interwoven that they are beyond the capacity of the usual separate engineer and contractor combination. This fact has been borne out by the experiences of both A.I.D. and Central Farmers with its Donaldsonville No. 2 plant. CFI has urged A.I.D. to seek this waiver.

(b) The unified responsibility enables the contractor to provide meaningful guarantees. It alone has the responsibility to see that the buyer receives in all respects a plant that works as it should.

(c) There will be a saving of time. If problems do arise, valuable time and effort will not be wasted in attempting to determine who is at fault. In addition, the solutions thereof will not be delayed by difficult communications between engineer and contractor. This time savings, as was pointed out above, is translated directly into substantial savings on the part of the buyer.

(d) The disadvantages normally associated with this type of arrangement are obviated by the fact that CFI can bring to bear the considerable skill and experience of the U.S. Coop movement in the planning, construction and operation of this type of facility. CFI will not be a supplier or contractor on any part of the project.

7.7 Waiver of M.O. 1443.2. In addition to the above waiver, A.I.D. is considering a proposal to waive the normal competitive (a) bidding and negotiation in the case of the ammonia unit, and (b) bidding in the case of the urea and NPK facilities. Kellogg is the only potential ammonia contractor with more than one identical sized plant to its credit, and the only contractor with complete process unit design capability. A main reason for competitive bidding on a construction contract is to make sure that the buyer gets a fair price. In the IFFCO situation there is little chance of an unfair price because CFI has available a detailed cost breakdown of the Donaldsonville No. 2 plant which can be adjusted for the differences in time and place to insure that a fair price is negotiated for this plant. Based on the experience of the U.S. cooperative fertilizer manufacturers, competitive negotiations for the urea and NPK plants may require only three to four months, as opposed to six to twelve months for competitive bidding. Bank of America, for itself and as a fiscal agent for other U.S. financial institutions, has indicated that the negotiation procedure outlined above will be acceptable and the most beneficial procurement alternative to the project. Initial indications are that the GOI concurs with Bank of America.

7.8 Schedule. IFFCO proposed the following draft construction schedule:7/

Major Activity	Completion from Time of Contracting-Years
Railway - Kandla	1.9
DAP/NPK Plant	
Process Design	0.5
Foundations	1.7
Plant and Equipment (av)	2.8
Offsites - Kandla (av)	2.8
Railway - Kalol	2.2
Ammonia Plant	
Foundations	1.7
Piping, Electricals and Instruments	3.2
Plant and Equipment	2.3
Urea Plant	
Foundations	1.8
Piping	3.2
Prill Tower	3.0
Compressor and Reactor (av)	2.2
Offsites - Kalol	2.9

A bar chart showing these various steps is attached as Annex VII A.

7/ "Project Schedule," December 9, 1968.

VIII. IMPACT ON THE U.S. ECONOMY

8.1 All equipment and services financed by the loan will be from U.S. sources. Substantial follow-on purchases in the U.S. are expected: it is estimated that the foreign exchange requirements, predominantly from the U.S., of maintenance spares, catalysts and chemicals will be about $1 million per year.

8.2 Repayment prospects are good. Since securing its independence in 1947 India has faithfully met the payments of interest and principal on its international obligations. The ability of the GOI to repay the loan ultimately depends upon the rate of its economic development, the growth of the country's exports and its foreign exchange earnings.

8.3 There will be some marginal competition between this project and other Indian fertilizer companies in which U.S. companies own minority interests. However as indicated in paragraphs 4.6 and 4.11 for the foreseeable future the all Indian supply/demand projection indicate a shortfall in domestic production.

8.4 India currently imports a substantial amount of fertilizer from the U.S., much of it AID financed. Fertilizer produced by this project will replace such U.S. exports. Because of raw material costs and transportation charges, however, the U.S. would not export significant quantities of finished fertilizer to India if it were not AID financed. In other words, the project does not prejudice any U.S. trade which would improve the U.S. balance of payments.

IX. ISSUES

9.1 The major issues investigated by AID in its review of the project are listed below. None is considered to be an impediment to loan or guarantee authorization. The paragraphs of this paper in which each issue is discussed appear beside the listing of the issue.

Issues	Discussed in Paragraphs
Voting Control of IFFCO with Member Coops not with GOI.	2.9 -2.13Annex II B
Availability of Raw Material and Utilities	3.8 -3.13
Competition	5.5
Transportation	5.18-5.22
Credit	5.25-5.27
Debt Coverage	6.10
Overrun Provision	6.9
Imported Phos acid versus Domestic Phos Rock	4.12-4.14
Contracting Methods	7.4-7.7

AID-DLC/P-851

ANNEX I-A

June 19, 1969

CHECKLIST OF STATUTORY CRITERIA
DEVELOPMENT LOAN

I. COUNTRY PERFORMANCE

A. Progress Towards Country Goals

1. FAA Secs. 201(b)(5), 201(b)(7), 201(b)(8), 208. Discuss the extent to which the country is:

(a) Making appropriate efforts to increase food production and improve means for food storage and distribution.

India is undertaking a high priority program for foodgrains production and is giving increasing attention to food storage and distribution.

(b) Creating a favorable climate for foreign and domestic private enterprise and investment.

India is endeavoring to take steps in this direction.

(c) Increasing the people's role in the developmental process.

India has a democratic form of government and encourages citizen participation in development through processes such as cooperatives, panchayats and the working of its democratic political system.

(d) Allocating expenditures to development rather than to unnecessary military purposes or intervention in other free countries' affairs.

India has a major commitment to development and does not so intervene.

(e) Willing to contribute funds to the project or program.

A substantial amount of the local costs of this project will be contributed by the Government of India.

The following abbreviations are used:

FAA Foreign Assistance Act of 1961, as amended.

APP. Foreign Assistance and Related Agencies Appropriation Act, 1968.

(f) Making economic, social and political reforms such as tax collection improvements and changes in land tenure arrangement; and making progress toward respect for the Rule of Law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise.

The GOI has made substantial efforts towards economic and social reforms. It has undertaken devaluation and liberalization measures. An Administrative Reforms Commission has been appointed and an AID/IRS tax assistance project has just been completed. India's adherence to the maintenance of the Rule of Law, individual freedom and freedom of expression and of the press is well recognized. Private initiative and enterprise are also regarded as having an important place in Indian economic development and democracy.

(g) Responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures.

India has been in the forefront of developing countries in responding to economic and social concerns of its peoples. Important self-help measures in particular have been taken in agriculture. Democratic processes of government provide a means of responding to political concerns.

B. Relations with the United States

1. FAA Sec. 620(c). Is the government indebted to any U.S. citizen for goods or services furnished or ordered where: (a) such citizen has exhausted available legal remedies, including arbitration, or (b) the debt is not denied or contested by the government, or (c) the indebtedness arises under such government's, or a predecessor's unconditional guarantee?

India is not ineligible under this section.

2. FAA Sec. 620(d). If the loan is intended for construction or operation of any productive enterprise that will compete with U.S. enterprise, has the country agreed that it will establish appropriate procedures to prevent export to the U.S. of more than 20% of its enterprise's annual production during the life of the loan?

Yes, see Section 4.06 of the Special Loan Repayment Procedure Agreement.

3. FAA Sec. 620(c)(1). Has the country's government, or any agency or subdivision thereof, (a) nationalized or expropriated property owned by U.S. citizens or by any business entity not less than 50% beneficially owned by U.S. citizens, (b) taken steps to repudiate or nullify existing contracts or agreements with such citizens or entity, or (c) imposed or enforced discriminatory taxes or other exactions, or restrictive maintenance or operation conditions? If so, and more than six months has elapsed since such occurrence, identify the document indicating that the government, or appropriate agency or subdivision thereof, has taken appropriate steps to discharge its obligations under international law toward such citizen or entity? If less than six months has elapsed, what steps if any has it taken to discharge its obligations?

India is not ineligible under this section.

4. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property, and failed to take appropriate measures to prevent a recurrence and to provide adequate compensation for such damage or destruction?

No.

5. FAA Sec. 620(l). Has the government instituted an investment guaranty program under FAA Sec. 221(b)(1) for the specific risks of inconvertibility and expropriation or confiscation?

India has instituted the program.

6. FAA. Sec. 620(o). Fisherman's Protective Act of 1954, as amended Section 5. Has the country seized or imposed any penalty or sanction against, any U.S. Fishing vessel on account of its fishing activities in international waters? If, as a result of a seizure, the U.S.G. has made reimbursement under the provisions of the Fisherman's Protective Act and such amount has not been paid in full by the seizing country, identify the documentation which describes how the withholding of assistance under the FAA has been or will be accomplished.

India is not ineligible under this section.

7. FAA Sec. 620(q). Has the country been in default, during a period in excess of six months, in payment to the U.S. on any FAA loan?

No.

8. FAA Sec. 620(t). Have diplomatic relations between the country and the U.S. been severed? If so, have they been renewed?

No.

9. App. Sec. 106. Describe any attempt made by the country to create distinction because of race or religion in granting personal or commercial access or other rights otherwise available to U.S. citizens generally.

India does not attempt to create such distinctions.

C. Relations with Other Nations and the U.N.

1. FAA Sec. 620(i). Has the country been officially represented at any international conference when that representation included planning activities involving insurrection or subversion directed against the U.S. or countries receiving U.S. assistance?

No.

2. FAA Secs. 620(a), 620(n); App. Sections 107 (a), 107(b), 116. Has the country sold, furnished, or permitted ships or aircraft under its registry to carry to Cuba or North Viet-Nam items of economic, military, or other assistance?

No.

3. FAA Secs. 620(u); App. 114. What is the status of the country's U.N. dues, assessments, or other obligations? Does the loan agreement bar any use of funds to pay U.N. assessments, dues, or arrearages?

There is no such delinquency. Funds will not be used for the U.N. dues etc

D. Military Situation

1. FAA Sec. 620(i). Has the country engaged in or prepared for aggressive military efforts directed against the U.S. or countries receiving U.S. assistance?

No.

2. FAA Sec. 620(s). What is (a) the percentage of the country's budget devoted to military purposes, and (b) the amount of the country's foreign exchange resources used to acquire military equipment? Is the country diverting U.S. development assistance or P.L. 480 sales to military expenditures. In the country diverting its own resources to unnecessary military expenditures? (Findings on these questions are to be made for each country at least once each fiscal year and, in addition, as often as may be required by a material change in relevant circumstances).

(a) 23 per cent of budget.

(b) Data not available.

India is not diverting U.S. development assistance or P.L. 480 sales to military expenditures. India is not diverting its resources to unnecessary military expenditures to a degree which would materially affect its development.

3. FAA Sec. 620(v); App. Sec. 119. Has the country spent money for sophisticated weapons systems purchased since the statutory limitations became effective? If so, identify either (a) the documentation which describes how the withholding of an equivalent amount of A.I.D. assistance has been or will be accomplished, or (b) the Presidential determination that such purchase is important to the national security of the U.S. so that no withholding is necessary.

India has spend no such money.

II. CONDITION OF THE LOAN

A. General Soundness

-- Interest and Repayment

1. FAA Secs. 201(d), 201(b)(2). Is the rate of interest excessive or unreasonable for the borrower? Are there reasonable prospects for repayment? What is the grace period interest rate; the following period interest rate? Is the rate of interest higher than the country's applicable legal rate of interest?

The rate of interest is reasonable for India. India is considered to have the capacity to repay the loan. The interest rate during the grace period is 2% and thereafter 3%.

Financing

1. FAA Sec. 201(b)(1). To what extent can financing on reasonable terms be obtained from other free-world sources, including private sources within the U.S.?

Such financing not reasonably available from other sources in the magnitude required to complete the project.

Economic and Technical Soundness

1. FAA Secs. 201(b) (2), 201(e). The activity's economic and technical soundness to undertake loan; does the loan application, together with information and assurances, indicate that funds will be used in an economically and technically sound manner?

Yes.

2. FAA Sec. 611(a)(1). Have engineering, financial, and other plans necessary to carry out assistance, and a reasonably firm estimate of the cost of assistance to the U.S., been completed?

3. FAA Sec. 611(b); App. Sec. 101. If the loan or grant is for a water or related land-resource construction project or program, do plans include a cost-benefit computation? Does the project or program meet the relevant U.S. construction standards and criteria used in determining feasibility?

Not applicable.

4. FAA Sec. 611(e). If this is a Capital Assistance Project with U.S. financing in excess of $1 million, has the principal A.I.D. officer in the country certified as to the country's capability effectively to maintain and utilize the project.

Yes. See Annex IC

B. Relation to Achievement of Country and Regional Goals

-- Country Goals.

1. FAA Secs. 207, 281(a). Describe this loan's relation to:

(a) Institutions needed for a democratic society and to assure maximum participation on the part of the people in the task of economic development.

(b) Enabling the country to meet its food needs, both from its own resources and through development, with U.S. help, of infrastructure to support increased agricultural productivity.

(c) Meeting increasing need for trained manpower.

(d) Developing programs to meet public health needs.

(e) Assisting other important economic, political, and social development activities, including industrial development; growth of free labor unions; cooperatives and voluntary agencies; improvement of transportation and communication systems; capabilities for planning and public administration urban development; and modernization of existing laws.

The loan will be consistent with these objectives and is related to an emphasis on self-help in meeting India's food needs. The project should improve the availability of trained manpower and assist development of Indian cooperatives.

2. FAA Sec. 201(b)(4). Describe the activity's consistency with and relationship to other development activities, and its contribution to realizable long-range objectives.

The project is closely related with India's other developmental activities and should make a demonstrable contribution to realizable long-range objectives.

3. FAA Sec. 201(b)(9). How will the activity to be financed contribute to the achievement of self-sustaining growth?

The project will contribute to the achievement of self-sustaining growth. See Sections II and IV of the loan paper.

4. FAA Sec. 201(f). If this is a project loan, describe how such project will promote the country's economic development, taking into account the country's human and material resource requirements and the relationship between ultimate objectives of the project and overall economic development.

See Section II, IV and V of the loan paper.

5. FAA Sec. 201(b)(3). In what ways does the activity give reasonable promise of contributing to development of economic resources, or to increase of productive capacities?

The project should do both. See Sections II, III, IV and V of the loan paper.

6. FAA Sec. 281.(b). How does the program under which assistance is provided recognize the particular needs, desires, and capacities of the country's people; utilize the country's intellectual resources to encourage institutional development; and support civic education and training in skills required for effective participation in political processes.

The loan will not make a direct contribution. The project is an essential part of the program to enable free people to feed themselves at an adequate level, which is necessary for healthy democratic private and local government institutions.

7. FAA Sec. 601(a). How will this loan encourage the country's efforts to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions?

(a) Trade would take place between the U.S. and India since all purchases financed from the loan would have their source and origin in the U.S. and be shipped from the U.S.

(b) The loan funds will be used by a private sector Indian cooperative, and purchases will be made from private U.S. firms.

(c) The loans would not necessarily have any direct effect on the development and use of credit unions and savings and loan associations. However, development and use of cooperatives will be encouraged since they will own the project.

(d) The loan will help to discourage monopolistic practices by providing further competition in India's domestic fertilizer industry.

(e) The loan will improve the efficiency of industry, agriculture and commerce as discussed in Sections II, III and V of the loan paper.

(f) The loan might assist free labor unions by fostering economic development and assisting in the reduction of unemployment.

8. FAA Sec. 202(a). Indicate the amount of money under the loan which is: going directly to private enterprise; going to intermediate credit institutions or other borrowers for use by private enterprise, being used to finance imports from private sources; or otherwise being used to finance procurements from private sources.

The loan funds would be used by the private cooperative sector in India, and purchases would be made from private U.S. firms thru normal commercial channels.

9. FAA Sec. 611(a)(2). What legislative action is required within the recipient country? What is the basis for a reasonable anticipation that such action will be completed in time to permit orderly accomplishment of purposes of loan?

No legislative action is required of India to accomplish the purpose of this loan.

-- Regional Goals

1. FAA Sec. 619. If this loan is assisting a newly independent country, to what extent do the circumstances permit such assistance to be furnished through multilateral organizations or plans?

India is not a newly independent country. Assistance to India from the developed countries of the Free World is coordinated through a consortium.

2. FAA Sec. 209. If this loan is directed at a problem or an opportunity that is regional in nature, how does assistance under this loan encourage a regional development program? What multilateral assistance is presently being furnished to the country?

This loan is not for a regional development program. Assistance to India is coordinated through a consortium of the free world developed countries.

C. Relation to U.S. Economy.

-- Employment, Balance of Payments, Private Enterprise

1. FAA Secs. 201(b)(6); 102, Fifth. What are the possible effects of this loan on U.S. economy, with special reference to areas of substantial labor surplus? Describe the extent to which assistance is constituted of U.S. commodities and services, furnished in a manner consistent with improving the U.S. balance of payments position.

All purchases financed from the loan would have their source and origin in the U.S. Areas of substantial labor surplus in the U.S. may benefit.

2. FAA Secs. 612(b), 636(h). What steps have been taken to assure that, to the maximum extent possible, foreign currencies owned by the U.S. and local currencies contributed by the country are utilized to meet the cost of contractual and other services, and that U.S. foreign-owned currencies are utilized in lieu of dollars?

India is satisfying these sections.

3. FAA Sec. 601(d); App. Sec. 115. If this loan is for a capital project, to what extent has the Agency encouraged utilization of engineering and professional services of U.S. firms and their affiliates? If the loan is to be used to finance direct costs for construction, will any of the contractors be persons other than qualified nationals of the country or qualified citizens of the U.S.? If so, has the required waiver been obtained?

The full amount of the loan will be spent for procurement of goods and services from U.S. Private enterprises. Any contracting services by contractors who will not be citizens of either U.S. or India will not be financed under the loan.

4. FAA Sec. 608(a). Provide information on measures to be taken to utilize U.S. Government excess personal property in lieu of the procurement of new items.

The Loan Agreement will contain the appropriate provision.

5. FAA Sec. 602. What efforts have been made to assist U.S. small business to participate equitably in the furnishing of commodities and services financed by this loan?

The procurement procedures to be followed under this loan will permit the equitable participation of U.S. small business.

6. FAA Sec. 621. If the loan provides technical assistance, how is private enterprise on a contract basis utilized? If the facilities of other Federal agencies will be utilized, in what ways are they particularly suitable: are they competitive with private enterprise (if so, explain); and how can they be made available without undue interference with domestic programs?

Loan does not provide technical assistance.

7. FAA Sec. 611(c). If this loan involves a contract for construction that obligates in excess of $100,000, will it be on a competitive basis? If not, are there factors which make it impracticable?

See Section VII of the loan paper.

-- Procurement

1. FAA Sec. 602(a). Will commodity procurement be restricted to U.S. except as otherwise determined by the President?

Yes.

2. FAA Sec. 604(b). Will any part of this loan be used for bulk commodity procurement at adjusted prices higher than the market price prevailing in the U.S. at time of purchase?

No bulk commodity procurement is involved.

3. FAA Sec. 604(e). Will any part of this loan be used for procurement of any agricultural commodity or product thereof outside the U.S. when the domestic price of such commodity is less than parity?

No.

D. Other Requirements.

1. FAA Sec. 201(b). Is the country among the 20 countries in which development loan funds may be used to make loans in this fiscal year?

Yes.

2. App. Sec. 112. Does the loan agreement provide, with respect to capital projects, for U.S. approval of contract terms and firms ?

Not applicable since loan will finance only equipment imports from the U.S.

3. FAA Sec. 620(k). If the loan is for construction of a productive enterprise, with respect to which the aggregate value of assistance to be furnished will exceed $100 million, what preparation has been made to obtain the express approval of the Congress?

The aggregate value of assistance to be furnished is less than $100 million.

4. FAA Secs. 620(b), 620(f); App. Sec. 109(b). Has the President determined that the country is not dominated or controlled by the international Communist movement? If the country is a Communist country (including, but not limited to, the countries listed in FAA Sec. 620(f) and the loan is intended for economic assistance, have the findings required by FAA Sec. 620(f) and App. Sec. 109(b) been made and reported to the Congress?

There is such a determination.

5. App. Sec. 109(a). Will any military assistance, or items of military or strategic significance, be furnished to a Communist nation?

No.

6. FAA Sec. 620(h). What steps have been taken to insure that the loan will not be used in a manner which, contrary to the best interest of the United States, promotes or assists the foreign aid projects of the Communist-bloc countries?

The assistance will not promote or assist such projects or activities.

7. App. Sec. 118. Will any funds be used to finance procurement of iron and steel products for use in Vietnam other than as contemplated by Section 118?

No.

8. FAA Sec. 636(i). Will any part of this loan be used in financing non-U.S.-manufactured automobiles? If so, has the required waiver been obtained?

No.

9. FAA Secs. 620(a)(1) and (2), 620(p); App. Sec. 117). Will any assistance be furnished or funds made available to the government of Cuba or the United Arab Republic?

No.

10. FAA Sec. 620(g). Will any part of this loan be used to compensate owners for expropriated or nationalized property? If any assistance has been used for such purpose in the past, has appropriate reimbursement been made to the U.S. for sums diverted?

No.

11. FAA Sec. 201(f). If this is a project loan, what provisions have been made for appropriate participation by the recipient country's private enterprise?

Private Indian cooperatives control the corporation which will own the project.

12. App. Sec. 104. Does the loan agreement bar any use of funds to pay pensions, etc., for persons who are serving or who have served in the recipient country's armed forces?

No such payments to be financed under the loan.

CHECKLIST OF STATUTORY CRITERIA FOR EXTENDED RISK GUARANTY

1. Section 221(a)	The guaranty facilitates private participation in developing the economic resources of a less developed friendly country.
2. Section 221(a)	The guaranteed investment will be made in India, a country which has agreed to institute the Investment Guaranty Program.
3. Section 221(a)	This paper recommends that the Assistant Administrator, Office of Private Resources, who has been delegated this authority, approve the project for guaranty purposes on behalf of the President when a group of eligible investors have agreed to make the U.S. Financial Institutions loan and when satisfactory terms thereof, including interest rates, have been determined.
4. Section 221(a)	The prospective holders of the guaranties shall be Corporations or companies created under the laws of the United States or of States thereof and shall be substantially beneficially owned by U.S. citizens. Any assignee of the guaranty must comply with those criteria for the assignment to be effective.
5. Section 221(b)(2)	This paper recommends to the Assistant Administrator, Office of Private Resources, that he determine, as the authorized representative of the President, that issuance of the guaranty is important to furthering private participation in economic development.
6. Section 221(b)(2)	The guaranty will not cover more than 75% of the aggregate investment in the project.
7. Section 221(b)(2)	The guaranty will not cover any loss arising out of fraud or misrepresentation for which the guaranteed lenders are responsible.
8. Section 221(b)(2)	The guaranty will not bring outstanding guaranty coverage under 221(b)(2) to an amount exceeding $550,000,000, nor coverage for other than housing projects and credit unions to an amount exceeding $390,000,000.

AID-DLC/P-851
ANNEX I C

Certification Pursuant to Section 611(e) of the Foreign Assistance Act of 1961, as amended

I, John P. Lewis, the principal officer of the Agency for International Development in India, having taken into account, among other things, the maintenance and utilization of projects in India previously financed or assisted by the United States, do hereby certify that in my judgment India has both the financial capability and human resources capability to effectively maintain and utilize the capital assistance project, Cooperative Fertilizer Project.

This judgment is based upon:

1. The Capital Assistance Paper, which describes the organization, responsibilities and human resources capabilities of the borrower, the Indian Farmers Fertilizer Corporative Limited (IFFCO), a cooperative society organized under the laws of India,

2. Various agreements between IFFCO and other parties in India and in the U.S. in areas of management, cooperation, obtaining of raw materials etc. all of which have been mentioned in appropriate paragraphs in the Capital Assistance Paper. Some of the important agreements are:

the Cooperation Agreement regarding Plant Construction and Operation dated July 10, 1968 between the IFFCO and the Cooperative Fertilizers International of the U.S. (CFI);

the Letter of Understanding between IFFCO and CFI dated January 27, 1969 regarding the procedures to be applied in carrying out the terms of the Cooperation Agreement; and

Letter of intent (No.I/7(85)/66) to allocate gas to IFFCO dated February 6, 1969 from the Government of India, Ministry of Petroleum and Chemicals,

3. The Raw Materials Economics Study for IFFCO, Kandla, India, dated April 23, 1969 pertaining to the evaluation of alternative phosphatic materials for the complex fertilizer plant at Kandla by Gordon F. Palm & Association, and

4. Report on Gas Supply, Cooperative Fertilizer Project, dated May 26, 1969 by E.E. Miller regarding gas quantity and quality available for IFFCO.

John P Lewis

John P. Lewis
Minister-Director

June 12, 1969

ANNEX I D

AID Loan No.
Cap. Asst. Paper No. AID-DLC/P-851/A Draft
Project No.

Capital Assistance Loan Authorization

Provided from: Development Loan Funds

India: IFFCO Fertilizer Project

Pursuant to the authority vested in the Administrator of the Agency for International Development (hereinafter referred to as "A.I.D.") by the Foreign Assistance Act of 1961, as amended, and the delegations of authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter 2, Title I, the Development Loan Fund, to the Indian Farmers Fertilizer Cooperative Ltd. (hereinafter referred to as IFFCO), a cooperative organized under the laws of India, of not to exceed fifteen million dollars ($15,000,000) for the purpose of building fertilizer manufacturing facilities in India, this loan to be subject to the following terms and conditions:

1. IFFCO will pay the rupee equivalent of the loan to the Indian Government over a fifteen year period. The initial four and one-half years to be a grace period of principal. The interest rate will be eight and one-half (8½%) for repayment on the disbursed balance of the loan. The Indian government will repay the loan in dollars to A.I.D. over a period of forty years. The initial ten years to be a grace period on principal. The interest rate will be two percent (2%) during the grace period, and three percent (3%) for the years thereafter.

2. All equipment, materials and services financed under this loan shall be procured in the United States.

3. The Borrower shall provide satisfactory evidence that the local currency required for the project is available.

4. The Borrower shall obtain a private sector doll loan for the additional foreign exchange funds necessary for the project.

5. The Borrower shall provide evidence that satisfactory arrangements have been made to construct, operate and maintain the Project as planned.

6. The loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

DRAFT June 19, 1969

LOAN AGREEMENT

AGREEMENT, dated the day of , between Indian Farmers Fertilizer Cooperative LTD. ("Borrower"), a corporation organized under the laws or India, and the Agency for International Development ("A.I.D.") an agency of the Government of the United States of America.

ARTICLE I

The Loan

SECTION 1.01. The Loan. Subject to the terms and conditions of this Agreement, A.I.D. agrees to establish a loan to Borrower, pursuant to the Foreign Assistance Act of 1961, as amended, of Fifteen Million Dollars ($15,000,000) (the "Maximum Credit"). A.I.D. will, in accordance with the terms of this Agreement, make Disbursements up to the amount of the Maximum Credit to finance the reasonable foreign exchange costs of goods and services (including transportation) required for the Project and approved in writing by A.I.D. (hereinafter called Eligible Items). The funds so disbursed shall hereinafter be called the "Loan".

As used in this Agreement the terms "Disbursement" and "Disbursed" shall mean any payment by A.I.D. of the Maximum Credit which is made either directly to Borrower or its designee, or to a banking institution pursuant to a letter of commitment issued under this Agreement.

SECTION 1.02. The Project. As used in this agreement the term "project" shall mean the design and construction of a petrochemical fertilizer plant in the state of Gujarat consisting of a 910 metric ton per day ammonia unit, a 1200 metric ton per day urea unit and a NPK complex unit with a daily production capacity of up to 360 metric tons per hour of diammonium phosphate (DAP) and/or various NPK grades.

ARTICLE II

Terms of Repayment; Fees and Charges

SECTION 2.01. Amortization. Borrower shall repay the loan in twentytwo (22) equal semi-annual installments, the first such installment to be payable four and one-half (4 1/2) years after the date of first disbursement. If at any time it is determined that the aggregate amount of disbursements will not equal the amount of the Maximum Credit, the Maximum Credit shall be reduced and the amount of each installment not then due or against which payment has not been made, may, at the option of A.I.D., be reduced to provide for the repayment of the then unrepaid balance of the loan in approximately equal installments. In the event that any installments shall be due and payable prior to the date on which it is determined that the aggregate amount of disbursements will not equal the Maximum Credit, such installment shall be calculated as if the entire Maximum Credit had then been disbursed.

SECTION 2.02. Interest. Borrower shall pay to A.I.D. interest on the unrepaid balance of the loan at the rate of eight and one-half per cent (8 1/2%) per annum during the fifteen (15) year period commencing with the first disbursement of the loan. Interest due shall accrue from the dates of the respective disbursements and shall be payable semi-annually, the first of each such payments to be due and payable on a date, to be specified by A.I.D., not later than six (6) months after the first disbursement.

SECTION 2.03. Manner and Currency of Repayment. Subject to the provisions of Section 2.04, all obligations of Borrower to make payments under this Agreement shall be discharged by the payment of such coin or currency as at the time of payment is legal tender in the United States of America for payment of public and private debts ("United States Dollars"). All payments except prepayments and refunds shall be applied first to the payment of the accrued interest, and then to payment of installments of the loan then due.

SECTION 2.04. Special Loan Repayment Procedure. Borrower may fully discharge its obligations hereunder to repay the loan and to pay interest due thereon by making repayments of the loan and payments of interest to the Government of India (the "Government") in Currency of India on the dates specified in Sections 2.01 and 2.02 hereof (such procedure being hereinafter referred to as the "Special Loan Repayment Procedure"). Such payment obligations shall be computed and stated in United States Dollars and the amount of Currency of India equivalent to the United States Dollar amount of the obligations for which payment is made to the Government shall be computed on the basis of a rate of exchange satisfactory to A.I.D.

SECTION 2.05. Prepayment. Borrower shall have the right to prepay, without penalty, at any time, all or any part of the unrepaid balance of the loan upon payment of the interest accrued on such balance to the date prepayment is made. Any prepayment shall be credited to the installments of the loan in the inverse order of their maturity.

SECTION 2.06. Taxes. Borrower shall pay or cause to be paid any present or future taxes, charges, or fees, imposed under the laws in effect within the territory of India on or in connection with the execution, delivery, recording or registration of this Agreement, the indebtedness evidenced hereby, any promissory notes, mortgage or other security deed or other documents which may be issued hereunder, the repayment of the loan or payment of credit fee or special charge, except to the extent that any of the foregoing may be exempt from such taxes, charges or fees under the agreement referred to in Section 3.01(b).

ARTICLE III

Conditions Precedent; Additional Requirements

SECTION 3.01. Conditions Precedent to Initial Disbursement. Prior to and as conditions precedent to the issuance of the first letter of commitment or first disbursement under this Agreement, Borrower shall, except as A.I.D. may otherwise consent in writing, furnish A.I.D. with the following, in form and substance satisfactory to A.I.D.:

(a) Evidence that satisfactory arrangements have been made to construct, operate and maintain the project as planned.

(b) Such reports, contracts, plans, specifications, documents or other submissions in respect of the Project as A.I.D. may request.

(c) An Agreement executed by the Government providing for the Special Loan Repayment Procedure and all documents relating to such agreement as A.I.D. may request.

(d) A legal opinion or opinions demonstrating to the satisfaction of, and signed by counsel satisfactory to, A.I.D. that:

(i) This Agreement has been duly authorized, executed and delivered by Borrower in accordance with any applicable laws in effect within the territory of India; all applicable requirements for the registration or recording of this Agreement have been complied with in such place or places and in such manner as are required within India to protect and preserve the rights of A.I.D. hereunder; all applicable taxes, charges or fees, imposed under laws in effect as of the date of such opinion within the territory of India on or in connection with the execution, delivery, recording or registration of this Agreement, the indebtedness evidenced hereby, any promissory notes which may be issued hereunder, the repayment of the loan or payment of interest have been duly paid by Borrower except such taxes, charges or fees as Borrower may be exempted from paying under the agreement referred to in Section 3.01(c); and this Agreement constitutes a valid and legally binding obligation of Borrower enforceable under any applicable laws in effect within the territory of India, in accordance with its terms; and

(ii) Borrower's representations as stated in Section 5.01(a) through 5.01(l), are true as of the date of such opinion or opinions, except that as to the matters referred to in Sections 5.01(c) through 5.01(l) the opinion or opinions may be only to the extent of counsel's or counsels' information and belief.

(e) Evidence satisfactory to A.I.D. that the local currency required for the project is available.

(f) Evidence satisfactory to A.I.D. that a private sector dollar loan to cover additional foreign exchange costs of the project, as been obtained by Borrower.

(g) Evidence as to the satisfaction of any other terms and conditions as A.I.D. may deem advisable.

SECTION 3.02. <u>Terminal Date for Fulfillment of Conditions Precedent.</u> If the conditions required by Section 3.01 have not been completed within 90 days of date of execution of this Agreement, or such other date as shall be agreed to in writing by A.I.D., A.I.D. may at any time thereafter at its option terminate this Agreement by giving notice to Borrower.

ARTICLE IV

Letters of Commitment and Disbursement

SECTION 4.01. Requests for Letters of Commitment. To obtain Disbursements of the Maximum Credit, Borrower may from time to time request A.I.D. to issue letters of commitment to one or more banking institutions in the United States designated by Borrower, committing A.I.D. to reimburse such bank or banks for payments, made through letters of credit or otherwise, to Borrower or any designee of Borrower pursuant to such documentation requirements as A.I.D. may prescribe. Banking charges incurred in connection with letters of commitment shall be for the account of Borrower and may be provided out of the Loan.

SECTION 4.02. Other Forms of Disbursement. Disbursements may also be made under this Agreement through such other means and by such other procedures as Borrower and A.I.D. may mutually agree upon in writing.

SECTION 4.03. Terminal Date for Requests for Letters of Commitment. Except as A.I.D. may otherwise agree in writing, no letters of commitment shall be issued in response to requests received after

SECTION 4.04. Terminal Date for Requests for Disbursement. Except as A.I.D. may otherwise agree in writing, no disbursement shall be made against documentation submitted after

ARTICLE V

Warranties

SECTION 5.01. Representations and Warranties. Borrower represents and warrants that as of the date of this Agreement and as of the date of each disbursement:

(a) Borrower is a duly organized and existing corporation under the laws and decrees of India with full authority to carry on its present business, to undertake the Project and to enter into and carry out all of its obligations under this Agreement;

(b) Borrower has taken all corporate and legal action and obtained all authorizations, consents or approvals of any governmental body or regulatory authority required in connection with the making and performance of this Agreement and the execution, delivery or payment of any notes which Borrower may be required to issue hereunder;

(c) Borrower has furnished A.I.D. with a true copy of its present Memorandum of Incorporation or Charter and Articles of Association or By-Laws;

(d) Borrower is not in violation of, and the execution and delivery of this Agreement, the compliance with all of its terms and the carrying out of the other transactions contemplated hereby, do not and will not conflict with or result in any violation of, any provisions of any present charter, by-laws, agreement, franchise, concession, license, permit, decree, order, statute, ordinance, governmental rule or regulation applicable to Borrower;

(e) There is no action or proceeding pending or threatened (or, to the best of Borrower's knowledge, any basis therefor) which might result in any material adverse change in the business prospects or condition (financial or other) of Borrower or which questions the validity of this Agreement, or the Financing Commitment, or, so far as Borrower knows, its ability to proceed in accordance with the Financing Plan described in Borrower's application for this loan (the "Financing Plan"), or any action taken or to be taken pursuant to or in connection herewith or therewith or in carrying out the Project. No notice has been given by any governmental authority of any proceeding to condemn, purchase or otherwise acquire Borrower, the Project, or any part of or interest in either and, so far as Borrower knows, no such proceeding is contemplated;

(f) Other than as described in its application for the Maximum Credit or heretofore disclosed in writing, Borrower's assets are not subject to any Lien. As used in this Agreement, the term "Lien" shall mean any voluntary or involuntary encumbrance, privilege, easement or priority;

(g) Borrower has filed all its tax returns which to the knowledge of Borrower are required to be filed and has paid all taxes, assessments, duties, and other governmental charges except those not yet delinquent or those being contested in good faith;

(h) Borrower has heretofore disclosed in writing to A.I.D. all agreements material to the Project or this Agreement;

ARTICLE VI

Covenants Concerning Procurement

SECTION 6.01. Eligibility Date. No goods or services may be financed by the Loan which arise out of orders or contracts firmly placed or entered into prior to the date of this Agreement.

SECTION 6.02. Reasonable Price. Borrower covenants to pay no more than reasonable prices for goods and services financed by the Loan, which should normally approximate the lowest competitive price for the goods and services procured, operating costs, quality, time and cost of delivery, terms of payment, and other factors considered.

SECTION 6.03. Competition; Small Business Notification. Goods and services (other than professional services) financed by the Loan shall to the maximum extent practicable be procured on a fair and competitive basis. In order that American small business shall have the opportunity to participate in furnishing Eligible Items, Borrower shall, at such time prior to ordering or contracting for any Eligible Items estimated to cost more than the equivalent of Five Thousand United States dollars ($5,000) as A.I.D. may specify, cause to be received by A.I.D. such information concerning Eligible Items as A.I.D. may require.

SECTION 6.04. Source of Procurement. All goods and services financed by the Loan shall be of United States source and origin, as defined by pertinent A.I.D. Regulations.

SECTION 6.05. Shipping. (a) All goods financed by the Loan must be shipped to Borrower by transportation media owned, operated and under the control of India or countries included in Code 899 of the A.I.D. Geographic Code Book as in effect at the time of shipment.

(b) All goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by the Loan which may be transported on ocean vessels shall be transported on privately-owned United States-flag commercial vessels, to the extent required by the relevant United States legislation and regulations at the time of shipment.

(c) No goods may be financed hereunder which are transported by any ocean vessel (i) which A.I.D., by written notice to Borrower, has designated as ineligible to carry A.I.D. financed goods or (ii) which has been chartered for the carriage of A.I.D. financed goods unless such charter has been approved by A.I.D.

SECTION 6.06. Marine Insurance. If in connection with the placement of marine insurance on shipments financed under United States legislation authorizing assistance to other nations, India, by statute, decree, rule or regulation, favors any insurance company of any country over any marine insurance company authorized to do business in any state of the United

States of America, goods financed by the Loan shall during the continuance of such discrimination be so insured in the United States with a company or companies authorized to do a marine insurance business in any state of the United States of America.

SECTION 6.07. Source of Other Goods and Services Utilized on Project. Except to the extent that A.I.D. may otherwise agree in writing, all goods and services utilized for the Project other than those financed by the Loan shall have their origin in and be procured from India or countries included in Code 899 of the A.I.D. Geographic Code Book as in effect at the time of procurement.

SECTION 6.08. Employment of Contract Personnel. The employment of personnel to perform services under contracts financed hereunder, in the whole or in part, will be subject to all applicable United States legislation and such requirements as A.I.D. may from time to time promulgate or specify and, except as A.I.D. may otherwise direct, all such contracts shall include provisions necessary to implement such legislation and requirements.

SECTION 6.09. United States Government-Owned Excess Property. The Borrower shall utilize, with respect to goods financed under the loan to which the Borrower takes title at the time of procurement, such reconditioned United States Government-Owned Excess Property as may be consistent with the requirements of the project and as may be available within a reasonable period of time. The Borrower shall seek A.I.D.'s assistance in ascertaining the availability of and in obtaining such Excess Property. A.I.D. will make arrangements for any necessary inspection of such property by the Borrower or its representative. All charges incident to the transfer to the Borrower of the Excess Property may be financed under the loan. Prior to the procurement of any goods, other than Excess Property, financed under the loan and after having sought such A.I.D. assistance, the Borrower shall indicate to A.I.D. in writing, on the basis of information then available to it, either that such goods cannot be made available from reconditioned United States Government-Owned Excess Property on a timely basis or that the goods that can be made available are not technically suitable for use in the project.

ARTICLE VII

Additional Covenants

SECTION 7.01. Execution, Completion and Operation of Project. Borrower covenants that:

(a) The Project shall be carried out and completed with due diligence and efficiency, in conformity with sound business, engineering and financial practices and in conformity with any contracts, engineering, construction or procurement arrangements, or plans and specifications approved by A.I.D.; Borrower shall obtain A.I.D. concurrence prior to any material modification or cancellation of any such contracts, arrangements, plans or specifications; Borrower shall promptly advise A.I.D. in writing upon completion of the Project;

(b) The financing provided for in the Financing Plan will be obtained and any additional resources which may be required to complete the Project will be provided by Borrower; the terms of any offer for sale of Borrower's debt, securities, or capital stock to provide additional funds for the completion of the Project shall be subject to the prior written approval of A.I.D.

(c) All goods financed by the Loan shall be adequately maintained and repaired, in accordance with sound maintenance practices, as necessary or appropriate; Borrower shall at all times cause its plant to be operated in accordance with sound business practices;

(d) All goods and services financed by the Loan shall be used exclusively for the Project, provided that in the case of any goods which are not fully expended through their use for such Project, the foregoing provision shall apply until the completion of the Project or until such time as such goods or services can no longer be usefully employed for such project; and provided further that no such goods shall be exported from India without prior approval of A.I.D.

SECTION 7.02. Information and Marking. Borrower shall cooperate with A.I.D. in making information concerning the Maximum Credit public and shall make appropriate arrangements to carry out A.I.D.'s instructions with respect to signs at the Project site and marking of goods financed by the Loan.

SECTION 7.03. Maintenance of Records; Inspections; Reports. Until Borrower has discharged in full its payment obligations under this Agreement, Borrower shall:

(a) Maintain or cause to be maintained records adequate to identify the goods and services financed by the Loan, to disclose the use thereof in the Project, to show the nature and extent of the solicitation of prospective suppliers and the basis for the award of the contracts or orders involved, and to indicate the progress of the Project. Borrower shall also maintain books and records of account in accordance with accounting principles and practices generally accepted as sound in India.

(b) Furnish A.I.D. within one hundred eighty (180) days after the end of each fiscal year of Borrower with at least two (2) copies of a balance sheet of Borrower as at the close of the fiscal year then ended, together with the related statement of profit and loss and surplus of Borrower for such fiscal year, in reasonable detail and certified by an independent chartered accountant satisfactory to A.I.D. and, in addition, two (2) copies of any other reports prepared for distribution to Borrower's subsidiaries. Such financial reports shall be prepared in accordance with accounting practices and principles generally accepted as sound in India and shall be accompanied by:

(i) A certificate of such accountant stating that his review of Borrower has included an examination of this Agreement; whether such examination has disclosed the existence of any event or condition which constitutes an Event of Default or which, after the notice or lapse of time, or both, specified in Section 8.02 would constitute an Event of Default; and setting forth computations as to Borrower's compliance during the period reviewed with Sections 7.07(a), 7.07(c) and 7.07(d) and stating whether Borrower has complied during such period with Section 7.07(b); and

(ii) A certificate of an officer of Borrower approved by A.I.D. stating that he has made or caused to be made a review of Borrower's transactions and condition during the fiscal year covered by such financial reports and as of the date of his certificate and that such review has not disclosed the existence of any event or condition which constitutes an Event of Default or which, after the notice or lapse of time, or both, specified in Section 8.02, would constitute an Event of Default or if any such event or condition existed or exists, the nature thereof and the action Borrower has taken or proposes to take with respect thereto.

(c) Furnish A.I.D. within one hundred twenty (120) days after the end of each fiscal year of Borrower with two (2) copies of an Annual Progress Report prepared by an officer of Borrower approved by A.I.D. setting out (i) whether Borrower's net worth, sales, and net profits during the fiscal year immediately preceding the date of such report (the "Report Year") were greater or less than they were for the fiscal year preceding the Report Year, (ii) whether Borrower's net worth, sales and profits for the Report Year were greater or less than its average net worth, sales and profits for the three years immediately preceding the Report Year; (iii) an explanation of the changes in net worth, sales and net profits reported under (i) or (ii), (iv) a brief general statement of the officer's opinion of Borrower's operations during the Report Year and its future prospects, and (v) a progress report on the Project indicating its estimated date of completion or if completed during the Report Year, its date of completion.

(d) Permit A.I.D. at all reasonable times to examine the books and records referred to in Subsection (a) above and all other documents and records relating to this Agreement or the Project. Borrower shall cooperate with A.I.D. to facilitate inspection of such books and records, its plants, offices, warehouses, equipment, properties, facilities and operations

(e) Promptly furnish to A.I.D. such reports and information relating to the Project, goods and services financed by the Loan and other covenants of this Agreement as A.I.D. may reasonably request.

SECTION 7.04. Commissions, Fees and Other Payments. Borrower warrants and covenants that in connection with obtaining the Maximum Credit or in connection with any action under or with respect to this Agreement it has not paid or caused to be paid and will not pay or cause to be paid and to the best of Borrower's knowledge there has neither been paid nor will there be paid nor agreed to be paid any commission, fee, or other payment to any person, firm, corporation or other entity (except as regular compensation to Borrower's full-time officers and employees) other than as compensation for bona fide professional, technical or other comparable services. Borrower shall promptly report to A.I.D. all payments or agreements to make payments for such professional, technical or comparable services, and if the amount of any such commission, fee or other payment is deemed unreasonable by A.I.D., Borrower shall cause a reduction s tisfactory to A.I.D. to be made therein.

A.I.D. from time to time may in writing prescribe conditions concerning the eligibility for financing hereunder of commissions, including brokerage commissions and commissions paid to sales agents of suppliers, and allowances to purchasing agents or importers. Borrower agrees to comply with such conditions, to promptly report to A.I.D. any payment or allowance, or agreement to pay or permit any commissions or allowances covered by such conditions of which it has knowledge and to reimburse A.I.D. on request, in the amount of any payment or allowance made or permitted contrary to such conditions; provided, however, that this paragraph shall apply only to commissions or allowances arising from contracts or orders made or placed after receipt by Borrower of notice of such conditions. Nothing contained in this paragraph shall be construed to permit the financing hereunder of any commission or allowance not otherwise eligible for financing under this Agreement.

(c) Conduct all transactions with its managing agents, directors, officers, stockholders, affiliates, and employees in accordance with good commercial practice in India, and fully disclose and promptly report to A.I.D. any such transactions not entered into in the ordinary course of business. All compensation to managing agents, directors, officers and executive employees shall be reasonable.

SECTION 7.07. Particular Negative Covenants. Until Borrower has discharged in full its payment obligations under this Agreement, Borrower, except as A.I.D. may otherwise agree in writing, shall not, directly or indirectly:

(a) Incur or have outstanding any indebtedness (including any indebtedness incurred hereunder), other than contingent liabilities, aggregating more than of the aggregate amount of Borrower's unimpaired capital, surplus (other than surplus arising from the reevaluation of capital assets) and free reserves determined in accordance with accounting principles and practices generally accepted as sound in India;

(b) Create or permit to exist any Lien on any of i assets (whether now or hereafter existing) without making effective provision satisfactory to A.I.D. whereby such Lien will equally and ratably secure repayment of the Loan and interest thereon. This subsection shall not apply:

(i) Any Lien created on property, other than property financed under this Loan, at the time of purchase thereof, solely as security for the payment of the purchase price of such property;

(ii) Any Lien on inventory to secure a debt maturing not more than one year after the date on which it is originally incurred and to be paid out of the proceeds of sale of such inventory;

(iii) Liens for taxes not delinquent or taxes being contested in good faith, provided that such Liens shall be discharged within thirty (30) days after final adjudication;

(iv) Liens for wages not yet due;

(v) Deposits or pledges of property other than capital assets to secure payment of workmen's compensation or other similar benefits required by law; or

(vi) Deposits or pledges of property other than capital assets to secure performance of bids, tenders, leases, public or statutory obligations, surety or appeal bonds or other purposes of like general nature in the ordinary course of Borrower's business.

(c) Maintain a current ratio (ratio of current assets to current liabilities, both determined in accordance with accounting principles and practices generally accepted as sound in India, provided that all indebtedness which matures on demand or within twelve (12) months from the creation thereof shall be treated as a current liability, notwithstanding any failure on the part of the lender to call such indebtedness within such twelve (12) month period or any renewal or extension of such indebtedness beyond such twelve month period of less than until and thereafter of less than

(d) Declare, pay, authorize, or make any dividend or other distribution on account of any shares of any class of stock of Borrower, whether now or hereafter outstanding, unless immediately after giving effect to such dividend or distribution either (i) the aggregate amount of all such dividends and distributions paid or declared during the period from the date of this Agreement to and including the date of such proposed dividend or distribution would not exceed of the Net Earnings of Borrower accrued during such period, or (ii) the aggregate amount of all such dividends or distributions declared in the fiscal year of Borrower in respect of which such dividend or distribution is declared, do not exceed Borrower's Net Earnings for such fiscal year; provided that in neither event shall any dividend or distribution be made if there exists an Event of Default or any event or condition which, after the notice or lapse of time, or both, specified in Section 8.02, would constitute an Event of Default; the term "Net Earnings" as used in this subsection shall mean the net earnings after taxes of Borrower computed in accordance with accounting inciples generally accepted as sound in India, before deducting depreciation and after deducting all debt amortization due and payable in the relevant period, provided that there shall be excluded from such net earnings any net gain arising from the sale or revaluation of capital assets or from the acquisition or retirement or sale of any securities of Borrower

(e) Invest in, extend loans, or otherwise advance or supply funds to any other person, corporation or entity, except as advances to suppliers of credit extended to customers and employees in the ordinary course of business, if there exists an Event of Default or any event or condition which, after the notice or lapse of time, or both, specified in Section 8.02, would constitute an Event of Default;

(f) Sell, transfer, lease or otherwise dispose of all or substantially all of its capital assets, or undertake any merger or consolidation;

(g) Export for use or consumption in the United States of America any of the production of the Project facilities.

ARTICLE VIII

Remedies of A.I.D.

SECTION 8.01. Suspension. In the event that at any time:

(a) An Event of Default has occurred or an event or condition shall have occurred which, after the notice or lapse of time, or both, specified in Section 8.02, would constitute an Event of Default; or

(b) The Project is in A.I.D.'s judgment unreasonably delayed;

(c) An event occurs which A.I.D. determines to be an extra-ordinary situation which makes it improbable that the purposes of this Loan will be attained or that Borrower will be able to perform its obligations hereunder; or

(d) Any disbursement would be in violation of the legislation governing A.I.D.

(e) All of any substantial part of Borrower's assets, business or operations (whether now or hereafter existing) shall be condemned, seized or appropriated, or any action shall be instituted to dissolve or disestablish Borrower or to suspend its operation, or a substantial part thereof and Borrower is unable to secure corrective action satisfactory to A.I.D. within sixty (60) days after such condemnation, seizure, appropriation, or other Governmental action;

(f) Any franchise, license, right, privilege, or charter, granted pursuant to or existing by virtue of law or other legal authority and necessary for the conduct of Borrower's business, for the completion of the Project, or for the carrying out of the terms of this Agreement is revoked, cancelled, or denied in such manner as to make it improvable, in the judgment of A.I.D., that Borrower will be able to perform its obligations under this Agreement or that the Maximum Credit will fulfill the purposes for which it has been established and Borrower is unable to secure the reinstatement of such franchise, license, right, privilege, or charter within sixty (60) days after written notice of its revocation, cancellation or denial has been received by Borrower; or

(g) Any procedure under the laws in effect within the territory of India for the relief of financially distressed debtors shall be entered into by Borrower voluntarily or involuntarily and said procedure shall not have been dismissed without material adverse effect to the subject party within sixty (60) days of the time such procedure is commenced;

then A.I.D. may at its option: (i) decline to issue further letters of commitment; (ii) suspend or cancel outstanding letters of commitment to the extent that they have not been utilized through the issuance of irrevocable letters of credit or through bank payments made other than under irrevocable letters of credit, giving notice to Borrower promptly thereafter; (iii) decline to make Disbursements other than under letters of commitment, and (iv) at A.I.D.'s own expense, direct that title to goods financed by the Loan shall be transferred to

A.I.D. if the goods are from a source outside of India, in a deliverable state and have not been offloaded at ports of entry in India. To the extent that any costs connected with the purchase and transportation of these goods have been financed by the Loan, these amounts shall be deducted therefrom.

SECTION 8.02. Acceleration. If any one or more of the following events ("Events of Default") shall occur and be continuing:

(a) Borrower shall fail to pay in full any interest or installment of the Loan within thirty (30) days after the same shall become due;

(b) Borrower shall fail to comply with any other term, covenant or condition contained herein and such failure remains unremedied for a period of thirty (30) days after written notice thereof has been given to Borrower by A.I.D.;

(c) Any representation or warranty made by Borrower in this Agreement, or in any documents submitted or to be submitted by or on behalf of Borrower under this Agreement, on in connection with obtaining the Maximum Credit shall prove to be incorrect in any material respect;

(d) Any indebtedness or obligation of Borrower for the payment of borrowed money shall be come due and payable prior to the stated maturity thereof by reason of acceleration, or is otherwise not paid when due, and provision for payment, satisfactory to A.I.D., has not been made;

then A.I.D., at its option, may declare all or any part of the unrepaid balance of the Loan and any promissory notes issued pursuant to this Agreement to be dues and payable immediately whereupon the same, and all interest accrued thereon, shall become immediately due and payable.

SECTION 8.03. Waivers of Default. No delay in exercising, or omission to exercise, any right, power or remedy accruing to A.I.D. under this Agreement or any promissory notes issued pursuant hereto shall be construed as a waiver of any of these rights, powers or remedies.

SECTION 8.04. Expenses of Preservation of Assets of Borrower and of Collection. All reasonable costs incurred by A.I.D. (other than salaries of its staff) after an Event of Default has occurred, in connection with (i) preservation of Borrower's assets (whether now or hereafter existing), or (ii) collection of amounts due under this Agreement or any promissory notes issued pursuant hereto, may be charged to Borrower and reimbursed out of this Loan or otherwise as A.I.D. shall specify.

SECTION 8.05. Refunds. If A.I.D. determines that any Disbursement made by it under this Agreement is not supported by valid documentation submitted by Borrower in accordance with the terms of this Agreement, or is not made or used in accordance with the terms of this Agreement, or was at the time of Disbursement in violation of the legislation governing A.I.D., Borrower shall pay to A.I.D., within thirty (30) days after receipt of request, an amount not to exceed the amount of such Disbursement; provided that such request shall be made not later than five (5) years after the date on which the Disbursement is made. Upon its receipt, A.I.D. shall reduce the installments of the Loan due in inverse order of maturity, by the amount of any such payment.

ARTICLE IX

Miscellaneous

SECTION 9.01. Use of Representatives: (a) All actions required or permitted to be performed or taken under this Agreement by Borrower or A.I.D. may be performed by their respective duly authorized representatives;

(b) Borrower hereby designates Cooperative Fertilizer International, a United States cooperation, as its representative with authority to designate in writing other representatives of Borrower in its dealings with A.I.D. Borrower's representatives named pursuant to the preceding sentence, unless A.I.D. is given notice otherwise, shall have authority to agree on behalf of the Borrower to any modification or amplification of this Agreement. Until receipt by A.I.D. of written notice of revocation by Borrower of the authority of any of its representatives A.I.D. may accept the signature of such representative on any instrument as conclusive evidence that any action effected by such instrument is authorized by Borrower.

SECTION 9.02. Binding Effect. This Agreement shall be binding upon Borrower, any subsidiary thereof, and successor or assign of either, and shall be binding upon and inure to the benefit of any successor or assign of A.I.D.

SECTION 9.03. Applicable Law. This Agreement shall be deemed to be a contract made under the laws of the District of Columbia, United States of America, and shall be governed by and construed in accordance with, the laws of the District of Columbia, United States of America.

SECTION 9.04. Notice. Any notice, request or communication given, made or sent by Borrower or A.I.D. pursuant to this Agreement shall be in writing and shall be deemed to have beenduly given, made or sent to the partyto which it is addressed when it shall be delivered by hand or by mail, telegram, cable or radiogram to such other party at the following addresses:

To the Borrower

Mail Address:

To A.I.D.:

Mail Address:

Agency for International Development
Department of State
Washington, D.C. 20523
U.S.A.

Cable Address:

AID
Washington, D.C., U.S.A.

Other addresses may be substituted for the above upon the giving of notice as provided herein.

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ANNEX II A

June 19, 1969

LIST OF
COOPERATIVE FERTILIZER INTERNATIONAL
MEMBERS/SPONSORS

Agricultural Cooperative Development International
Washington, D. C.

Central Farmers Fertilizer Company
Chicago, Illinois

Coastal Chemical Corporation
Yazoo City, Michigan

The Cooperative League of the USA
Chicago, Illinois

Cotton Producers Association
Atlanta, Georgia

Farmers Regional Cooperative
Fort Dodge, Iowa

Farmers Union Central Exchange, Inc.
St. Paul, Minnesota

Farmland Industries, Inc.
Kansas City, Missouri

FS Services, Inc.
Bloomington, Illinois

Indiana Farm Bureau Cooperative Association, Inc.
Indianapolis, Indiana

Midland Cooperatives, Inc.
Minneapolis, Minnesota

Mississippi Chemical Corporation
Yazoo City, Mississippi

Missouri Farmers Association, Inc.
Columbia, Missouri

BOARD OF DIRECTORS June 19, 1969

"TRANSITORY BYE LAW" GOVERNING FIRST BOARD OF DIRECTORS

42. Notwithstanding anything contained in these bye-laws, the first Board of Directors and its Chairman shall be nominated by the Government of India. The strength of the nominated Board excluding the Chairman and the Managing Director shall not exceed eleven.

43. The nominated Board shall hold office for a period not exceeding five years from the date of its nomination (March 11, 1968). Interim vacancies in the nominated Board shall be filled by nominees of the Government of India.

PRESENT COMPOSITION OF BOARD OF DIRECTORS INCLUDING THE CHAIRMAN

(A) Cooperative Members

(1) Yuvraj Udaybhansinghji - Presently Chairman of the of the National Cooperative Union of India and the All India Central Land Development Banks Cooperative Union. Past President of the Gujarat State Cooperative Land Development Bank since its inception in 1951.

(2) V. N.Puri - Chairman and past Managing Director, Punjab State Wholesale Cooperative. Member of the Board of Directors and Executive Committee of the Punjab State Consumer Cooperative Society. Joint Secretary, National Cooperative Union of India. Member of the Board of Directors of National Cooperative Development Corporation, National Agricultural Cooperative Marketing Federation, and International Cooperative Alliance.

(3) Rao Dalip Singh - Chairman of the Haryana State Wholesale Cooperative. Member of the Legislative Assembly, Haryana.

(4) Kanhai Singh - Vice Chairman of the Uttar Pradesh (U.P.) State Wholesale Cooperative. Director of the U.P. Cooperative Bank, U.P. Cooperative Union, U.P. Land Development Bank, a district cooperative bank, and a local wholesale cooperative.

(5) M. L. Chaudhry - Chairman, State Wholesale Cooperative, Rajasthan.

(6) S. G. A. Naidur - Chairman, State Wholesale Cooperative, Mysore.

(7) S. C. Kesur - State Wholesale Cooperative, Maharashtra.

(B) Industrialist Member

(1) R. P. Goenka - Former Chairman of Chamber of Commerce, Calcutta. Wealthy industrialist.

(C) GOI Members

(1) Ramaswamy Iyer, IAS - Deputy Secretary, Ministry of Finance.

(2) V. N. Kasturirangan - Chief Project Officer in Department of Chemicals, Ministry of Steel, Mines and Petrochemicals. Previous General Manager of Fertilizers and Chemicals Travancore, Ltd. (A major GOI public sector company).

(3) M. A. Quraishi, ICS - Additional Secretary, Ministry of Food, Agriculture, Community Development and Cooperation.

(D) Ex-Officio (non-voting) Member

(1) Paul Pothen - Managing Director of IFFCO.

(E) Additional Member

(1) The IFFCO Board of Directors has room for one more Director who, the GOI has agreed, can be a BofA appointee after BofA provides the foreign exchange financing.

BOARD OF DIRECTORS BY MARCH 1973

BYE LAW SECTION

33. "(a) The Board of Directors of IFFCO shall consist of:

i) One nominee each of an apex marketing society in a State wherefrom all the cooperatives have paid not less than Rs. 5.0 million ($666,000 equivalent) to the share capital of IFFCO;

ii) Five Directors to be elected by the General Body;

iii) Not more than five persons to be nominated by the Government of India;

iv) One nominee each of the National Agricultural Cooperative Marketing Federation, National Cooperative Union of India, National Federation of Cooperative Sugar Factories and the National Cooperative Development Corporation; and

v) Managing Director of the IFFCO (Ex-officio).

"(b) The financing agency or agencies, if any, providing long term credit to IFFCO shall also be eligible to nominate one Director each.

"(c) The Board shall have power to co-opt not more than two Directors interested in the furtherance of the objectives of the IFFCO.

34. "The terms of office of the elected Board of Directors shall be three years; provided, however, that if for any unavoidable reason, a new Board is not constituted within the expiry of the term, the existing Board shall continue to hold office till the new Board is constituted.

35. "The casual vacancy in the office of an elected Director shall be filled by the Board of Directors by co-option. The Director so co-opted shall be filled up by election for the remainder of the term, if any, of the Director in whose place the vacancy originally occurred.

36. "A member of the Board may, at any time, resign from his office by sending his resignation to the Managing Director of IFFCO. Such resignation shall take effect from the day it is accepted by the Board.

37. "No member of the Board shall be present at a meeting when any matter in which he is personally interested is being discussed, nor shall he vote thereupon.

38. "An elected member of the Board shall vacate his office if:

i) The member society which he represents ceased to be a member of IFFCO or is expelled by the General Body;

ii) if he acquires any disqualifications prescribed in the Cooperative Societies Act and the Rules framed thereunder;

iii) If he is absent at more than three consecutive meetings of the Board of Directors without leave of absence.

39. "The meetings of the Board of Directors shall be convened at the instance of the Chairman. Two weeks notice shall ordinarily be given for the meetings of the Board. The quorum for a meeting of the Board shall be one-third of its total strength or five, which ever is more.

40. "The Chairman of the Board of Directors, and in his absence, the Vice-Chairman shall preside over the meetings of the Board. In the absence of both Chairman and Vice-Chairman, the Directors present in the meeting shall elect a Chairman for the meeting from among themselves.

41. "All questions in the meetings of the Board shall be decided by majority of Directors present and voting. In case of equality of votes, the Chairman of the meeting shall have a casting or second vote."

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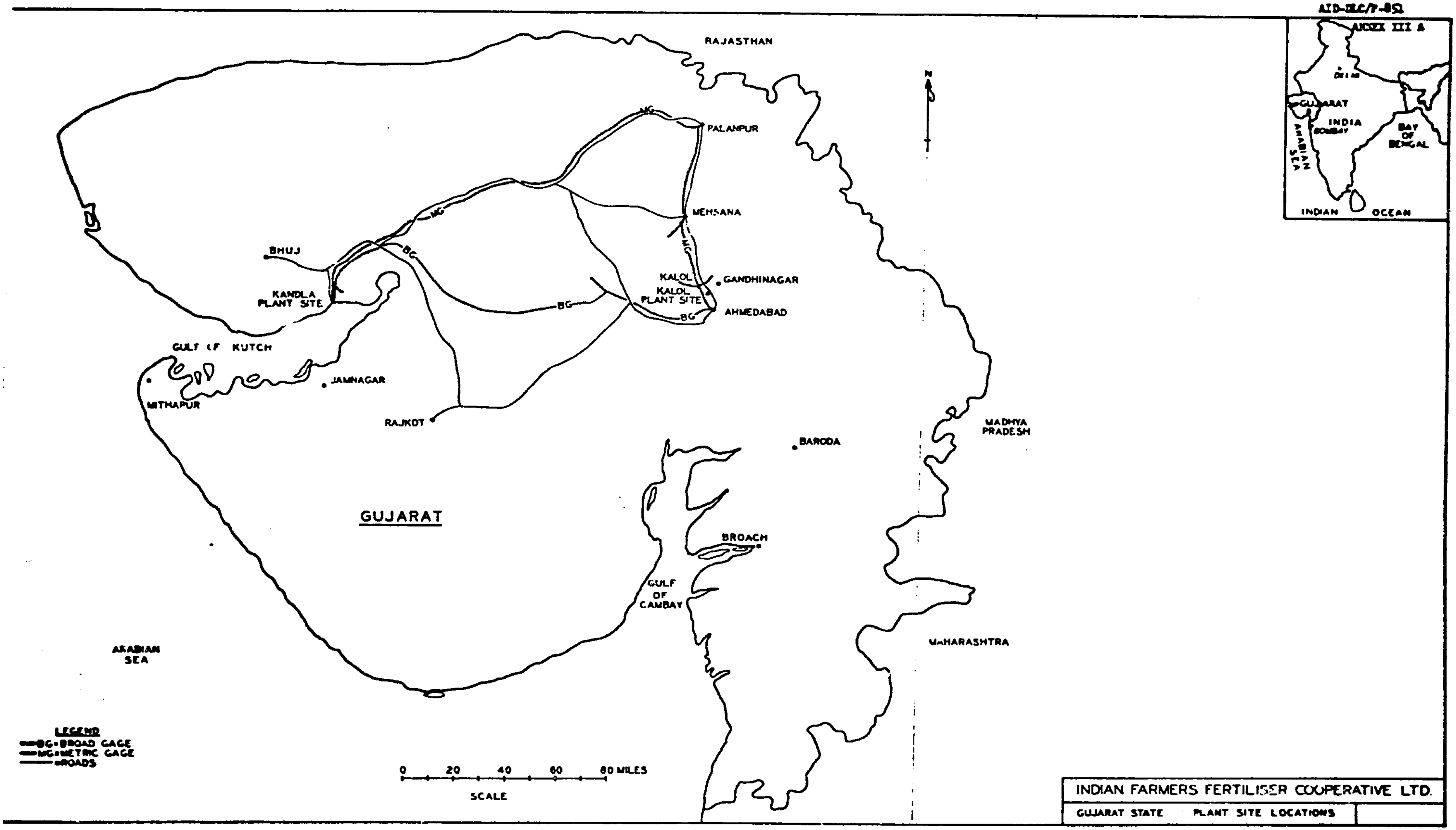
ANNEX III A
DELHI
GUJARAT
INDIA
BOMBAY
ARABIAN SEA
BAY OF BENGAL
INDIAN OCEAN
RAJASTHAN
N
PALANPUR
MG
MEHSANA
BHUJ
BG
KANDLA PLANT SITE
KALOL
GANDHINAGAR
KALOL PLANT SITE
AHMEDABAD
GULF OF KUTCH
JAMNAGAR
MITHAPUR
RAJKOT
MADHYA PRADESH
BARODA
GUJARAT
BROACH
GULF OF CAMBAY
ARABIAN SEA
MAHARASHTRA
LEGEND
BG=BROAD GAGE
MG=METRIC GAGE
=ROADS
0 20 40 60 80 MILES
SCALE
INDIAN FARMERS FERTILISER COOPERATIVE LTD.
GUJARAT STATE PLANT SITE LOCATIONS

IFFCO FERTILIZER PROJECT

Resource Inflow/Outflow for National Economic Profitability Computation

(All figures in thousands of dollars)

		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Total
FOREIGN EXCHANGE																	
Value of Production:																	
Urea	1/2/				6377	19875	21952	27701	27701	27701	27701	27701	27701	27701	27701	27701	297513
DAP (equivalent)	1/2/				4611	14990	17296	23055	23055	23055	23055	23055	23055	23055	23055	23055	[illegible]
Potash (equivalent)	1/2/				1090	3545	4088	5450	5450	5450	5450	5450	5450	5450	5450	5450	[illegible]
Total Inflow		-	-	-	12078	38410	43336	56206	56206	56206	56206	56206	56206	56205	56205	56205	[illegible]
Costs:																	
Project Investment	3/	6627	15122	14791													
P_2O_5 (Phos. Acid)	4/				3621	11769	13579	18106	18106	18106	18106	18106	18106	18106	18106	18106	191323
Potash	5/				1062	3453	3984	5312	5312	5312	5312	5312	5312	5312	5312	5312	56307
Coating Agent	5/				26	86	99	132	132	132	132	132	132	132	132	132	[illegible]
Naphtha	5/				121	394	454	606	606	606	606	606	606	606	606	606	[illegible]
Fuel Oil	6/				185	600	692	923	923	923	923	923	923	923	923	923	[illegible]
CFI Costs	7/				117	441	226	121	47	36	-	-	-	-	-	-	[illegible]
Catalysts & Chemicals	7/				130	300	-	-	-	-	-	-	-	-	-	-	[illegible]
Maintenance Materials	7/				325	612	486	370	370	370	370	370	370	370	370	370	[illegible]
Additions to Inventories	8/				1970	-	-	-	-	-	-	-	-	-	-	-	[illegible]
Total Foreign Exchange Cost		6627	15122	14791	11739	17655	19520	25570	25496	25485	25449	25449	25449	[illegible]	[illegible]	[illegible]	[illegible]
Net Foreign Exchange Inflow(Outflow)		(6627)	(15122)	(14791)	339	20755	23816	30636	30710	30721	30757	30757	30757	30757	[illegible]	30757	[illegible]
LOCAL CURRENCY																	
Costs:																	
Project Investment	9/	14256	23012	7468	3221	-	-	-	-	-	-	-	-	-	-	-	[illegible]
Raw Materials	10/				878	2850	3291	4386	4386	4386	4386	4386	4386	4386	4386	4386	[illegible]
Additions to Inventories	11/				540	-	-	-	-	-	-	-	-	-	-	-	[illegible]
Operating Costs	12/				3320	7365	8500	10075	10075	10075	10075	10075	10075	10075	10075	10075	[illegible]
CFI Costs	13/				323	569	254	129	43	34	-	-	-	-	-	-	[illegible]
Total Local Currency Cost		14256	23012	7468	8282	10784	12045	14590	14504	14495	14461	14461	14461	14461	14461	14461	[illegible]
Net Inflow (Outflow)		(20883)	(38134)	(22259)	(7943)	9971	11771	16046	16206	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

IFFCO Fertilizer Project

Footnotes for table on National Economic Profitability

1/ Equivalent imports from Table 8 Note (1) of the April 25, 1969 Financial Analysis of the IFFCO Fertilizer Project. (All footnote references to tables are those from this Financial Analysis report unless otherwise noted.) At full capacity they are: Urea - 392,000 MT; DAP - 265,000 MT; and Potash - 109,000 MT.

2/ Price assumptions from New Delhi 2910 Para 2 are: Urea Rs. 610 in 1973, Rs. 585 in 1974, Rs. 560 in 1975 and Rs. 530 in 1976 and following years; DAP $87.00 per MT. (Note that Table 8 uses $90.0 per MT for Urea and $100.0 per NT for DAP.) Potash $50.0 per MT per Table 8. Production per Table 14 is assumed to be 20% in 1973, 65% in 1974, 75% in 1975 and 100% thereafter.

3/ Construction costs and CFI costs from Table 9. Does not include interest, legal fees and bank fees.

4/ Foreign exchange costs per MT from Table 18. Have assumed that input usage varies proportionately with production (see Note 2 above).

5/ The annual consumption of naptha and fuel oil is assumed to vary proportionately with output during the start up period 1973-1976. The foreign exchange cost is assumed to be 90 percent of the refinery price given in Table 17 which works out to be $10.20 per MT.

6/ Source same as given in Note 5 above. Price works out to be $10.10 per MT.

7/ Per Table 8. These amounts are the CFI costs net of those covered by the million dollar grant from CFI.

8/ It is assumed that all raw materials inventories are built up during the first year of operation (1973). Foreign exchange costs per MT from Table 18 and Notes 5 and 6 above. These rates are applied to the inventory tonnages shown in Table 11. Inventories of goods in process and product are excluded since they are part of sales (which is estimated production priced as noted in Note 2 above.)

9/ Includes construction contracts, CFI costs and departmental charges (except bank loan expense in 1970) from Table 10. Excludes interest and initial working capital since the latter is already reflected in additions to inventories or in sales (value of production). Also excluded are import duties and sales taxes. Import duties and sales taxes are lumped as a four-year total in Table 3 on Page I-8 of The Capital Investment Cost Report (Revised) for the IFFCO Fertilizer Project, March 21, 1969 (CIRC). The import duties and sales taxes were allocated to each year in the same proportion as the annual dollar amount of "construction contracts" (Table 9) bear to the four-year total of "construction contracts", viz.

	1970	1971	1972	1973	Four Year Total
Construction Contracts	6400	14900	14400	3700	39,400
Percent of Total	16.2	37.8	36.6	9.4	100.0

Multiplying the percentages of the total above times total import duties ($7,285,000) and sales taxes ($1,995,000) gives the annual amounts excluded.

10/ Total raw material costs shown in Table 4 less the foreign exchange costs shown above (See Notes 4, 5 & 6) and less taxes taken from Table 17 with totals computed as follows:

Product	Rs. Per MT	Total MT @ 100%	Total Value 1973	1974	1975	1976 - 1984
Naptha	36.1	59,400	Rs. 429	Rs. 1394	Rs. 1608	Rs. 2144
Fuel Oil	92.0	91,370	1681	5464	6304	8406
P_2O_5	261.2	130,000	6791	22071	25467	33956
Filler	0.6	15,700	2	6	7	9
Total Rupee Value (000) Rs.			8903	Rs. 28935	Rs. 33386	Rs. 44515
Total Taxes (000) Dollars $			$ 1187	$ 3858	$ 4451	$ 5935

11/ Inventories from Table 11, except Ammonia, Urea adn NPK, less the foreign exchange costs shown earlier (see Note 8) and taxes computed using the prices per MT shown in Note 12. Total taxes are $441,000.

12/ From Table 19 except the foreign exchange costs of catalysts and chemicals (see Note 7) of $130 in 1973 and $300 in 1974 have been deducted.

13/ Total from Table 4 less the foreign exchange amounts already shown (see Note 7).

Comment: Have not included selling costs (shown in Table 4) in this statement because they are not unique to this project i.e., they would be required whether IFFCO imported the fertilizer or manufactured it. Also the product is priced at estimated CIF price rather than at estimated sales price leaving no margin for local selling costs in the inflow side of the calculation.

IFFCO FERTILIZER PROJECT
COMPUTATION OF NATIONAL ECONOMIC PROFITABILITY

Discount Rate	Present value of net inflow(outflow)1/ Foreign Exchange(FX)	Local Currency (LC)	Equalizing Premium2/	FX Exchange Rate Implied 2/
8%	129,032	(126,255)	-2.15%	7.34
9%	117,134	(119,962)	+2.41%	7.68
10%	106,509	(114,231)	+7.25%	8.04
12%	87,937	(104,171)	+18.46%	8.88
15%	65,934	(91,911)	+39.40%	10.45

Notes:

1/ See Annex VI A for time phasing of net inflows (outflows).

2/ The equalizing foreign exchange (FX) premium is the percentage increase in the official exchange rate of Rs. 7.50 per $1.00 required for a zero net present value for the project at a given discount rate, it is computed according to the following formula:

(100 + FX premium) times (present value FX inflow/outflow) +

100 times (present value LC inflow/outflow) = 0

3/ Computed as follows: (100 + Equalizing FX premium) times (7.50)

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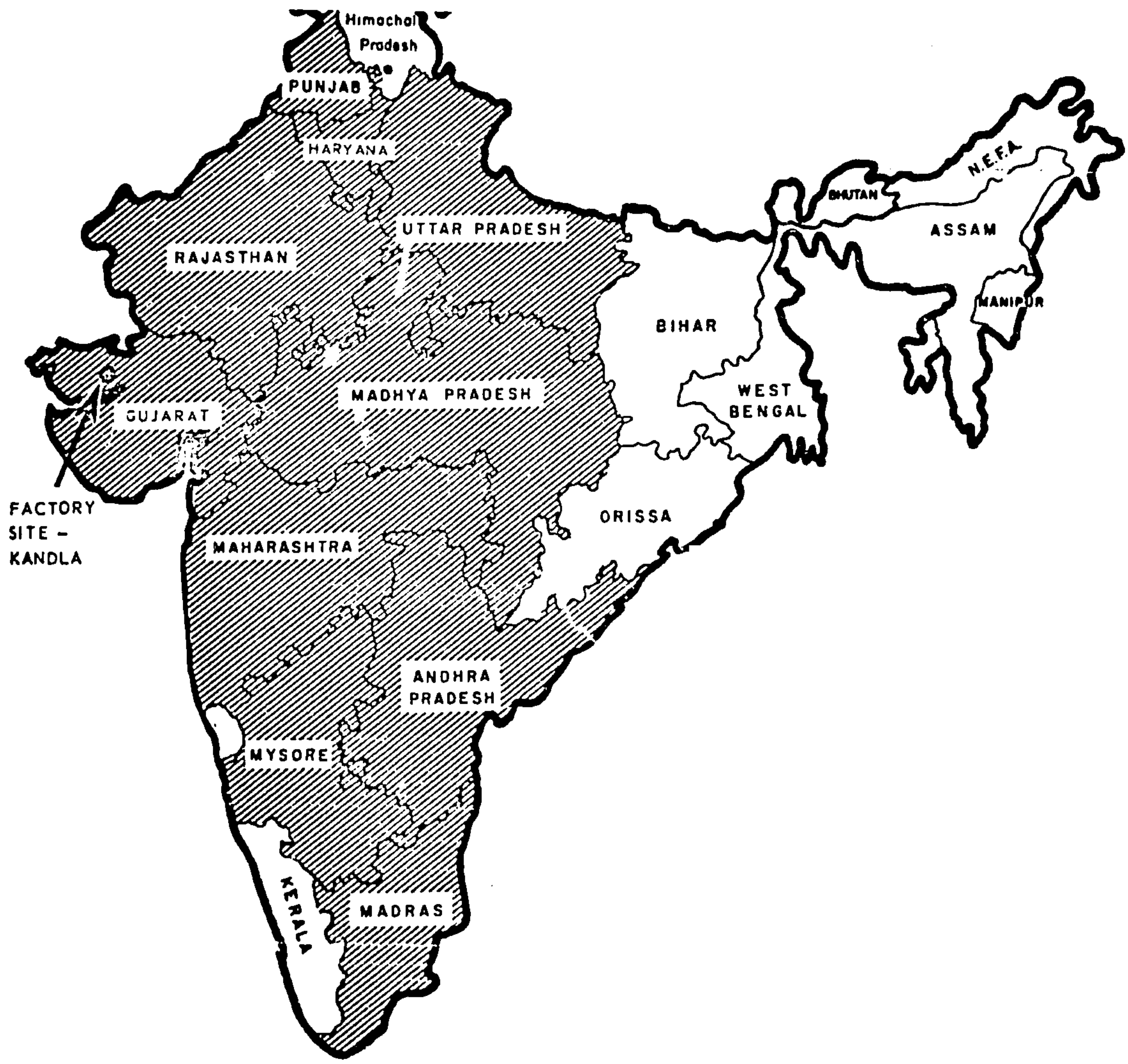
ANNEX V A

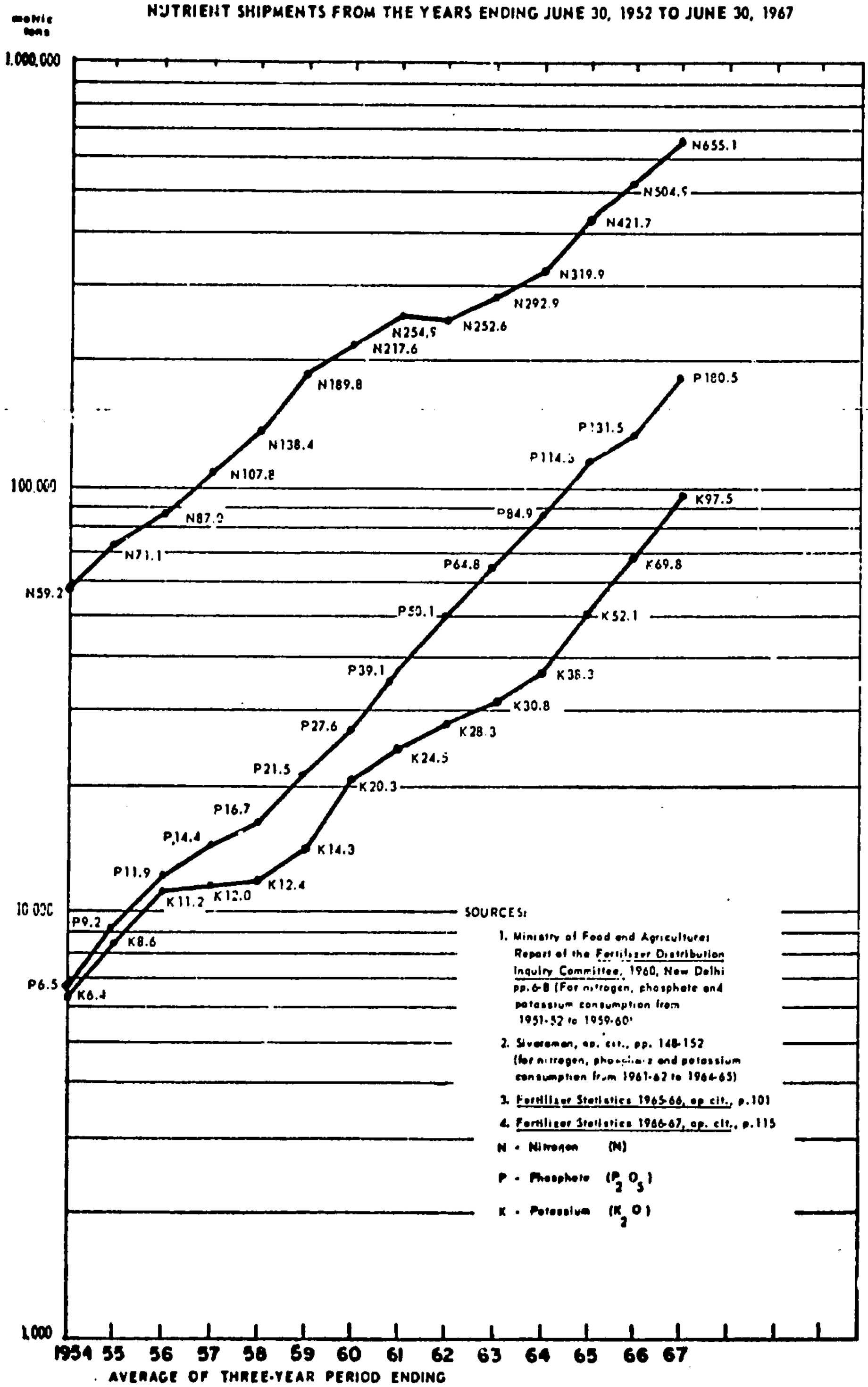
Ten State Market Area

FOR

INDIAN FARMERS FERTILIZER COOPERATIVE, LTD



ALL INDIA
SEMI-LOGARITHMIC GRAPH SHOWING A THREE YEAR RUNNING AVERAGE OF FERTILIZER NUTRIENT SHIPMENTS FROM THE YEARS ENDING JUNE 30, 1952 TO JUNE 30, 1967



IFFCO FERTILIZER PROJECT

FINANCIAL RATIO STATEMENT

			1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
A.	Production Capacity	20%	65%	75%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
B.	Current Ratio	1.08	2.20	3.48	5.64	7.43	8.85	9.70	10.20	10.18	10.16	10.13	15.80	[illegible]
C.	Debt-to-Equity	2.28	2.08	1.90	1.35	0.91	0.65	0.50	0.38	0.30	0.21	0.13	0.06	0.03
D.	Working Capital	756	10972	23812	44575	61816	75407	83643	88406	88248	87987	87698	90905	[illegible]
E.	Profit-to-Sales	--	--	--	--	--	--	2.1%	2.0%	3.9%	4.8%	5.6%	[illegible]	7.1%
F.	Profit-to Net Worth	--	--	--	--	--	--	1.8%	1.4%	2.5%	3.0%	3.4%	3.7%	[illegible]
G.	Cost of Sales-to-Sales	75%	85%	88%	83%	72%	74%	76%	79%	83%	82%	81%	80%	[illegible]
H.	Debt Service	1.23	1.88	2.00	2.69	2.47	2.22	1.78	1.48	0.98	0.97	0.96	0.97	[illegible]
I.	Days Accounts Receivables	131	47	47	44	44	44	47	47	47	47	47	[illegible]	[illegible]
J.	Days Inventory Maintained	113	40	40	40	51	51	55	55	55	58	58	58	58

IFFCO FERTILIZER PROJECT
Pro-Forma Statement of Sources and Applications of Funds
(Thousands of Dollars)
FY Ending March 31

	Pre-Startup To 9/30/72	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Sources of Funds														
From Operations:														
Net income after tax		-	-	-	-	-	-	1435	1275	2298	2857	3353	3801	[illegible]
Depreciation		811	17126	19750	18274	9610	7720	6200	4990	4010	3240	2620	2120	1720
Tax credits	-	-	-	-	9400	14540	12781	7511	5408	444	552	648	734	[illegible]
Total from operations	-	811	17126	19750	27674	24150	20501	15146	11673	6752	6649	6621	6655	[illegible]
Dollar Loans	48000	-	-	-	-	-	-	-	-	-	-	-	-	-
Rupee term loan	28000	-	-	-	-	-	-	-	-	-	-	-	-	-
Rupee working capital loan	-	4000	-	-	-	-	-	-	-	-	-	-	-	-
Co-op equity	12000	-	-	-	-	-	-	-	-	-	-	-	-	-
GOI equity	24000	-	-	-	-	-	-	-	-	-	-	-	-	-
Total funds applied	112000	4811	17126	19750	27674	24150	20501	15146	11673	6752	6649	6621	6655	[illegible]
Applications of Funds														
Working Capital														
Receivables	-	6100	900	1000	2000	(500)	(500)	(500)	(500)	(500)	-	-	-	-
Inventory-Raw-Materials	4000	(1000)	-	-	-	-	-	-	-	-	-	-	-	-
Inventory-Products	-	500	1200	1300	1320	-	-	-	-	-	-	-	-	-
Other Current Assets	400	-	-	-	-	-	-	-	-	-	-	-	-	-
Accounts Payable	(1250)	(750)	(200)	(500)	-	-	-	-	-	-	-	-	-	-
Added Working Capital	3150	4850	1900	1800	3320	(500)	(500)	(500)	(500)	(500)	-	-	-	-
Fixed Assets														
Plant and Equipment	106000													
Townships	2600													
Added Fixed Assets	108600													
Loan Repayments:														
Dollar Loans	-	-	2182	4364	4364	4364	4364	4364	4364	4364	4364	4364	4364	[illegible]
Rupee Term Loans	-	-	1273	2546	2546	2546	2546	2546	2546	2546	2546	2546	2546	[illegible]
Rupee Working Capital Loan	-	-	4000	-	-	-	-	-	-	-	-	-	-	-
	-	-	7455	6910	6910	6910	6910	6910	6910	6910	6910	6910	6910	[illegible]
Other Uses														
Retire GOI equity	-	-	-	-	-	-	-	-	-	-	-	-	-	[illegible]
Total Funds Applied	111750	4850	9355	8710	10203	6410	6410	6410	6410	6410	6910	[illegible]	[illegible]	[illegible]
Net Increase in Cash	250	(39)	7771	11040	17444	17740	14091	8736	5263	342	(261)	[illegible]	[illegible]	[illegible]
Beginning Cash Balance	- 0 -	250	211	7982	19022	36466	54206	68297	77033	82296	82638	[illegible]	[illegible]	[illegible]
Cash Balance End of Year	250	211	7982	19022	36466	54206	68297	77033	82296	82638	[illegible]	[illegible]	[illegible]	[illegible]

ANNEX VI

IFFCO FERTILIZER PROJECT

PROFORMA INCOME STATEMENT

(Thousands of Dollars)

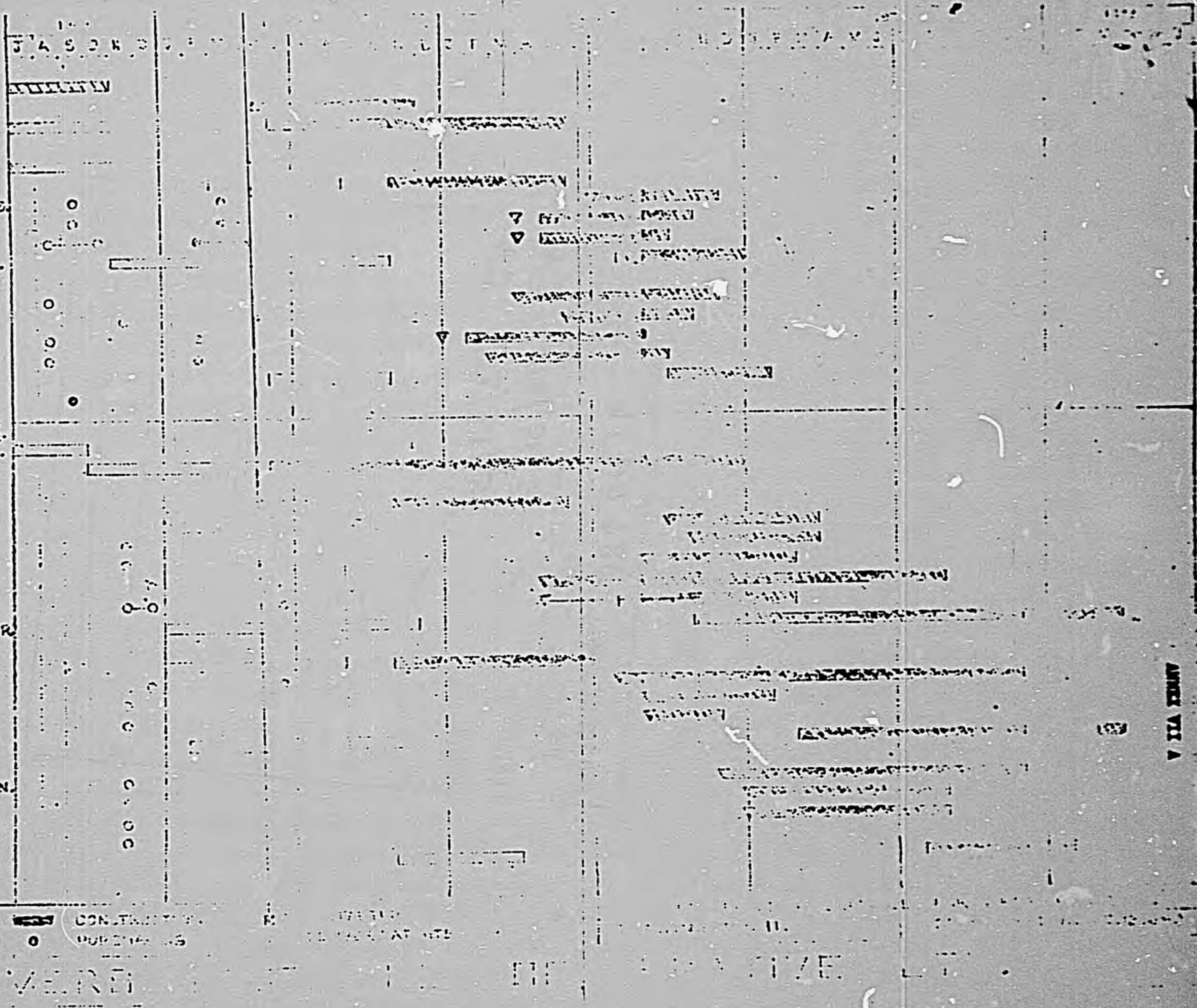
FY ending March 31

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
Capacity Utilization	20%	65%	75%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Price Level	100%	100%	100%	95%	90%	85%	80%	75%	70%	70%	70%	70%	70%
Net Sales Income	17,000	55,250	63,750	80,750	76,500	72,250	68,000	63,750	59,500	59,500	59,500	59,500	59,500
Operating Costs:													
Raw Materials	7,100	23,000	26,550	35,400	35,400	35,400	35,400	35,400	35,400	35,400	35,400	35,400	35,400
Excess Materials	875	1,025	730	--	--	--	--	--	--	--	--	--	--
Production Costs	3,450	7,865	8,500	10,075	10,075	10,975	10,075	10,075	10,075	10,075	10,075	10,075	10,075
Selling Expenses	800	1,700	1,800	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
CFI Costs	440	1,010	480	250	90	70	--	--	--	--	--	--	--
Total Operating Costs	12,665	34,600	38,060	47,725	47,565	47,545	47,475	47,475	47,475	47,475	47,475	47,475	47,475
Operating Income	4,335	20,650	25,690	33,025	28,935	24,705	20,525	16,275	12,025	12,025	12,025	12,025	12,025
Non-Operating Costs:													
Depreciation	10,355	18,650	14,950	11,980	9,610	7,720	6,200	4,990	4,010	3,240	2,620	2,120	1,720
Depreciation (Deferred)	(9,544)	(1,524)	4,800	6,294	--	--	--	--	--	--	--	--	--
Interest-FX-Loans	2,044	2,044	3,792	3,445	3,061	2,690	2,319	1,948	1,577	1,206	835	464	93
Financing Costs-FX-Loan	110	110	191	166	149	130	112	94	77	59	41	23	5
Interest-LC-Loan	1,050	1,050	1,957	1,766	1,575	1,384	1,193	1,001	811	620	429	238	[illegible]
Interest-WC-Loan	320	320	--	--	--	--	--	--	--	--	--	--	--
Total Non-Operating Costs	4,335	20,650	25,690	23,625	14,395	11,924	9,824	8,033	6,475	5,125	3,925	2,845	1,866
Profit before Tax	-0-	-0-	-0-	9,400	14,540	12,781	10,701	8,242	5,550	6,900	8,100	9,180	10,159
Less:													
6% Tax Credit				752	1,163	1,022	856	659	444	552	648	734	813
Tax Holiday Credit				4,704	2,453	3,347	4,210	4,749	--	--	--	--	--
Development Rebate				3,944	10,924	8,412	2,445	--	--	--	--	--	--
Income Tax				--	--	--	1,755	1,559	2,808	3,491	4,099	4,645	5,1[illegible]
Total Credits & Tax				9,400	14,540	12,781	9,266	6,969	3,252	4,043	4,747	5,379	5,953
Net Income After Taxes	-0-	-0-	-0-	-0-	-0-	-0-	1,435	1,275	2,298	2,857	3,353	3,801	4,206

IFFCO FERTILIZER PROJECT
Pro-Forma Balance Sheet
(Thousands of Dollars)
As of March 31

	Pre-Startup 9/30/72	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
CURRENT ASSETS														
Cash	250	211	7982	19022	36466	54206	68297	77033	82296	82638	82377	82088	81833	61127
Receivables	---	6100	7000	8000	10000	9500	9000	8500	8000	7500	7500	7500	7500	7500
Raw Materials	4.00	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Products Inventory	---	500	1700	3000	4320	4320	4320	4320	4320	4320	4320	4320	4320	4320
Bags, Supplies, etc.	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Total Current Assets	4650	10211	20082	33422	54186	71426	85017	93253	98016	97858	97597	97308	97053	76347
Plant & Equipment, Net	102900	102154	85158	65538	47394	37914	30324	24254	19394	15514	[illegible]	[illegible]	[illegible]	[illegible]
Townships, Net	2600	2535	2405	2275	2145	2015	1885	1755	1625	1495	1365	1235	1105	975
Other Assets	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	[illegible]
Total Assets	113250	118000	110745	104335	106825	114455	120326	122362	122135	117967	[illegible]	111557	[illegible]	[illegible]
CURRENT LIABILITIES														
Accounts Payable	1250	2000	2200	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	[illegible]
Current-Maturities-Dollar Loans	---	2182	4364	4364	4364	4364	4364	4364	4364	4364	4364	4364	2178	---
Current-Maturities-Rupee Loan	---	5273	2546	2546	2546	2546	2546	2546	2546	2546	2546	2546	[illegible]	---
Total Current Liabilities	1250	9455	9110	9610	9610	9610	9610	9610	9610	9610	9610	9610	[illegible]	[illegible]
AID DOLLAR LOAN	15000	14318	12954	11590	10226	8862	7498	6134	4770	3406	2042	678	---	---
BANK OF AMERICA TERM LOANS	33000	31500	28500	25500	22500	19500	16500	13500	10500	7500	4500	1500	---	---
RUPEE TERM LOAN - NET	28000	26727	24181	21635	19089	16543	13997	11451	8905	6359	[illegible]	[illegible]	---	---
TOTAL-LIABILITIES	77250	82000	74745	68335	61425	54515	47605	40695	33785	26575	[illegible]	[illegible]	[illegible]	[illegible]
NET-WORK														
Co-Op Shares	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	[illegible]	12000	[illegible]
GOI Shares	24000	24000	24000	24000	24000	24000	24000	24000	24000	24000	[illegible]	[illegible]	[illegible]	---
Earned Surplus	---	---	---	---	6442	12789	19761	26373	33056	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dev. Rebate Reserve	----	---	---	---	2958	11151	17460	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total - Net-Worth	36000	36000	36000	36000	45400	[illegible]	[illegible]	81667	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Liabilities-Net-Worth	113250	118000	110745	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ANNEX VII A



A. [illegible]
1.0 SITE FILL.
2.0 PILING.
3.0 RAILWAY.
4.0 [illegible] PLANT.
4.1 PROCESS [illegible]
4.2 FOUNDATIONS.
4.3 GRANULATOR, [illegible] & COOLERS.
4.4 MATERIAL HANDLING EQPT.
4.5 OTHER EQUIPMENT.
4.6 PIPING, ELECTRICALS & INSTR.
5.0 OFFSITES.
5.1 AMMONIA TANK.
5.2 PHOSPHORIC [illegible]
5.3 PIPING ETC.
5.4 POWER DISTR. & LIGHTING.
5.5 INSULATION & TESTING
6.0 PHOS. ACID CONTRACT.

B. AMMONIA [illegible]
1.0 STUDIES: SOIL, WATER, POWER & GAS.
2.0 RAILWAY.
3.0 AMMONIA PLANT.
3.1 FOUNDATIONS.
3.2 STRUCTURAL STEEL.
3.3 COMPRESSORS & DRIVES.
3.4 CONVERTOR.
3.5 PRIMARY REFORMER.
3.6 OTHER EQUIPMENT.
3.7 PIPING, ELECTRICALS & INSTR.
4.0 UREA PLANT.
4.1 FOUNDATIONS.
4.2 PRILL TOWER.
4.3 COMPRESSORS.
4.4 UREA REACTOR.
4.5 PIPING.
5.0 OFFSITES.
5.1 STEAM & POWER GENERATION.
5.2 WATER [illegible]
5.3 COOLING TOWER [illegible]
5.4 PIPING [illegible] VENTS.
6.0 INSULATION [illegible]

[illegible] CONTRACT [illegible]
o [illegible] o PURCHASES

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