

5. LAIPライスミル設置にかかわる 技術ノート

LOWER ANAMBRA IRRIGATION PROJECT

TECHNICAL NOTE

ON

INSTALLATION

OF

INTEGRATED RICE MILL COMPLEX

1. General

New paddy fields of 3,800 ha will be fully irrigated under the Lower Anambra Irrigation Project (L.A.I.P.) by the end of construction period in February 1987 and double cropping of paddy will be practiced over the whole area by the participant farmers. The expected paddy yield at the full operation stage is 5.0 tons per ha per crop or about 19,000 tons per crop in total. The annual paddy production will be 38,000 tons. This target production will be realized by mid-1991.

The existing rice mills in and around the project area are capable of processing only 4,000 tons per annum. The present capacity of rice mills is obviously insufficient for future paddy production.

Paddy produced in the project area could be sold outside without milling to the National Grain Board and/or the private rice millers in major towns. The market outlet of paddy is, however, limited to some 10,000 tons per annum because their capacity of milling is also limited.

The construction of new rice mill should be an essential component of L.A.I.P. (see Annex I).

2. Proposed Plan of Rice Mill

2.1 Proposed System of Processing

Past studies on installation of new rice mill have reached same conclusion that the new rice mill should not be a simple set of milling machine but an integrated complex which comprises:

- 1) receiving,
- 2) drying,
- 3) storage,
- 4) parboiling, and
- 5) milling units.

The integrated rice mill complex would minimize the following problems that most of the existing traditional rice mills are facing to:

- 1) poor quality of milled rice and relatively low market price,
- 2) low efficiency and high operation cost,
- 3) shortage of sun-drying space and deterioration of wet paddy,
- 4) limited availability of firewoods for parboiling, and
- 5) shortage of store space for dried paddy and milled rice.

The proposed system of processing is outlined as follows: ✓

Receiving and Cleaning

Paddy will be transported from the field to the receiving section of the rice mill complex by Trailer or Truck. The anticipated moisture content of paddy is 24%. The paddy will be weighed at the truck scale and fed to the receiving hopper. The impurities will then be removed in the cleaner. The cleaned paddy will be delivered to the tempering bins for drying.

Drying

Wet paddy will be dried through several passes in the dryer. The moisture content will be reduced upto 14% which assures safe storage. Uniform drying will be very important for quality control and safe storage.

Storage

The receiving and drying will be carried out during the harvest period (70 days). Parboiling and milling are not necessarily made during the same period and longer period of time (120 days) will be granted for the operations. It will reduce the capacity of parboiling and milling facilities. It will minimize the investment cost; however, it will require the storage facilities. Conventional type of warehouse will be recommendable for storage.

Parboiling

Parboiling is a kind of pre-milling treatment which will improve the milling quality. The cleaned paddy will be conveyed to the parboiling section and fed to the parboiling tank for soaking and steaming. The parboiled paddy will then be sent back to the dryer and be dried up to the moisture level of 14% through several passes of tempering.

Milling

After drying, the parboiled paddy will be cleaned again and be fed to the paddy husker. The husked rice will then be polished by the whitening machine. The white rice will be graded into several classes by using the grain size grader.

2.2 Proposed Capacity of Rice Mill Complex

Stagewise implementation has been conceived because some uncertainty is involved in the future paddy production. The proposed capacity of first stage implementation will be 3.3 tons/hour for parboiling and milling. (see Annex 11)

The proposed capacity of rice mill complex can handle about 16,000 tons of paddy per annum. It almost corresponds to about 40% of the target paddy production.

3. Proposed Layout

The integrated rice mill complex will be installed adjacent to the bifurcation of the Hadrace Canal. The site space is 2.5 ha (125 m x 200 m). (see Fig. 1 Location Map).

The proposed site has the following advantages:

- 1) easy access to the water for parboiling
- 2) free from land disputes, connecting with well networks roads.
- 3) suitable foundation for construction of rice mill complex

4. Cost Estimate

The cost estimate is made based on the following assumption and conditions:

- (a) The unit prices used are calculated on the basis of the wages and prices prevailing in Nigeria for the local currency portion and the world-wide prices for the foreign currency portion as of January, 1986.

(b) Price contingency is disregarded in this estimate.

(c) All the estimates are exclusive of duties and taxes on machine, equipment and materials.

The initial cost for installation of the proposed integrated rice mill complex is estimated as follows (for details, see Table-3):

Items	Foreign Currency (Yen ¥1,000)	Local Currency (Nira ₦1,000)
1) General Items	56,000	170 70 100
2) Rice Mill Plant	912,000	253 100 153
3) Installation of Plant	189,000	68 - 68
4) Foundation/Buildings	711,000	1,935 800 1,135
5) Engineering/Design Fee	88,000	0 - -
Total	1,956,000	2,426 970/1056

Table 1.3 General Features of Integrated Rice Mill Complex

A. Location	:	Omor
B. Process and Capacity		
a. Receiving/Drying Facilities		
1. Receiving Hopper	:	20 ton/hr
2. Pre Cleaner	:	20 "
3. Receiving/Tempering Bins	:	105 tons
4. Dryer	:	12 ton/hr
b. Parboiling Facilities		
1. Receiving Hopper	:	2 tons
2. Cleaner	:	4 ton/hr
3. Thickness Grader	:	"
4. Weigher	:	"
5. Soaking Tank	:	80 tons
6. Cooking Machine	:	3 ton/hr
7. Pre-Dryer	:	"
8. Tempering Bin	:	100 tons
9. Dryer	:	15 ton/hr
10. Mill Day Bin	:	180 tons
c. Rice Mill Facilities (3.0 ton/hr)		
1. Receiving Hopper	:	2 tons
2. Cleaner	:	4 ton/hr
3. Weigher	:	"
4. Husker	:	3 "
5. Paddy Separator	:	"
6. Destoner	:	"
7. Rice Whitener	:	2.4 "
8. Rotary Shifter	:	2.2 "
9. Length Grader	:	2.0 "
C. Generator		
a. Receiving Facilities	:	100 kW
b. Drying Facilities	:	100 "
c. Parboiling Facilities	:	250 "
d. Milling Facilities	:	150 "
e. Storage Equipment	:	50 "
f. Others	:	50 "
D. Required Space of Building		
a. Site Space	:	2.5 ha
b. Receiving/Drying House	:	700 m ²
c. Parboiling Building	:	500 m ²
d. Boiler Room	:	250 m ²
e. Rice Milling Plant	:	400 m ²
f. Generator House	:	160 m ²
g. White Rice Storage	:	150 m ²
h. Rice Storage	:	1,400 m ²
i. Diesel Generator	:	325 kVA x 3 units (260 kW)
j. Oil Storage Tank	:	120,000 liters in total

ANNEX I RICE PROCESSING SCHEDULE

(Unit : ton)

Year	Target Production	Rice Processing Programme		Project Rice Mill	Remarks
		Local Mill	N.C.B. ^{/1}		
1986	Dry 1,525	1,525		-	
	Wet 6,250	4,000	2,250	-	
1987	Dry 9,000	4,000	5,000 ^{/2}	-	
	Wet 11,400	4,000	7,400 ^{/2}	-	
1988	Dry 13,500	4,000	9,300 ^{/2}	-	
	Wet 13,300	4,000	1,800	7,500	- Project Rice Mill Start
1989	Dry 15,200	4,000	3,700	7,500	- (Expansion of Rice Mill)
	Wet 15,200	4,000	3,700	7,500	
1990	Dry 15,200	4,000	3,700	7,500	
	Wet 17,100	4,000	5,600	7,500	
1991	Dry 19,000	4,000	7,500	7,500	
	Wet 19,000	4,000	7,500	7,500	
1992	Dry 19,000	4,000	7,500	7,500	
	Wet Continued				

Remarks: ^{/1} : N.C.A. means Nigeria Grain board

^{/2} : Introduce of temporary rice mill equipment is proposed.

A. BASIC DESIGN CONDITIONS.(1) General

- a. Total Paddy Field : 3,800 ha
- b. Production and Yield of Paddy : 5.0 tons/ha/F.A.Q and dry paddy at 14% m.c.w.b.
- c. Cropping Pattern : 2 crops/annum (Oct/Nov/Dec and 1/2 Feb /Mar/Apr/1/2May)
- d. Total target production of clean and dry paddy : 19,000 tons/crop
: 38,000 tons/annum
- e. Total Production of raw paddy :
22,630 tons/crop
45,260 tons/annum at 24% m.c.w.b. including 5% of foreign matters
- f. Variety of Rice : Long and medium grains such as IR-series, TOS-series, B-G 90-2, SML, etc.
- g. Harvesting Method : By combine - harvester and/or manual

(2) Numbers of Net Working Days and Hours

- a. Harvesting Period : Net 80 days/3 months/crop season and 6 hrs/day
- b. Receiving : Net 80 days/3 months/crop season and 6 hrs/day
- c. Drying : Net 80 days/3 months/crop season and 24 hrs/day
- d. Parboiling : Net 120 days/6 months/crop season and 24 hrs/day
- e. Milling : Net 120 days/6 months/crop season and 24 hrs/day
- f. Storage Period : Maximum 180 days/crop (120 net working days/crop)

(3) Conditions of Materials

- a. Moisture Content
 - Raw Paddy : Maximum 24%w.b.
 - Dried Paddy (for storage) : 14%w.b.
 - Milled Rice : 14%w.b. or below
- b. Grain Density
 - Paddy = 0.55 tons/m³
 - Brown rice and Milled rice : 0.80 tons/m³
- c. Rate by weight of By-products
 - Husk/paddy : 18 - 22%
 - Bran/Brown rice : 9 - 10%
 - Foreign matters/Raw Paddy : 5% or below

(4) Construction Schedule and Production of Paddy

a. First Stage for 7,500 tons/crop

- Receiving/Drying Facilities
- Parboiling Facilities
- Milling Facilities
- Storage Facilities
- Building
- Common Buildings
- Generator

b. Second Stage for 7,500 tons/crop

- Receiving/Drying Facilities
- Parboiling Facilities
- Milling Facilities
- Storage Facilities
- Buildings
- Generator

(5) Loan Arrangement

Phase-I of First Stage will be applied for OECF Loan. Phase-II of Phase-II of First Stage and Second Stage will be applied for Nigerian own funds.

BASIC CAPACITY OF FACILITIES FOR PHASE-I

(1) Raw Paddy

$$7,500 \text{ tons/crop} \times \frac{100 - 14}{100 - 26} \times \frac{100}{100 - 5} = 8,900 \text{ tons/crop}$$

(7) Generator:

Required Power

20 TPH Receiving Facilities	6 hrs x 80 days	100 kw
12 TPH Drying Facilities	24 hrs x 80 days	100 kw
3 TPH Parboiling Facilities	24 hrs x 120 days	250 kw
3 TPH Milling Facilities	24 hrs x 120 days	150 kw
Storage Equipment	24 hrs x 120 days	50 kw
Others	24 hrs x 120 days	50 kw
Total		500 - 700 kw

C REQUIRED SPACE OF BUILDINGS

(1) Receiving/Drying Facilities	: 700 m ²
(2) Parboil Plant	: 500 m ²
Boiler room	: 250 m ²
(3) Rice Milling Plant	: 400 m ²
(4) Generator House	: 160 m ²
(5) White Rice Storage	: 150 m ²
(6) Paddy Storage	: 1,400 m ²
(7) Diesel Generator	: 325 KVA x 3 units (260KW)
(8) Oil storage tank	: 120,000 liters in total
(9) Others	

(2) Receiving Facilities

- a. Daily input = 8,900 tons/crop ÷ 80 days/crop = 111 tons/day
b. Hourly capacity = 111 tons/day ÷ 6 hrs/day = 19 ± 20 ton/hr

(3) Drying Facilities

Incase of wet paddy is fed into Parboiling Facilities directly after raw paddy was cleaned at Receiving Facilities ;

- a. Daily input of wet paddy cleaned :

$$111 \text{ tons/day} \times \frac{100 - 5 \text{ (Foreign matters)}}{100} = 63 \text{ tons/day} \times \frac{100 - 14}{100 - 24}$$

$$= 54 \text{ tons/day}$$

- b. Moisture reduction :

$$24\% \text{ w.b.} - 14\% \text{ w.b.} = 10\% \text{ w.b.}$$

- c. Moisture reduction ratio :

2 to 2.5 % per pass through the dryer

- d. Hourly through-put capacity of dryer :

$$54 \text{ tons/day} \times \frac{24 - 14}{2 - 2.5} \div \langle 24 - 3 \text{ (for safety)} \rangle \text{ hrs/day}$$

$$= 13 \pm 12 \text{ ton/hr}$$

(4) Parboiling Facilities

- a. Daily input :

$$7,500 \text{ tons/crop} \div 120 \text{ days/crop} = 63 \text{ tons/day}$$

- b. Hourly capacity :

$$63 \text{ tons/day} \div \langle 24 - 4 \text{ (for safety)} \rangle \text{ hrs/day}$$

$$= 3.2 \pm 3.0 \text{ ton/hr}$$

(5) Milling Facilities

- a. Daily input :

$$7,500 \text{ tons/crop} \div 120 \text{ days/crop} = 63 \text{ tons/day}$$

- b. Hourly capacity :

$$63 \text{ tons/day} \div \langle 24 - 4 \text{ (for safety)} \rangle \text{ hrs/day} = 3.2 \pm 3.0 \text{ ton/hr}$$

(6) Storage Facilities

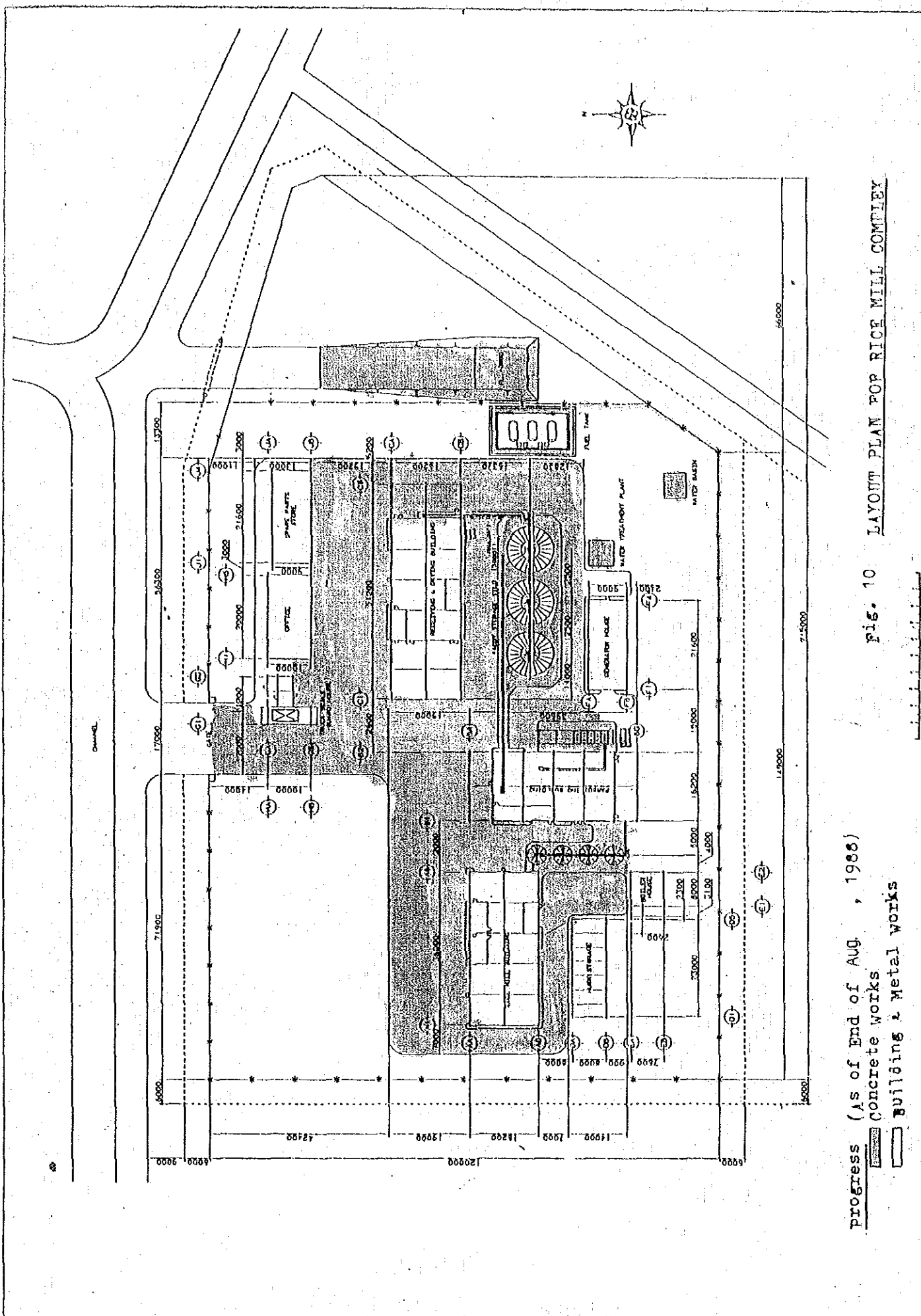
- a. Maximum Storage capacity :

$$7,500 \text{ tons/crop} \div 63 \text{ tons/day} \times 80 \text{ days/crop}$$

$$= 2,460 \text{ tons/crop}$$

- b. Storage Areas

$$2,460 \text{ tons} \div 3 \text{ tons/m}^2 \times 1.5 = 1,230 \text{ m}^2 < 1,400 \text{ m}^2$$



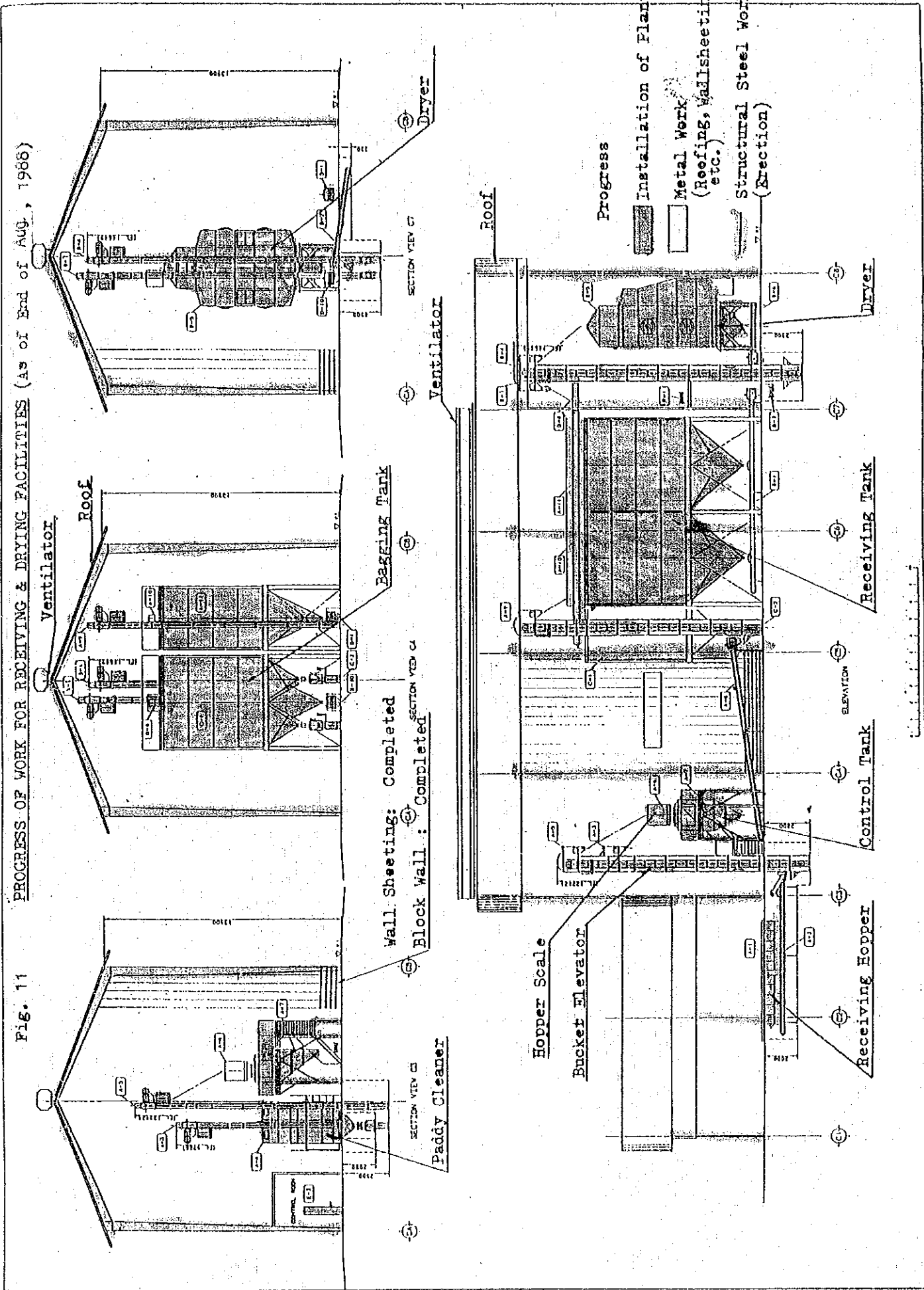
progress (As of End of AUG , 1966)

▨ concrete works

▨ Building & Metal works

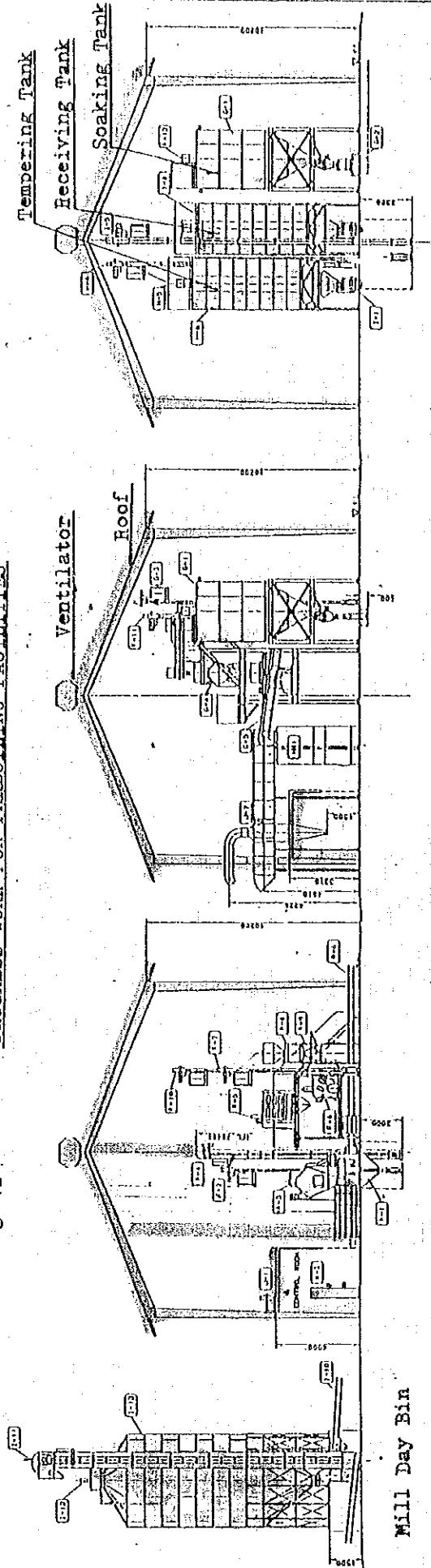
Fig. 10 LAYOUT PLAN FOR RICE MILL COMPLEX

Fig. 11 PROGRESS OF WORK FOR RECEIVING & DRYING FACILITIES (As of End of Aug., 1966)



PROCESS WORK FOR PARBOLLING FACILITIES

Fig. 12



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SECTION VIEW

SECTION VIEW

SECTION VIEW

Mill Day Bin

Soaking Tank

Ventilator

Roof

Receiving Tank

Bucket Elevator

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ELEVATION

ELEVATION

Block wall: Completed

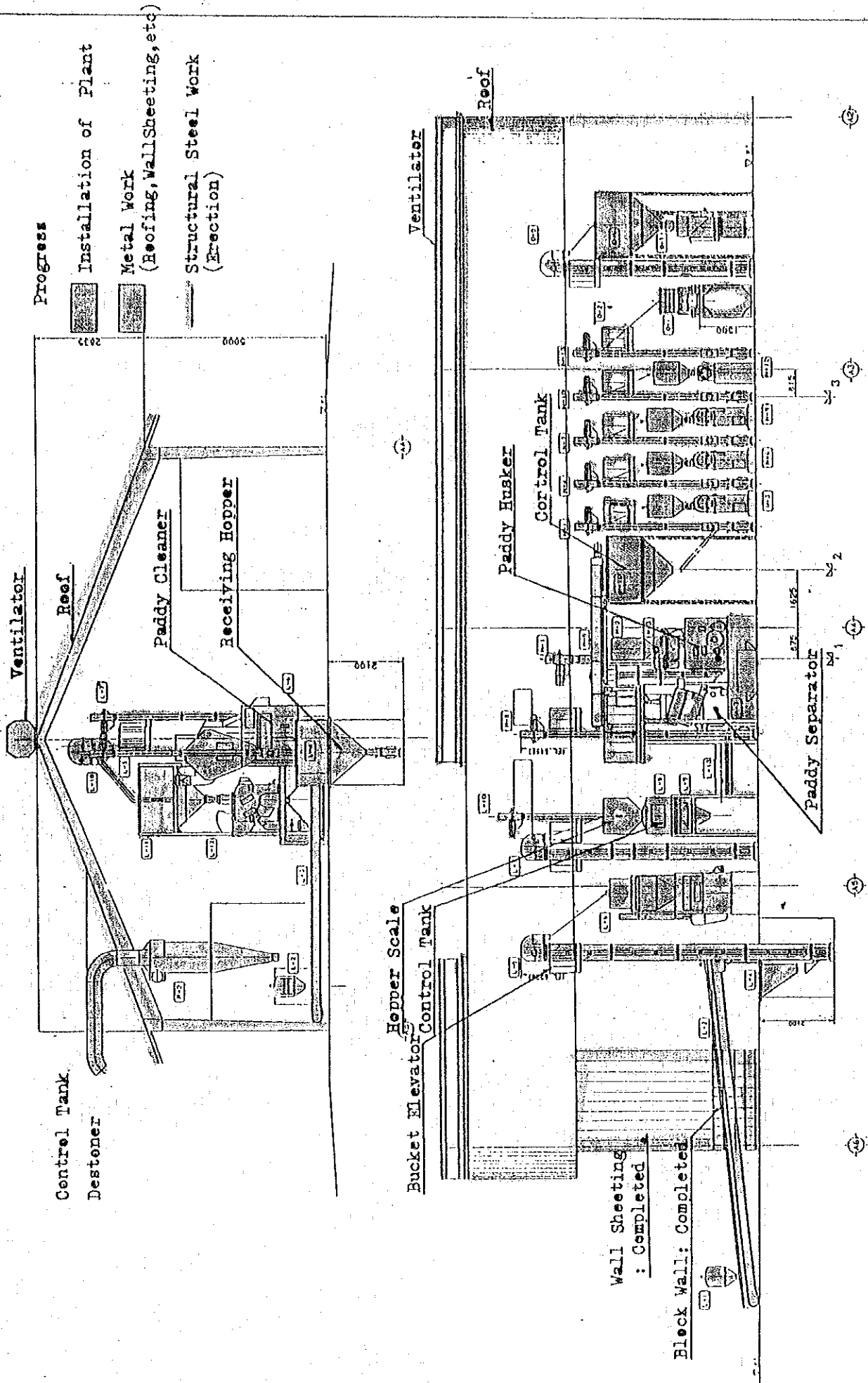
Wall Sheetings: Completed

Installation of Plant

Metal Work (Roofing, Wall Sheetings, etc.)

Structural Steel Work (Erection)

Fig. 13 PROGRESS OF WORK FOR RICE MILL FACILITIES
 (As of End of Aug. 1988)



6. LAIP 職員一覽表

STAFF OF PROJECT OFFICE

<u>Name</u>	<u>Rank</u>	<u>Name</u>	<u>Rank</u>
A. Senior Staff			
1. N. Mgbemena	Project Manager		
A.1 C.O.M.			
1. J.I.Nwobodo	A. O. I	2. M.A.Okeke	A.O.I
3. A.O.Ugwu	A. O. I	4. E.O.Okoro	PAS
5. P.C.Okeke	HAS	6. G.K.N.Anyabolu	PAS
7. J.M.Udechi	PAS	8. M. Ekpesu	HFS
9. C.U.Ogbonnaya	PIE	10. N.N. Orji	HAS
11. C. Enekwechi	AS	12. R.A. Uchefuna	PTO(Mech)
13. J.O. Ifediegwe	HTO(Bdg)	14. P.N. Onuba	SWS(Elec)
15. C. Uke	Surv. II	16. E.I.K. Uche	SEE
17. R.O. Okereke	PWE(Mech)	18. A.B. Obiora	EO
19. C.C. Nwekw	ACCT. I	20. M.U. Ikpa	EO(Acct)
21. M.C.Amanchukwu	CSK		
A.2 F&A			
1. D.O. Osuagwu	S.A.O		
B. Junior Staff			
B.1 C.O.M.			
1. J. Onyekweodiri	Pt. Mech I	2. H. Ngwueche	Tr. Mech
3. A. Igboanugo	Tr. Mech	4. P. Oguama	Tr. Mech
5. F. Orji	Gen. Op.	6. S. Ezekudo	Gen. Op.
7. E. Mgbakogu	Gen. Op.	8. A.A. Oguejiofor	Gen. Op.
9. D. Uzor	Gen. Op.	10. J. Ozioko	Tr. Op.
11. D. Nnabedum	Tr. Op.	12. R. Okolie	Tr. Op.
13. J. Ezike	Tr. Op.	14. S. Ekwueme	Tr. Op.
15. M. Ugwuoke	Tr. Op.	16. B. Nwankwo	Tr. Op.
17. C. Ofuebe	Tr. Op.	18. D. Ugbaji	Tr. Op.
19. L. Ezeugwu	Tr. Op.	20. P. Chukwuemeka	Tr. Op.
21. M. Obu	Tr. Op.	22. A. Okafor	Tr. Op.
23. I. Ugwu	Tr. Op.	24. J. Eze	Tr. Op.
25. A. Ekere	Tr. Op.	26. G. Onyishi	Tr. Op.
27. C. Ugwuoke	Tr. Op.	28. T. Abonyi	Tr. Op.
29. C. Obiora	Tr. Op.	30. F. Nweke	Tr. Op.
31. G. Ugwuze	Tr. Op.	32. M. ezeukwu	Tr. Op.
33. D. Onyishi	Tr. Op.	34. J. Agbo	Tr. Op.
35. E. Chifahoke	Tr. Op.	36. C. Ugwu	Tr. Op.
37. J. eds	Tr. Op.	38. H. Ozioko	Tr. Op.
39. K. Aba	Tr. Op.	40. J. Nnalue	Tr. Op.
41. C. Obi	Tr. Op.	42. C. Anedo	Tr. Op.
43. R. Chiekwena	Tr. Op.	44. G. Agbaogu	Tr. Op.
45. I. Agbo	Tr. Op.	46. M. Amechi	Tr. Op.
47. C. Nwazi	Tr. Op.	48. A. Okwume	Tr. Op.
49. J. Udechi	Tr. Op.	50. T. Odenigbo	Tr. Op.
51. I. Amaegwu	Tr. Op.	52. A. Okolo	Tr. Op.
53. G. Eze	Tr. Op.	54. E. Nweke	Tr. Op.
55. C. Ugwu	Tr. Op.	56. G. Attamah	Tr. Op.
57. D. Okafor	Tr. Op.	58. P. Mokwe	Sr. Tr. Op.II
59. A. Ozioko	Tr. Op.	60. S.O. Anekwe	Tr. Op.
61. P. Agu	Tr. Op.	62. C.U. Nnana	Tr. Op.
63. T. Ekwealor	Tr. Op.	64. I.E. Nwobodo	Pump Op.

65. R.E. Nwaribe	Pump Op.	66. P.C. Nchekwuba	Pump Op.
67. E.C. Ifetike	Pump Op.	68. E.N. Okonkwo	Pump Op.
69. E.C. Okoye	Pump Op.	70. L. Okoye	Pump Op.
71. A. Obiasi	Pump Op.	72. M. Onyibor	Pump Op.
73. S.C. Ikegbuna	Pump Op.	74. N.A. Nwokedi	Pump Op.
75. S. Meli	Pump Op.	76. F. Onyishi	Pump Op.
77. O. Anedo	Pump Op.	78. E. Orazulume	Tr. Mech.
79. K. Chima	Pt. Mech.	80. L. Odomere	Sr. Craft Ftt.
81. E.N. Okoye	Auto Elec.	82. D. Ojibo	Auto Elec.
83. I.S. Okoro	Plumber II	84. M. Obiorah	Carpenter
85. K. Okoli	Carpenter	86. J. Okeke	Mason

B.2 F&A

1. C. Aliozor	Cl. Offr.	2. G.O. Nwoye	Cl. Offr.
3. G.U. Chime	Cl. Offr.	4. A.I. Achebe	Sr. Cl. Offr.
5. S. Ebosle	Store Keeper	6. M.L. Offorbike	Store Keeper
7. O. Ewah	Store Keeper	8. C. Nwachi	Store Asst.
9. S.U. Obumneme	Store Attd.	10. S. Chukwurah	Store Asst.
11. E. Nduanya	Store Attd.	12. F. Ojukwu	Store Attd.
13. E. Okonkwo	Store Attd.	14. A. Umezuruike	Store Attd.
15. L.O. Anago	Cl. Offr.	16. C. Iroh	Typist III
17. G.O. Okoye	Typist II	18. E. Metu	Typist II
19. J.U. Onuorah	Typist III	20. P.O. Okonkwo	Drv/Mech
21. N.N. Eze	Drv/Mech	22. A. Okerulu	Motor Drv.
23. S.A. Obodoeze	Tanker Drv.	24. I.O. Emegini	Motor Drv.
25. C. Anyaeri	Motor Drv.	26. A. Okoye	Motor Drv.
27. E.C. Igwebuike	Messenger	28. R.C. Ughanwa	Messenger
29. A.E. Ifeacho	Cleaner	30. M. Ugwu	Cleaner
31. T. Onuorah	Cleaner	32. J. Ejimofor	Cleaner
33. C.N. Ibenegbu	Cleaner	34. M.M. Ejimofor	Cleaner
35. O. Obiedo	Cleaner		

7. 1989 年度公团
予 算 要 求 書

ANNEX I

PROJECTED REVENUE ESTIMATES FOR 1989

Head No. 023800000004 Ministry/Department F.M.A.W.R. 5R.D./A.I.R.B.D.A.

Sub-Head 023801000015

Title of Revenue Generating Services/Projects Lower Anambra Irrigation Project

Location(s) Omor

Sub-Head	Details of Revenue Generating Services/Projects	Existing Fees/Rates and the year fixed	Actual Revenue Collected in 1987	Approved Revenue Estimates for 1988	Actual Revenue Collected for the 1st six months of 1988	Projected Revenue Based on New Rates Additional Sources 1989	Total Revenue Projection for 1989	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
G23801-000015	Lower Anambra Irrigation Project		539,663.58		1,289,067.14	1,820,000.00	1,820,000.00	
	(a) Land preparation	N260/ha (1986)						
	(b) Irrigation water supply	N300/ha (1986)						N150/ha during rainy season.
	(c) Seed rice	N3,000/tonne						
	(d) Milled rice	N4,000/tonne						
	(e) House rent	N50/Snr. Staff house/month N25/Inter. Staff house/month N12.50/Jnr Staff						
	Sub-total		539,663.58		1,289,067.14	25,304,000.00	25,304,000.00	At sales price of N4,000/tonne of milled rice

PROJECTED REVENUE ESTIMATES FOR 1989

Head No. 023800000004 Ministry/Department F.M.A.W.R.&R.D/A.I.R.B.D.A.
 Sub-Head 023801000098

Title of Revenue Generating Services/Projects Headquarters Development Agbala and
 Area Office Aguleri

Location(s) Agbala and Aguleri

Sub-Head	Details of Revenue Generating Services/Projects	Existing Fees/Rates and the year fixed	Actual Revenue collected in 1987	Approval Revenue Estimates for 1988	Actual Revenue Collected for the 1st six months of 1988	Projected Revenue Based on New Rates Additional Sources 1989	Total Revenue Projection for 1989	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
023801000098	Headquarters Development Agbala and Aguleri							
(a)	House Rent	#50/Snr. Staff house/month #25/Inter-Staff #12.50/Junior Staff house/month	1,119,167.70		18,547.22	41,400.00	41,400.00	
(b)	School fees				12,710.00	25,000.00	25,000.00	
(c)	Others				214,124.66	350,000.00	350,000.00	
	Sub-total		1,119,167.70		245,381.88	416,400.00	416,400.00	

ANNEX I

PROJECTED REVENUE ESTIMATES FOR 1989

Head No. 02380000004 Ministry/Department F.M.A.W.R.&R.D./A.I.R.E.D.A.
 Sub-head 023801000120
 Title of Revenue Generating Services/Projects Borehole Development Project
 Location(s) Anambra and Imo Projects

Sub-Head	Details of Revenue Generating Services/Projects	Existing Fees/Rates and the year fixed	Actual Revenue Collected in 1987	Approved Revenue Estimates for 1988	Actual Revenue Collected for the 1st six months of 1988	Projected Revenue Based on New Rates Additional Sources 1989	Total Revenue Projection for 1989	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
023801000120	<u>Borehole Development Project</u>							
	(a) Drilling	7,500/day	24,500	Not Applicable	49,000.00	100,000.00	100,000.00	Revenue will be from under the Authority's drilling projects.
	(b) Hiring out of plant & machinery	(various)	43,790	- do -	6,228.92	20,000.00	20,000.00	
Sub total			68,290		55,228.92	120,000.00	120,000.00	

ANNEX I

PROJECTED REVENUE ESTIMATES FOR 1989

Head No 02380100000004 Ministry/Department F.M.A.R & RD/AIRBD.

Sub-head 023801000064

Title of Revenue Generating Services/Projects Soil Erosion and Flood Control and Watershed Management

Location(s) Anambra and Imr. Projects

Sub-Head	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Remarks
	Actual Revenue Collected in 1987	Approved Revenue Estimates for 1988	Actual Revenue Collected for the 1st six months of 1988	Projected Revenue Based on New Rates Additional Sources 1989	Total Revenue Projection for 1989					
023801000064										
	Afforestation Programme Raising of indigenous fruit trees (20,000 seedling) and 30,000 forest-trees	(various)			35,000.00		40,000.00	40,000.00		about 20,000 seedlings to be planted the public will rest use for Authority Programme
	Sub total				35,000.00		40,000.00	40,000.00		
	Grand total			1,727,121.28	58,000.00	1,589,677.94	25,880,400.00	25,880,400.00		

FEDERAL REPUBLIC OF NIGERIA

ANAMBRA/IMO RIVER BASIN DEVELOPMENT AUTHORITY

1989 CAPITAL ESTIMATE PROPOSALS

KM 9,
AGBALA,
OWERRI.

SEPTEMBER, 1988.

ANAMBRA-IMO RIVER BASIN DEVELOPMENT AUTHORITY, OWERRI

Summary of 1989 Budget Proposals

sification Code	Title of Project & Location	State/Completion %	Plan/Cost Expenditure 1989-1993	Capital Appropriation 1989	Outstanding Liabilities	Projected Revenue	Remarks
023801000015	Lower Anambra Irrigation Project, OMOR	92	8,000,000	26,008,800	16,117,307.64	25,304,000	
023801000023	Niger Flood Plain (Umueze-Anam Oroma-Efiti)	4%	6,000,000	-2,000,000	529,095.38	Nil	
023801000031	Lower Mamu River Proj.	4%	6,500,000	500,000	Nil	Nil	
023801000049	Upper Mamu River Proj.	10%	7,000,000	2,000,000	Nil	Nil	
023801000056	Niger Flood Plain (South) Irrig. Project	4%	10,000,000	1,000,000	Nil	Nil	
023801000060	Ibu River Dan and Irrigation Project	10%	31,000,000	20,000,000	810,329.90	Nil	
023801000104	Ukwa Irrigation and Land Reclamation Proj.	7%	8,000,000	1,000,000	Nil	Nil	
023801000064	Soil Erosion and Flood Control and Watershed Mngt.	N/A.	10,000,000	3,000,000	Nil	40,000	
023801000072	Small Earth Dams & Minor Irrig. Schemes	-do-	10,000,000	3,200,000	Nil	Nil	
023801000112	Ngor Okpuala Irrig. Project	4%	5,000,000	1,500,000	Nil	Nil	
023801000120	Bofehicles Dev.	7%	5,000,000	3,000,000	Nil	120,000	
023801000098	Headquarters Dev. Agbale & Area Office Overhead	N/A	10,000,000	2,010,000	15,469,427.48	416,400	
	Personnel Cost	-	-	11,758,725	Nil	Nil	
		-	-	5,168,950	Nil	Nil	
			116,500,000	82,146,475	32,926,160.40	25,880,400	

CAPITAL ESTIMATES - SUMMARY

S/ CLASSIFICATION NO.	I	II	III	IV	V	VI	VII	VIII
TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN/COST EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS		
1. 023801000015	Lower Anambra Irrigation Project	92%	8,000,000	25,446,892.00	16,117,307.64	26,008,800	Outstanding liability made up of outstanding payments to Contractor and Consultants as well as crop compensation.	VIII
2. 023801000023	Niger Flood Plain (Umueze Anam-broma-Etiti)	10% (Feas. Study completed)	6,000,000	125,000.00	529,095.38	2,000,000		
3. 023801000031	Lower Nam River Project	4% (Feas. Study stalled)	6,500,000	125,000.00	NIL	500,000	Study still in progress	
4. 023801000049	Upper Mamu River Project	10% (Feas. Study completed)	7,000,000	125,000.00	NIL	2,000,000		
5. 023801000056	Niger Flood Plain (South) Irrigation Project	4% (Feas. Study stalled)	10,000,000	125,000.00	NIL	1,000,000		
6. 023801000080	Ibu River Dam and Irrigation Project	10% (Feas. Study completed)	31,000,000	1,599,628.00	810,320.90	20,000,000	Includes #810,329.90 for crop compensation	
7. 023801000004	Ukwa Irrigation and Land Reclamation Project	7% (Designs not completed)	8,000,000	780,904.97	NIL	1,000,000		
8. 023801000064	Soil Erosion and Flood Control and Watershed Management	Not Applicable	10,000,000	5,500,436.24	NIL	3,000,000		

S/ NO.	CLASSIFICATION CODE I	TITLE OF PROJECT AND LOCATION II	STATE OF COMPLETION IN PERCENTAGE III	PLAN/COST EXPENDITURE (1989-1993) IV	CUMULATIVE ALLOCATION RELEASED TO DATE V	OUTSTANDING LIABILITY (IF ANY) VI	APPROPRIATION 1999 VII	REMARKS VIII
9.	023801000072	Small Earth Levees and minor Irrigation Schemes	N/A	10,000,000	2,284,631.03	3,850.00	3,200,000	
10.	023801000112	Ngor Okpuala Irrigation Project	4% (Feasibility Study stalled)	5,000,000	374,727.43	NIL	1,500,000	
11.	023801000120	Boreholes Development	70%	5,000,000	2,446,832.00	NIL	3,000,000	
12.	02380100096	Headquarters Development Afbala and Area Office Aguleri	N/A	10,000,000	-	15,469,427.48	2,010,000	
		TOTAL		116,500,000	38,918,053.67	32,926,160.40	65,218,800 - Capital 11,758,725 - Overhead 5,168,950 - Personnel	
							82,146,475	

ANNEX VIA
 CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM
 Separate Form Must Be Completed For Each Project/Subhead

Ministry/Department/Sector FMAVHRD/AIRBTA

02380000004

Title of Project LOWER ANAMBRA IRRIGATION PROJECT Sub-Head 023801000015

Location of Projects (Town & State) OGOR, ANAMBRA

Is project in fifth National Development Plan 1988 - 1992 (if yes, state sector) YES, WATER RESOURCES

Total Plan Cost/Allocation (1988 - 1992) ₦8,000,000

Phasing of Plan Allocation 1988	<u>2,000,000</u>	1989	<u>1,500,000</u>
1990	<u>1,500,000</u>	1991	<u>1,500,000</u>
		1992	<u>1,000,000</u>

Appropriation for 1988 ₦5,000,000

Amount Required for the 1989 fiscal year ₦26,008,800

(i) Local ₦25,559,470.00

(ii) Foreign ₦449,330.00

Amount of outstanding Liabilities or existing contractual commitments on projects payable in 1989 ₦7,755,640.02

State of completion of project (%) 92%

Difficulties Encountered in the implementation of the project NONE

Corrective measures taken on (ii) above N/A

Anticipated Target/Performance for the 1989 Establishment of Residential Accommodation and Health Clinic. O & M of Pumping Station, Canals, Roads, Rice mill & Farm Machinery for Wet and Dry season crop production

Estimated completion date _____

Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989 Grant from Federal Government & loan from O.E.C.F. of Japan

Is project Revenue-Earning? (Yes or No) Yes

Details of Capital Expenditure

Lower Anambra Irrigation Project

Description of
Concept and Scope of Project

Major Capital items include completion of outstanding civil works and uncompleted staff quarters, health clinic for JICA and other buildings, and operation and maintenance of a rice mill complex to handle the expected output 19,800 tonnes of paddy annually.

Specifications and Targets Completion of outstanding works necessary to produce, handle, store and market the stated 19,800 tonnes of paddy.

Justification of Project The project, to date, has assisted in transforming the rural economy of Omor through dependable accessibility to the area and introduction of modern agricultural inputs and production techniques thereby raising both the farmers' awareness as well as incomes. The project can further be justified by the degree of its acceptability by the farmers.

Location Omor, Uzo-Uwani L. G. A.

Status of Project On-going. Major infrastructural facilities completed. Crop cultivation has been going on. 9% of capital programmes completed.

Physical Achievements 3850 Ha have been developed for rice irrigation while 350ha. have been developed for rain-fed cropping of other staple food crops. A 3.3ton/hr Rice mill unit and mechanical workshop complex completed. Also, an earth dam to supply water to the project has been completed. Almost 2km road to the rice mill to be tarred in 1988. Ricemill to be commissioned and test operated in October.

ANNEX VI

CLASSIFICATION CODE I	TITLE OF PROJECT AND LOCATION II	STATE OF COMPLETION IN PERCENTAGE III	PLAN COST/EXPENDITURE (1985-1993) IV	CUMULATIVE ALLOCATION RELEASED TO DATE V	OUTSTANDING LIABILITY (IF ANY) VI	APPROPRIATION 1989 VII	REMARKS VIII
K01000015	LOWER ANAMBA IRRIGATION PROJECT	92%	#8,000,000	#25,446,892	#16,117,307.64	#600,000 #1,677,800 #17,500,000	<p>Completion of residential and utility buildings at Omor (including staff canteen).</p> <p>Operation and maintenance of rice mill.</p> <p>Revolving loan to purchase paddy for the rice mill. This is based on an average yield of 2.5 tonnes per hectare from 4,500 hectares (i.e. 6,750 tonnes) and at #2,000 per tonne of paddy.</p> <p>Operation and maintenance of farm machinery consisting of 136 tractors, 102 motorised knapsack sprayers and 60 motorised threshers.</p>

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPRECIATION 1989	R L M A R K S
I	II	III	IV	V	VI	VII	VIII
						¥300,000	Maintenance of roads; headrace, irrigation and drainage canal; and other related structures.
						¥155,000	Running of generating sets and water treatment plants.
						¥300,000	For seed multiplication on 60Ha. (double cropping) at ¥2,500 per hectare for distribution to farmers to cultivate 3,500Ha. each for wet and dry seasons.
						¥3,675,000	Representing 70% of total amount (¥5.2M) required for the JICA Programme - Including Extension of Consultancy Service before the commencement of JICA programme in October, 1990. The amount also includes the cost of a Training Centre for teaching of farmers and extension staff.

ANNEX VI

CLASSIFICATION CODE I	TITLE OF PROJECT AND LOCATION II	STATE OF COMPLETION IN PERCENTAGE III	PLAN COST/EXPENDITURE (1989-1993) IV	CUMULATIVE ALLOCATION RELEASED TO DATE V	OUTSTANDING LIABILITY (IF ANY) VI	APPROPRIATION 1989 VII	H E M A R K S VIII
							(See also Director General's application No PDWR/WR/S/88/XI of 1/5/88 attached)
						#1,000,000	Potable water reticulation within the project and to land owning communities
						#26,000,600	

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

Ministry/Department/Sector FMAWR & RD/AIRBDA

Head 02380000001

Title of Project NIGER FLOOD PLAIN IN (OROMA
-ETITI-UMUEZE-ANAM) PROJECT, Sub-Head 023801000023

Location of Projects (Town & State) UMUEZE-ANAM, ANAMBRA

Is project in fifth National Development Plan 1988 - 1992 (if yes, state sector) YES, WATER RESOURCES

Total Plan Cost/Allocation (1989 - 1993) N6,000,000

Phasing of Plan Allocation 1989 N1,000,000 1990 N2,000,000
1991 N1,000,000 1992 N1,000,000 1993 N1,000,000

Appropriation for 1988 10e

Amount Required for the 1989 fiscal year N2,000,000

(1) Local _____

(ii) Foreign _____

Amount of outstanding liabilities or existing contractual commitments on projects payable in 1989 N529,095,38

State of completion of project (10%) Feasibility Study & Design Completed

Difficulties Encountered in the Implementation of the project Lack of funds to implement project

Corrective measures taken on (ii) above Fed. FMAWRRD has been informed.

Anticipated Target/Performance for the 1989 Processing of Tenders for main Contract award.

Estimated completion date 1993

Is project grant or loan or foreign assisted? (if so, by whom indicate estimated disbursement for 1989 _____)

Is project Revenue-Earning? (Yes or No.) YES

ANNEX VI

CLASSIFICATION I	TITLE OF PROJECT AND LOCATION II	STATE OF COMPLETION IN PERCENTAGE III	PLAN COST/EXPENDITURE (1989-1993) IV	CUMULATIVE ALLOCATION RELEASED TO DATE V	OUTSTANDING LIABILITY (IF ANY) VI	APPROPRIATION 1989 VII	REMARKS VIII
023801000023	NIGER FLOOD PLAIN (UMEZE) -ANAX-OROMA-ETITI) PROJECT	Feasibility Study including Eng. Designs Completed. 10%	#6,000,000	#125,000	#529,095.38	#2,000,000	Feasibility study was completed in 1980. Implementation has been hampered by lack of funds. Amount indicated is to cover cost of processing tenders, selection of a construction firm and initial take-off of construction works.

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must be Completed For Each Project/Subhead

Ministry/Department/Sector F.M.A.W.R. & R.D. /A.I.R.B.D.A.
Head 0238-00000004

Title of Project SOIL EROSION AND FLOOD CONTROL AND WATERSHED
MANAGEMENT Sub-head 023801000061

Location of Projects (Town & State) IN ANAMBRA AND IMO STATE PROJECT
SITES

Is project in fifth National Development Plan 1988 - 1992 (if yes, state sector) YES WATER RESOURCES

Total Plan Cost/Allocation (1989-1993) N10,000,000

Phasing of Plan Allocation 1989 N2,000,000 1990 N3,000,000
1991 N2,000,000 1992 N2,500,000 1993 N1,000,000

Appropriation for 1988 N2,200,000

1. Amount required for the 1989 fiscal year N3,000,000
(i) Local _____
(ii) Foreign _____

2. Amount of outstanding Liabilities or existing contractual commitments on projects payable in 1989 _____

3. State of completion of project (%) Not applicable

4. Difficulties Encountered in the Implementation of the project LACK OF FUNDS

5. Corrective measures taken on (1) above SUPERVISION WORK DONE BY AUTH. STAFF

6. Anticipated Target/Performance for the 1989 STUDY AND DESIGN OF 4NO. GULLY
EROSION SITES. MAINTENANCE WORKS (INCLUDING GRASSING AND AFFORESTRATION)
OF 6NO. EROSION SITES.

7. Estimated completion date 1989

8. Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989 GRANT ASSISTED

FEDERAL GOVERNMENT

9. Is project Revenue-Earning? (Yes or NO) No

Title of Project: SOIL EROSION AND FLOOD CONTROL AND WATERSHED MANAGEMENT

Sector: Water Resources

Description of Scope and Concept: Project locations, dam sites and Watersheds of projects are seriously affected or threatened by erosion. It is proposed to study and design erosion control measures for effective watershed management in and around project locations and dam sites. Comprehensive and detailed erosion surveys of dam sites and project watersheds will be done to provide sufficient soil erosion data base for control designs and subsequent production of 1:50 scale master plans which should provide a common framework for co-ordinated Engineering, tree/grass planting and soil management activities directed at soil erosion control and watershed Management at Authority's operational areas particularly dam sites, Reservoirs and Command areas of irrigation schemes.

Physical Specification and Target: About 2000ha Watershed area will be covered, embracing

- Ibu Dam Site/Watershed
- Lower Anambra Project Watershed
- Agulu-Nanka, Ngwo, Ekulu, Ulasi, Abiriba, Onicha Mbaise, Okwudor.
- 4 Gully Complexes to be studied and designed for funding by the National Sub-Committee on Soil Erosion and Flood Control of the National Committee on Ecological Problems.

Additionally the Authority's Forestry Nursery will be expanded with a subsidiary Nursery at the Aguleri Area Office.

Justification of the Project: There is need to protect existing and proposed water resources projects - dam sites, Reservoirs areas and the Watershed of project locations against soil erosion. To do this there is need for properly studied and comprehensively designed erosion control measures. Three aspects are important here, viz:

- (1) Protection of agricultural land on flanks of dam sites up to the adjoining divides.
- (2) Control of rate of siltation of reservoirs as a result of sheet and gully erosion.
- (3) Enhancement of quality of run off water which feeds the reservoirs.

A master plan is a necessary framework for erosion control activities incorporating Engineering, tree/grass planting, counter bunding and soil management activities geared towards comprehensive watershed Management in project areas.

Cost Estimates

Capital

1. Soil Surveys and Production of master plan on project and dam site -
N250,000.00
2. Establishment of Forestry Nurseries at Agbala
and Aguleri - N80,000.00
3. Study and design of 4No. Gully Complexes - N400,000
- Sub-Total - N730,000.00

Recurrent Expenditure

	N
1. Maintenance work at Uiasi Erosion Site	90,000.00
2. Maintenance work at Agulu - Nanka Erosion site	100,000.00
3. Maintenance work at Lower Anambra Irrigation Project	100,000.00
4. Maintenance at Lokpanta dam site	100,000.00
5. Maintenance work at Ngwo Erosion site	100,000.00
6. Maintenance work at Ekulu Erosion site	100,000.00
7. Maintenance work at Abiriba Erosion site	100,000.00
8. Maintenance work at Onicha-Mbaise erosion site	80,000.00
9. Maintenance work at Okwudur Erosion site	80,000.00
10. Afforestation programme and watershed management	80,000.00
Sub-Total	N930,000.00

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989-1991)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS
I	II	III	IV	V	VI	VII	VIII
023801000064	SOIL EROSION AND FLOOD CONTROL AND WATER-SHEET MANAGEMENT. AMARJHA AND TMC STATE PROJECT SITES.	Not application.	₹10,000,000	₹32,817,222.	NIL	₹2,000,000.	

ANNE VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector HEALTH / WATER RESOURCES
2. Head 02380000001
2. Title of Project SMALL EARTH DAM AND MINOR IRRIGATION Schemes
Sub-Head 023801000072
3. Location of Projects (Town & State) ANAMBRA AND IMO STATES
4. Is project in fifth National Development Plan 1989-1993
(if yes, state sector) YES - WATER RESOURCES
5. Total Plan Cost/Allocation (1989 - 1993) ₦10,000,000.00
6. Phasing of Plan Allocation 1989 ₦2000000 1990 ₦2,000,000
1991 ₦2000000 1992 ₦2000000 1993 ₦2000000
7. Appropriation for 1989 ₦3,000,000
8. Amount Required for the 1989 financial year ₦3,200,000
9. (i) Local ₦3,200,000
(ii) Foreign _____
9. Amount of outstanding Liabilities or existing contractual commitments on projects payable in 1989 ₦3,850.00
10. State of completion of project (%) _____
11. Difficulties Encountered in the implementation of the project FUNDING AND LACK OF SUFFICIENT CONSTRUCTION EQUIPMENT
12. Corrective measures taken on (11) above _____
13. Anticipated Target/Performance for the 1989 CONSTRUCTION OF 4NOS SMALL EARTH DAMS, 2NOS EACH IN ANAMBRA AND IMO STATES.
14. Estimated completion date _____
15. Is project grant or loan or foreign assisted? (if so, by whom and indicate estimated disbursement for 1989 GRANT ASSISTED
16. Is project Revenue-Earning? (Yes or No) REVENUE IS INDIRECT

1. Project Title: SMALL EARTH DAMS
2. Sector: Water Resources
3. Short Description of scope and

concept of project:

The programme aims at developing the surface water potentials of the State, especially in areas where groundwater is difficult to find. This will be achieved through constructing small earth dams for domestic and irrigation water supply.

7No. locations were investigated in Anambra and Imo States. Lokpanta small earth dam construction has been completed. It now requires finding for the operation and maintenance. A water treatment plant will be installed close to the reservoir for domestic and industrial use. The reservoir is also meant to provide irrigation water and a design of an irrigation network to cover 25ha. will be done. Complete design reports have been done for Ebunwana and Arochukwu small earth dams in Imo State and M-bakwu and Ikwo small earth dams in Anambra State. Investigations have been carried out in Ihite-Owerre and Umuchima. Four new locations will be studied during the year.

5. Justification of the project

The project will provide water for domestic and agricultural/industrial uses.

6. Location: Covers the whole of Anambra and Imo States
7. Status: on-going
8. Physical Achievement: One dam has been completed while another one is being constructed n.w. Study and design of four earth dams have been completed

9. Capital Expenditure

1. Construction of 4 Earth Dams at Arochukwu) Eburwana) Imo State Umunze in Aguata and Omanze in Isu-Uzo L.G.As. of Anambra State	N2,400,000.00
2. Design and Construction of Irrigation facilities at each dam location of at least 10ha each, at N10,000/ha	400,000.00
3. Provision of Treatment Plant at Lokpanta Earth dam	200,000.00
4. Installation of 2 minor Irrigation schemes using MOW Hydroflo pumps and covering an average of 30ha. per site	200,000.00
	----- N3,200,000.00 =====

OVERHEADS

MINISTRY/DEPARTMENT: F.M.A.W.R. & R.D./ AIRERA

HEAD: 005

SUB-HEAD: 32 - Small Earth Dams

Details of Service of Sub-Head	Details of previous Service and/or Sub-Heads merged to form the new overheads	Details of Expenditure/ Estimate of Workload or Commitment	Amount Approved 1988	Actual Expenditure 1987	Provision sought in 1989	Reason(s) for Increases
1. Operation and Maintenance for Lokpanta Dam	For grassing of the periphery of the dam maintenance of structures and embankment.		600,000.00,		10,000.00	
					10,000.00	
					50,000.00	
					70,000.00	
2. Maintenance of Igbokwu						
3. Operation and Maintenance of Irrigation facilities						

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT and LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS
I	II	III	IV	V	VI	VII	VIII
023801000072	Small Earth Dams	Not applicable	#10,000,000	#2284,631,03	#3,850,000	#3200,000.00	Construction of Small Earth Dams is an on-going project. It is envisaged that works (two in Anambra, two in Imo States) would be constructed within the year while study and designs of four additional ones would be done by in-house capability.

ANNEX VIA
CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector FY/WR & ID/AIRBDA/Water Resources
head 02380000004
2. Title of Project Ibu Dam and Irrigation Project Sub-Head 023801000080
3. Location of Projects (Town & State) Arandizuogu Imo State
4. Is project in fifth National Development Plan 1989 - 1993 (if yes, state sector) yes - Water Resources - Agriculture
5. Total Plan Cost/Allocation (1989 - 1993) 31,000,000.00
6. Phasing of Plan Allocation 1989 19,000,000 1990 17,000,000
1991 17,000,000 1992 15,000,000 1993 15,000,000
7. Appropriation for 1989 12,000,000
8. Amount Required for the 1989 fiscal year 120,000,000
(i) Local 114,000,000
(ii) Foreign 16,000,000
9. Amount of outstanding liabilities or existing contractual commitments on projects payable in 1989 Nil
10. State of completion of project (%) 10%
11. Difficulties Encountered in the implementation of the project Lack of Funds
12. Corrective measures taken on (11) above Included in 5th Dev. Plan
13. Anticipated Target/Performance for the 1989 Provision of access road, construction of site office, and residential buildings, excavation and foundation treatment and mobilization of contractors.
14. Estimated completion date 1993
15. Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989 Being negotiated
16. Is project Revenue-earning? (Yes or No) Yes

Details of Capital Expenditure

1. Title of Project Ibu River Dam Project
2. Description:
of Concept and
3. Scope of Project Construction of a multi-purpose dam with
night storage to irrigate 5,000 Hectares
of arable land using both gravity and
sprinkler Irrigation Systems for all-year
round cropping of rice, maize and assorted
vegetables. Also in-corporated in the
project are the Livestock, Fisheries and
Forestry components.
It will also supply raw water
for the Okigwe regional water supply scheme.
4. Specifications
and Targets Construction of a dam. Cultivation of
5,000 hectares by farmers. Egg production
scheme, Fisheries and Forestry Development.
 1. Review of Feasibility Studies, Engineering designs and
tender documents preparatory to construction of the dam.
Provision of access road and construction of site office
and residential buildings for the contractors and consultants.
5. Justification:
of Project Good arable land abundant water for both
irrigation and domestic use! Existence of
pilot schemes in the area and good results
obtained. The dam will also afford a control
of excessive flood down stream the Imo River.
High linkage with agro-allied industry
especially rice milling.
6. Location: Arondinuogu in Ideato L.G.A. (Areas down stream
the confluence of the Ibu and Imo Rivers.)
7. Status of On-going with pilot farms at Ndimoko/Ndionuoha,

Physical Achievements

The Engineering designs and tender documents of the Ibu dam project have been completed. Tenders have been processed, and the contract is expected to be awarded this year.

Capital Expenditure - Details

1) Site preparation including construction of office and residential accommodations	4,000,000.00
2) Provision of access road	1,300,000.00
3) Payment of crop compensation	1,500,000.00
4) Diversion channel excavation etc.	2,500,000.00
5) Borrow area preparation	2,000,000.00
6) Foundation treatment, excavation etc.	6,250,000.00
7) Additional site investigations	420,000.00
8) Review of Engineering designs	150,000.00
9) Vehicles for supervision	500,000.00
10) Spare parts for vehicles etc.	300,000.00
11) Supervision/consultancy cost	1,000,000.00
12) Maintenance of structures and roads	<u>80,000.00</u>
	<u>₦20,000,000 .00</u>

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENT-AGE	PLAN COST/EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	R E M A R K S
I	II	III	IV	V	VI #	VII	VIII
023801000080	Ibu River Dam and Irrigation Project	10%	#31,000,000	#1,599,628	#810,329.90	#20,000,000.00	The project was admitted for construction during the 5th Dev. Plan period. Tenders have been processed while Contract is expected to be awarded soon. Provisions sought are for the initial take-off of the project and for payment of compensation.

1989 RECURRENT ESTIMATES

ANNEX IV

OVERHEADS

MINISTRY/DEPARTMENT: F.M.A.W.R. & R.D./A.I.R.B.D.A.....

HEAD: 023800000004

SUB-HEAD: 023801000080 - Ibu River Dam and Irrigation Project.....

Details of Service of Sub-Head	Details of Previous Service and/or Sub-Heads merged to form the new overheads	Details of Expenditure/ Estimate of Workload or Commitment	Amount Approved 1988	Actual Expenditure 1987	Provision Sought in 1989	Reason(s) for increases
Ibu River Dam and Irrigation Project.	Maintenance of access road, and project facilities		2,000,000	509,527.57	100,000	

ANNEA VI

CAPITAL PROGRAMME 1989 ADVANCE FACILITIES FORM

Separate Form must be Completed For Each Project/Subhead

1. Ministry/Department/Sector PHILIPPINES, I. C. D. A.
HEAD 02380000004
2. Title of Project LOCHIN P. LU (CICILAN-NANOC) RIVER PROJECT Sub-Head
023801000031
3. Location of Project (Town & State) ANJARRA
4. Is project in fifth National Development Plan 1989 - 1993 (if yes, state sector) YES, USE RESOURCES
5. Total Plan Cost/Allocation (1989 - 1993) 16,500,000
6. Phasing of Plan Allocation 1989 500,000 1990 2,000,000
 1991 2,000,000 1992 1,000,000 1993 1,000,000
7. Appropriation for 1986 10 c
8. Amount Required for the 1989 fiscal year 1500,000
 (i) Local 1500,000
 (ii) Foreign _____
9. Amount of outstanding liabilities or existing contractual commitments on projects payable in 1989 Nil
10. State of completion of project (%) 4% feasibility study on-going
11. Difficulties Encountered in the implementation of the project _____
12. Corrective measures taken on (11) above _____
13. Anticipated Target/Performance for the 1989 Completion of feasibility Study and Engineering Designs
14. Estimated completion date 1993
15. Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989) Grant assisted
16. Is project Revenue-Earning? (Yes or No) Yes, when fully implemented

DETAILS OF CAPITAL EXPENDITURE

LOBER LAGOON RIVER PROJECT

<u>Description of Concept and Scope of Project:</u>	Proposed Construction of two dams on the tributaries of the Lobo River on Chibia stream and the second on Ali and Ori streams for conjunctive water use to irrigate 5,000 hectares for double cropping.
<u>Specifications and Targets:</u>	The main thrust of efforts during 1989 will be directed at ensuring that feasibility studies and engineering designs are completed.
<u>Justification of Project:</u>	There exists sufficient water on the Mamu River and the tributaries that will irrigate the proposed 5,000 hectares. The water stored will provide a more dependable water sources for the communities. Also, tubular-type hydro-generators may be installed in the headrace to provide electricity to the project and/or the surrounding communities. Furthermore, the canal system can be used for fishery development.
<u>Location:</u>	The project is located in Igbakwu and Amansea in Loko L.G.A. of Anambra State.
<u>Status of Project:</u>	On-going. Pilot farms were established at Igbakwu.
<u>Physical Achievement:</u>	Feasibility studies and engineering designs have advanced to the third phase of investigation.

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS
I	II	III	IV	V	VI	VII	VIII
02380100031	Lower Namu River Project	Feasibility study completed since 4%	46,500,000	125,000	Nil	500,000	Amount is required to complete feasibility study which has attained the draft final stage

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector FMWRD/A. II R. B. D. A.
 Head 023800000001
2. Title of Project UPPER MAMU RIVER PROJECT Sub-Head 023801000019
3. Location of Projects (Town & State) ANAMBRA
4. Is project in fifth National Development Plan 1989 - 1993 (if yes, state sector) YES, WATER RESOURCES
5. Total Plan Cost/Allocation (1989 - 1993) ₦7,000,000
6. Phasing of Plan Allocation 1989 ₦1,000,000 - 1990 ₦2,000,000
 1991 ₦2,000,000 1992 ₦1,000,000 1993 ₦1,000,000
7. Appropriation for 1988 10%
8. Amount Required for the 1989 fiscal year ₦2,000,000
 (i) Local _____
 (ii) Foreign _____
9. Amount of outstanding Liabilities or existing contractual commitments on projects payable in 1989 NIL
10. State of completion of project (%) 10% Fees. Study & Design Completed
11. Difficulties Encountered in the implementation of the project Lack of fund to commence project implementation
12. Corrective measures taken on (11) above FMWRD informed of the readiness of the project for implementation
13. Anticipated Target/Performance for the 1989 First phase of project implementation involving tendering, perimeter survey and crop enumeration
14. Estimated completion date 1993
15. Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989 N/A
16. Is project Revenue-Earning? (Yes or no) Yes, when fully Implemented

DETAILS OF CAPITAL EXPENDITURE

UPPER MAMU RIVER PROJECT

Description of Concept

and Scope of Project:

The project is planned to build two dams through a phased development plan. The first dam will be built across the Mamu River about 5km. from Ufuma to divert Mamu waters into two main canals to irrigate 5,953 hectares. The second dam is planned across river Ota-Alu located about 5km. from Ufuma. This dam is intended to provide irrigation water for 3,902ha. Therefore, total area planned for irrigation will be 9,855 hectares. The major crops proposed for double cropping are rice, maize and cowpea.

Specifications and Targets:

Major planned activities for 1989 will include the following:-

- (a) Tender processing and selection of competent contractor
- (b) Enumeration of crops for the infrastructure are
- (c) Perimeter survey for area demarkation.

Justification of Project:

The area is a flood plain of gentle slope. The vegetation in the area is predominantly semi-savannah which in general will reduce per hectare cost of development. There are also abundant water resources from the Mamu River and its tributaries as well as from the rivlets in the area. High yields are therefore expected from the proposed crops.

Location:

The project areas lies mainly in the Upper reaches of Mamu and its tributaries

Physical Achievements:

Feasibility studies and engineering designs have been completed.

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS
I	II	III	IV	V	VI	VII	VIII
023801000019	Upper Mamu River Project (anambra)	Feasibility Study including Eng. Design completed 10%	7,000,000	5,25,000	NIL	82,000,000	Amount is required to commence the preliminary activities for project implementation consisting of tendering, perimeter survey and crop enumeration.

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector FMAWRRD/A.I.R.B.D.A.
Head 023800000004
2. Title of Project Niger Flood Plain (South) Irrigation Project
Sub-Head 023801000056
3. Location of Projects (Town & State) South of Onitsha, Anambra
4. Is project in Fifth National Development Plan 1989 - 1993
(if yes, state sector) Yes, Water Resources
5. Total Plan Cost/Allocation (1989 - 1993) ₦10,000,000
6. Phasing of Plan Allocation 1989 1,000,000 1990 3,000,000
1991 3,000,000 1992 1,500,000 1993 1,500,000
7. Appropriation for 1988 10 e
8. Amount Required for the 1989 fiscal year ₦1,000,000
(i) Local ₦1,000,000
(ii) Foreign _____
9. Amount of outstanding Liabilities or existing contractual
commitments on projects payable in 1989 Nil
10. State of completion of project (%) 4% Feasibility Studies in
Progress
11. Difficulties Encountered in the implementation of the project
Lack of Topo Maps
12. Corrective measures taken on (11) above Contract for Topo
Maps signed and execution is expected to commence in 1989
13. Anticipated Target/Performance for the 1989 Completion of
Feasibility Study, Designs and Costing.
14. Estimated completion date 1993
15. Is project grant or loan or foreign assisted? (If so, by whom
and indicate estimated disbursement for 1989) Grant.
16. Is project Revenue-Earning? (Yes or No) Yes, when fully
implemented.

DETAILS OF CAPITAL EXPENDITURE

NIGER FLOOD PLAIN (SOUTH) IRRIGATION PROJECT

Description of Concept
and Scope of Project;

The project aims at developing 10,000 hectares (net) through drainage and flood protection, the eastern bank of Niger River South of Onitsha for irrigating rice as well as rainfed cultivation of such other crops as yam, cassava, maize and vegetables.

Specifications and
Targets:

Targets during 1989 will include the production of Aerial photographs and topographic maps to facilitate the completion of engineering designs.

Justification of Project:

Suitable land and adequate water resources exist within the project area but full utilization of these resources has been constrained by the high level of flood in the area. Also, the type of land tenural arrangement will make it possible to obtain the desired land area for development. Furthermore, areas which prove unsuitable for arable crop cultivation will be put under forestry to prevent land degradation.

Location:

The area lies on the eastern bank of the Niger River, South of Onitsha and stretches from Odekpe Southwards to Atani, Osomari and Ogidi and eastwards to Okija, Osubulu, Oraifite to Oba.

Physical Achievements:

Feasibility studies and engineering designs have reached the draft final stage. Further progress is however hindered by unavailability of contour maps.

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989 - 1991)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS
I	II	III	IV	V	VI	VII	VIII
...023807000056	Niger Flood Plain (South) Irrigation Project (Onitsha, Anambra)	Feas. Study on-going 4%	N10,000,000	N125,000	Nil	N1,000,000	This amount will cover cost of aerial photo-graphy and topo-mapping as well as completion of feasibility study and engineering designs.

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

Ministry/Department/Sector FMAWRD/AIRBDA

Head 023800000004

Title of Project UKWA IRRIGATION AND LAND RECLAMATION PROJECT

Sub-Head 023801000104

Location of Projects (Town & State) OBETE, UKWA LGA IMO STATE

Is project in fifth National Development Plan 1988 - 1992
(if yes, state sector) YES - WATER RESOURCES

Total Plan Cost/Allocation (1989 - 1993) N8,000,000

Phasing of Plan Allocation 1989 2,000,000 1990 2,000,000
1991 2,000,000 1992 1,000,000 1993 1,000,000

Appropriation for 1988 N500,000.00

Amount Required for the 1989 fiscal year N1,000,000.00

(i) Local _____

(ii) Foreign _____

Amount of outstanding Liabilities or existing contractual commitments on projects payable in 1989 _____

State of completion of project (%) 7%

Difficulties Encountered in the implementation of the project
INADEQUATE FUNDING

Corrective measures taken on (ii) above _____

Anticipated Target/Performance for the 1989 COMPLETION OF ENGINEERING DESIGNS AND SERVICES. COMMENCEMENT OF CONSTRUCTION WORKS.

Estimated completion date 1993

Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989 _____)

Is project Revenue-Earning? (Yes or No) YES

Details of Capital Expenditure

Project Title:

Ukwa Irrigation & land Reclamation Project.

Sector:

Water Resources

Short Description of Scope and Concept:

The Ukwa Project will reclaim 12,000 Ha. of land for irrigating 4000 Ha. for rice pineapples and vegetable production.

Physical Specifications and Targets:

Completion of engineering designs and services. Commencement of construction works.

Justification of the Project:

Reclamation of extension area of land. The project will stimulate agro-industry to capture the full benefits of rural growth linkages.

Location:

Obete - Ukwa LGA.

Status:

On-going

Physical Achievement:

Feasibility study completed and engineering designs of project in progress.

Capital Expenditure:

Completion of engineering designs and services. Commencement of construction works.

₦1,000,000.00

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENT-AGE	PLAN COST/EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	REMARKS
I	II	III	IV	V	VI	VII	VIII
023801000104	Ukwa Irrigation/ Land Reclamation Project	7%	#8,000,000	#780,904.97	NIL	#1,000,000	To complete engineering designs and to process tenders to commence project implementation

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector F.M.A.W.R. & R.D./A.I.R.B.D.A.
 Head 02380000004
2. Title of Project HEADQUARTERS DEVELOPMENT INCLUDING AREA OFFICE
 Sub-head 023801000098
3. Location of Project (Town & State) AGEBALA - OWERRI
4. Is Project in Fifth National Development Plan 1989 - 1993 (if yes, state sector) YES + WATER RESOURCES
5. Total Plan Cost/Allocation (1989 - 1993) N10,000,000.00
6. Phasing of Plan Allocation 1989 2,000,000.00 1990 2,000,000.00
 1991 2,000,000.00 1992 2,000,000.00 1993 2,000,000.00
7. Appropriation for 1988 N100,000.00
8. Amount Required for the 1989 fiscal year N2,010,000.00
 (i) Local _____
 (ii) Foreign _____
9. Amount of outstanding liabilities or existing contractual commitments on projects payable in 1989 _____
10. State of completion of project (%) NOT APPLICABLE
11. Difficulties Encountered in the implementation of the project _____
12. Corrective measures taken on (11) above _____
13. Anticipated Target/Performance for the 1989 _____
OPERATION AND MAINTENANCE OF EXISTING INFRASTRUCTURE
14. Estimated completion date 1993
15. Is Project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989) GRANT
16. Is Project Revenue-Earning? (Yes or No) NO

Details of Headquarters Development Expenditure - Capital

CAPITAL

1.	Construction of 1No. A.G.M.'s House	-	N160,000
2.	Completion of Executive Guest House and Enugu Guest House	-	N700,000
3.	Purchase of land survey/drawing and soil sampling equipment	-	N150,000
4.	Purchase of safety equipment	-	N50,000
5.	Purchase of new Hydromet equipment and maintenance of existing ones	-	N200,000
6.	Improvement and maintenance of Estate roads	-	N300,000
7.	Purchase of 1No. 120KVA Generator for Area Office	-	N250,000
8.	Extension of electricity for Area Office	-	<u>N200,000</u>
			<u>N2,010,000</u>

ANNEX VI

CLASSIFICATION CODE I	TITLE OF PROJECT AND LOCATION II	STATE OF COMPLETION IN PERCENTAGE III	PLAN COST/ EXPENDITURE (1989-1993) IV	CUMULATIVE ALLOCATION RELEASED TO DATE V	OUTSTANDING LIABILITY (IF ANY) VI	APPROPRIATION 1989 VII	REMARKS VIII
023801000098	HEADQUARTERS DEVELOPMENT, AGEBA	Not applicable			₦1,659,097.58	₦2,010,000.00	The amount indicated in required to complete some uncompleted structures, start a new building (A.C.M.'s House) and complete payment on crop compensation.

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROPOSAL FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector: F.M.A.W.R.R.D./A.I.R.B.D.A./Water Resources.
Head 023800000004
2. Title of Project: NGOR-OKPUALA (OBIKE-EZIAMA) PROJECT
Sub-Head 023801000112
3. Location of Projects (Town & State) Ngoc - Okpuala Imo State
4. Is project in fifth National Development Plan 1989-1993 (if yes, state sector) YES - WATER RESOURCES
5. Total Plan Cost/Allocation (1989 - 1993) 115,000,000
6. Phasing of Plan Allocation 1989 11,000,000 1990 11,000,000
1991 12,000,000 1992 1500,000 1993 1500,000
7. Appropriation for 1989 10e
8. Amount Required for the 1989 fiscal year 11,500,000
(i) Local 11,500,000
(ii) Foreign _____
9. Amount of outstanding liabilities or existing contractual commitments on projects payable in 1989 0
10. State of completion of projects (%) 4%
11. Difficulties encountered in the implementation of the project Inadequate Funding
12. Corrective measures taken on (11) above _____
13. Anticipated Target/Performance for the 1989 Completion of Feasibility Study, Engineering Designs, Tender Documents and payment of outstanding bills. Commencement of construction works.
14. Estimated completion date 1993
15. Is project grant or loan or foreign assisted? (If so, by whom and indicate estimated disbursement for 1989) _____
16. Is project Revenue-Earning? (Yes or No) Yes.

Details of Capital Expenditure

Project Title: Ngor - Okpuala(Obike Eziama) Irrigation Project.

Sector: Water Resources

Short Description of: The Project will irrigate

Scope and Concept: 5,000 Ha. of land through direct pumping from Ogochia River for maize Production.

Physical Specifications: and Targets Completion of feasibility study, engineering designs and tender documents.
Payment of outstanding bills and commencement of construction works.

Justification of Project: The Project is intended to contribute immensely to the maize requirement of local feedmills within Anambra and Imo States.

Location: Ngor - Okpuala

Status: On-going.

Physical Achievement: The feasibility study has reached an advanced stage of completion. Topo - mapping has been completed.

Capital Expenditure: Completion of feasibility study, engineering designs and tender documents. Payment of outstanding bills and commencement of construction works - ₦1,500,000.

ANNEX VI

CLASSIFICATION CODE I	TITLE OF PROJECT AND LOCATION II	STATE OF COMPLETION IN PERCENTAGE III	PLAN COST/ EXPENDITURE (1989-1993) IV	CUMULATIVE ALLOCATION RELEASED TO DATE V	OUTSTANDING LIABILITY (IF ANY) VI	APPROPRIATION 1989 VII	REMARKS VIII
023801000112	NGOR-OKFUALA (OBIKE-EZIANWA) PROJECT	4%	M5,000,000	M374,727.43	NIL	M1,500,000	Amount required to complete feasibility study and engineering designs and to commence preliminary activities for project implementation consisting of tendering, perimeter survey and crop enumeration.

ANNEX VIA

CAPITAL PROGRAMME 1989 ADVANCE PROJECT FORM

Separate Form Must Be Completed For Each Project/Subhead

1. Ministry/Department/Sector FNAM/RI/A.I.R.I.D.A.
Head 02380000000
2. Title of Project BOREHOLE DEVELOPMENT Sub-Head 023801000120
3. Location of Projects (Town & State) AMBERA AFD IMO STATE
4. Is project in fifth National Development Plan 1988-1992
(if yes, state sector) YES, WATER RESOURCES
5. Total Plan Cost/Allocation (1989 - 1993) RS,000,000
6. Phasing of Plan Allocation 1989 1,000,000 1990 1,000,000
1991 1,000,000 1992 1,000,000 1993 1,000,000
7. Appropriation for 1988 RS,000,000
8. Amount required for the 1989 fiscal year RS,000,000
(i) Local _____
(ii) Foreign _____
9. Amount of outstanding Liabilities or existing contractual
commitments on projects payable in 1989 NIL
10. State of completion of project (%) _____
11. Difficulties Encountered in the implementation of the project _____
12. Corrective measures taken on (11) above _____
13. Anticipated Target/Performance for the 1989 Completion of
additional 20 Nos. Boreholes in the first phase of the National
Borehole Programme and drilling of 20 Nos. New Boreholes
through direct drilling programme.
14. Estimated completion date _____
15. Is project grant or loan or foreign assisted? (If so, by whom
and indicate estimated disbursement for 1989 Grant Assisted
16. Is project Revenue-Earning? (Yes or No) YES

Details of Capital Expenditure
Underground Water Resources
Boreholes Programme (Agriculture/Water Resources)

Description of Scops and Concept of Project The programmes at completion and commissioning of the inherited National Boreholes phase I programme during 1989 in Anambra and Imo States.

Physical Specifications and Targets

- (i) Completion of 20 of the National borehole in Anambra and Imo States.
- (ii) Providing distribution network within 1km radius.
- (iii) Repair of 1No. rig and routine serving and purchase of spare parts for 2 Nos. drilling rigs.

Justification of the Project

Drilling of boreholes to provide potable water and for industrial uses is an essential component of rural development programme. Many towns and villages in Anambra and Imo States do not have access to good drinking water.

Location Covers the entire Anambra and Imo State.

Status On-going

Physical Achievements 2 No drilling rigs are available and some casing materials have been purchased. Geophysical studies on some locations have been completed. Commendable progress made in completing the 1st Phase of the National Borehole Programme.

Capital Expenditure

- (1) Completion of 20 No. National boreholes = (N1,500,000.00)
(to be provided by F. D. W. R.)
- (2) Purchase and installation of overhead tanks = N368,000
- (3) Purchase of generating sets and pumps
N1,632,000

Total = N2,000,000

Recurrent Costs

- (i) Working capital for drilling boreholes 320,00
- (ii) Plumbing and other operational costs N50,000.00
- (iii) Purchase of rig accessories and spares N 1,500.00
- (iv) Purchase of screening materials N130,000.00

Total N 1,000,000

Grand Total N3,000,000

ANNEX VI

CLASSIFICATION CODE	TITLE OF PROJECT AND LOCATION	STATE OF COMPLETION IN PERCENTAGE	PLAN COST/ EXPENDITURE (1989-1993)	CUMULATIVE ALLOCATION RELEASED TO DATE	OUTSTANDING LIABILITY (IF ANY)	APPROPRIATION 1989	R E M A I N I N G S
I	II	III	IV	V	VI	VII	VIII
023801000120	BOREHOLE DEVELOPMENT	70%	¥5,000,000			¥2,000,000	The amount indicated is to be used in completing 20 of the boreholes under the National Boreholes programme and drilling 20 additional boreholes under the Authority's direct drilling programme.

ANAMBRA IMO RIVER BASIN DEVELOPMENT AUTHORITY, OWERRI
SUMMARY OF COMMITMENTS AS AT 31st AUGUST, 1988

S/NO.	NAME OF PROJECT	SUB-HEAD	TOTAL AMOUNT OF CONTRACT		CUMULATIVE PAYMENTS		BALANCE	
			#	K	#	K	#	K
1.	Lower Anambra Irrigation Project	001	25,871	864.86	18,116	218.84	7,755	645.02
2.	Idemili Flood Project	002	1,435	959.00	718	51.08	717	377.92
3.	Niger Flood Flaine	003	1,343	907.55	814	812.17	529	095.38
4.	Nyaba Irrigation Project	004	95	000.00	17	250.00	77	757.00
5.	Upper Imo Project	005	1,814	362.25	1,170	489.38	643	872.87
6.	Allied Imo Project	006	3,597	760.30	2,462	471.75	4,135	298.55
7.	Lower Imo Project	007	375	000.00	262	500.00	112	500.00
8.	Other Erosion Control Imo	008	38	500.00	34	650.00	3	850.00
9.	Crop Compensation	009	16,716	954.64	5,821	440.20	10,895	514.44
10.	Local Purchase Orders	010	356	648.97	-	-	356	648.97
11.	Salaries/Wages/Allowances	011	300	000.00	-	-	300	00.00
		TOTAL	51,945	957.57	29,418	413.42	22,527	543.15

ANAMBRA IMO RIVER BASIN DEVELOPMENT AUTHORITY OMBELI -
ANAMBRA OPERATIONS CONTRACT COMMITMENTS ON LOWER ANAMBRA IRRIGATION
PROJECT AS AT 31st AUGUST, 1989

S/NO.	NAME OF CONTRACTOR OR CONSULTANT	SUB-HEAD	NATURE OF CONTRACT	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
				₦ K	₦ K	₦ K
1.	Chilo Sci-Aqua Systems	001	Feasibility study of Lower Mamu	625,000.00	347,250.00	277,750.00
2.	Nippon Koei CO. Limited		Technical Consultancy Services on Supervision of Lower Anambra	5,915,016.00	2,700,218.04	3,214,797.96
3.	Chibuzo Enterprises		Sub-Structure of Feed-Mill Project at Mgbakwu	105,930.00	100,570.25	5,359.75
4.	John Okonkwo		Sales Office at Mgbakwu (Terminated)	10,000.00	3,000.00	6,000.00
5.	Papricorn Nig. Limited		Video Documentary of Omor Project	39,500.00	22,500.00	17,000.00
6.	Taisei C-Itch Consortium		Lower Anambra Irrigation Project	11,120,000.00	10,179,722.10	940,277.60
7.	Emeka Ozuah (TERMINATED)		1No. Intermediate staff Quarters at Mgbakwu	70,000.00	26,600.00	43,400.00
8.	Denag Nig. Limited.		1No. Office/Laboratory at Mgbakwu	40,000.00	6,000.00	34,000.00
9.	Ayanwueze & Sons Limited		1No. Garage at Omor	30,000.00	25,500.00	4,500.00
10.	Chief L. N. Mecha (TERMINATED)		1No. Intermediate Staff Quarters at Omor	70,000.00	10,500.00	59,500.00
11.	M. C. Encwe & Co. (TERMINATED)		1No. Staff Quarters with boys Qrts. at Omor	96,852.40	75,409.73	21,442.62

AWAHERA OPERATIONS CONTRACT COMMITMENT ON L.A.I.P. CONTINUED

S/NO.	NAME OF CONTRACTOR OR CONSULTANT	SUB-HEAD	NATURE OF CONTRACT	VALUE OF CONTRACT		AMOUNT PAID		BALANCE	
				£	Y	£	Y	£	Y
12.	J. N. Idoko & Sons		11. Intermediate Staff Quarters at Olor	70,000.00		67,050.00		2,950.00	
13.	J. O. Afolokuba & Sons		11. Clinic House at Olor	105,702.90		77,946.77		30,762.79	
14.	P. Onuma-Juru (TERMINATED)		11. Club House at Olor	127,374.01		61,728.43		68,585.59	
15.	Denno Construction Co. (TERMINATED)		11. Snr. Staff Qrts. with boys Qrts at Olor	96,852.00		44,172.57		52,439.57	
16.	Taisei C-Itoh Consortium		L.A.I.P. Pumping Station Equipment	428,205.00		342,564.77		85,640.23	
17.	Taisei C-Itoh Consortium		Provision for Price Fluctuation up to 25th certificate	3,824,082.25		3,824,082.25		-	
18.	Orcsland Engineering Services		Construction of Workshop for General Service	81,954.00		77,856.37		4,097.63	
19.	Eskon Engineering Limited		Construction of Fuel & Lubricant Storage House	64,112.10		60,976.49		3,205.61	
20.	Midland Engineering Co. LTD.		Incompleted Store House & Fuel lump at Olor	310,474.55		294,893.82		-5,520.73	
21.	Messrs C.-L. Mbatgu & Bros. Nig. Co.		Construction of Maintenance & Repair Workshop at Olor	107,943.65		63,728.57		44,215.08	
22.	Taisei C-Itoh Consortium		Construction of Mech. Workshop at L.A.I.P. Olor	160,000.00		-		160,000.00	
23.	Taisei C-Itoh Consortium		Operation & Maintenance Equip. Procurement	60,000.00		-		60,000.00	

ANAMBA OPERATIONS CONTRACT COMMITMENT OF L.A.I.P. CONTINUED

S/NO.	NAME OF CONTRACTOR OR CONSULTANT	SUB-HEAD	NATURE OF CONTRACT	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
				₹	₹	₹
24.	Taisei C-Itch Consortium		Construction of Rice Mill Complex at L.A.I.P. Omor	2,30,000.00		2,30,000.00
				25,87,864.86	18,16,218.94	7,755,645.92

* NOTE: Serial Number 17 - Lease Fluctuation has no contract sum, so only total payments and approved certificates not paid are shown herewith.

CONTRACT COMMITMENTS AS AT 31ST AUGUST, 1988

IDEMILI FLOOD PLAIN

S/NO.	NAME OF CONTRACTOR/CONSULTANT	S/HD	NATURE OF CONTRACT	VALUE OF CONTRACT M : K	AMOUNT PAID M : K	BALANCE M : K
1.	Chilo Sol-Aqua Systems	002	Supervision of all Construction Activities relating to Flood Control, Odekpe Irrigation Project.	257,787.00	141,782.85	115,004.15
2.	Chilo Sol-Aqua Systems		Constructing a 3km Dyke at Rice Irrigation Odekpe	600,448.00	341,878.38	254,569.62
3.	Adderly-Dors Nig. Ltd.		Constructing 2km Dyke at Rice Irrigation Odekpe	404,299.00	60,644.85	343,654.15
4.	Chilo Sol-Aqua Systems		Hydrographic and Shoreline Surveys, Owali, Odekpe Creek	173,425.00	170,275.00	3,150.00
			TOTAL =	1,435,959.00	718,581.08	717,377.92

CONTRACT COMMITMENT AS AT 31ST AUGUST, 1988

NIGER FLOOD PLAINS

S/NO.	NAME OF CONTRACTOR/CONSULTANT	S/HD	NATURE OF CONTRACT	VALUE OF CONTRACT M : K	AMOUNT PAID M : K	BALANCE M : K
1.	Skoup & Co. Ltd.	003	Feasibility Study & Engineering Design of Niger Flood Plains South	850,000.00	425,000.00	425,000.00
2.	Nachi Construction Co.		Construction of No. Plant House at Otuocha	8,000.00	3,200.00	4,800.00
3.	Nigerian Shipbuilders Ltd.		Building of 2 Ferrries	480,000.00	381,000.00	99,000.00
4.	Fabs & Associates, Nteje		Erection of a Smoking Kiln house at Umuekete, Fish Farm (Job Order 4032 of 25/8/81)	5,907.55	5,612.17	295.38
			TOTAL =	1,343,907.55	814,812.17	529,095.38

CONTRACT COMMITMENTS AS AT 31ST AUGUST, 1988

NYABA IRRIGATION PROJECT

S/NO.	NAME OF CONTRACTOR/CONSULTANT	S/WD	NATURE OF CONTRACT	VALUE OF CONTRACT K	AMOUNT PAID K	BALANCE K
1.	A. S. Nwaka	004	1 No. Office Block at Abakaliki	95,000.00	17,250.00	77,750.00
			TOTAL =	95,000.00	17,250.00	77,750.00

CONTRACT COMMITMENTS AS AT 31ST AUGUST, 1988

UPPER IMO PROJECT

S/No.	NAME OF CONTRACT/CONSULTANT	SUB-HEAD	NATURE OF CONTRACT	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
1.	Obinali Enterprises, 92 Owerri Road, Okigwe.	005	1No. Project Manager's Duplex (TERMINATED)	118,000.00	50,445.00	67,555.00
2.	Andrew U. Nwogu & Bros. Umuahia.	"	11No. Smoking Kiln at Ndumoko/Ndionuoha	4,407.55	3,559.08	848.47
3.	Chief M. C. Mbadive.	"	1No. Office Block at Ndumoko (TERMINATED)	95,000.00	14,250.00	80,750.00
4.	Mrs. V. N. Aguiyi Ironsi Umuahia	"	1No. Intermediate Staff Qrts. at Ndionuoha.	70,000.00	66,500.00	3,500.00
5.	I. I. Nwankwo & Partners	"	Feasibility Study Inyang River Project	487,500.00	365,250.00	119,250.00
6.	Chief A. E. Nwele	"	Farm Stores at Lokpanta	107,955.30	25,909.33	82,045.97
7.	Mr. C. O. Mbogu,	"	Rehabilitation of Feedmill Office/Lab. at Lokpanta	75,569.40	70,778.17	4,790.97
8.	Knul Consultants	"	Feasibility Study Asu-Ezeaku (Anasiri)	750,000.00	470,161.00	279,836.50
9.	Chibso Nig. Enterprises	"	Sub-Structures Feedmill Lokpanta	105,930.00	100,633.50	5,296.50
	T O T A L =			1,814,362.25	1,170,489.38	643,872.87

CONTRACT COMMITMENT AS AT 31ST AUGUST, 1988

ALLIED IMO PROJECTS

S/No.	K.I.D.C.E. CONTRACTOR/CONSULTANT - S/HD	NATURE OF CONTRACT	VALUE OF CONTRACT	ACCOUNT ID	BALANCE
1.	Benhol Farms Limited	006 Feasibility Study, etc. of Igwu River	875,000.00	525,000.00	350,000.00
2.	Knight Frank & Rutely Nig.	Feasibility Study Egbema/Oguta	850,000.00	425,000.00	425,000.00
3.	Survey Services & Property	Plant House at Egbema	8,000.00	1,200.00	6,800.00
4.	L.C. Anyanwu	Farm House at Nticha (TERMINATED)	180,000.00	27,000.00	153,000.00
5.	Bethel Building Construction	1 No. Plant House at Nticha	8,000.00	1,200.00	6,800.00
6.	Fans New World Inter. Agency	1 No. Office Block at Egbema	95,000.00	72,200.00	22,800.00
7.	Alex Ogueforor C. Ltd.	1 No. Labour Line at H/quarters (TERMINATED)	60,000.00	17,100.00	42,900.00
8.	Chief Est. Ibo	Fencing Headquarters Compound	168,000.00	158,000.00	10,000.00
9.	Amalco & Sons	1 No. Guest House at H. (TERMINATED)	161,052.30	127,754.65	33,297.65
10.	I/S Interweld Resources	10 No. Farm Umunwawa	242,702.00	23,566.90	219,135.10
11.	Baloch-Jalor Consultants & Engr. P/B. Ltd.	Design of Final Control Structure for Ndiegoro Area	950,000.00	867,500.00	82,500.00
TOTAL =			3,597,760.00	2,462,471.75	1,135,288.25

CONTRACT COMMITMENTS AS AT 31ST AUGUST, 1986

LOWER INC PROJECTS

S/No.	NAME OF CONTRACTOR/CONSULTANT	SUB-HEAD	NATURE OF CONTRACT	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
1.	Industrial Dynamics Nig. Ltd	007	Feasibility Survey Ngor-Okebala	375,000.00	262,500.00	112,500.00
EROSION CONTROL						
1.	Mr. J. N. Cbi	008	Construction of Drainage Channels at Umude	9,000.00	8,100.00	900.00
2.	Sam Okwulemie		- do -	29,500.00	26,550.00	2,950.00
				38,500.00	34,650.00	3,850.00
CROPS COLONISATION						
1.	Sundry Beneficiaries	009	Colonisation for Economic Plants and Crops	5,047,905.59	3,350,929.25	1,696,976.34
				5,047,905.59	3,350,929.25	1,696,976.34

ANAMERA/IMO RIVER BASIN DEVELOPMENT AUTHORITY - OWERRI - ANAMERA OPERATIONS

ANAMERA CROP COMPENSATION COMMITMENTS AS AT 31ST AUGUST 1988

S/No.	NAME OF PROJECT	HECTARE	TOTAL SUM OF COMPENSATION	AMOUNT PAID	BALANCE
1.	Mgbaku	183.00	332,722.00	171,047.89	161,674.11
2.	Uruocha	251.10	635,115.65	334,867.18	303,248.47
3.	Umabi	205.00	456,000.00	225,000.00	229,000.00
4.	Omor	4,985.00	9,954,201.10	1,592,535.78	6,361,662.62
5.	Abakaliki	192.00	286,010.00	143,057.10	142,952.90
	T O T A L =	5,819.10	11,669,049.05	2,470,510.95	9,198,538.10

ANAMERA IMO RIVER BASIN DEVELOPMENT AUTHORITY, OWERRI
CONTRACT COMMITMENTS AS AT 31ST AUGUST, 1988
LOCAL PURCHASE ORDERS

S/NO.	NAME OF CONTRACTOR/CONSULTANTS	LPO. NO	NATURE OF CONTRACT/SUPPLIES	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
1.	Harosen & Co., Owerri	3625	Compressors for A/C.	7,025.31	-	7,025.31
2.	African Petroleum, P.H.	3627	Supply of Lubricants	28,726.00	-	28,726.00
3.	African Petroleum, P.H.	3628	Supply of Lubricants	33,564.15	-	33,564.15
4.	H. O. U. Ani, Abakpa	3635	Supply of Petrol to Enugu Office	2,002.00	-	2,002.00
5.	SCOATRAC, Enugu	3640	Supply of Spare Parts	3,000.00	-	3,000.00
6.	Mrs. K. Ogakum, Onitsha	3644	Supply of 1No 900 x 20 Michallin tyres	14,375.00	-	14,375.00
7.	V. O. Mbaegbu, Owerri	3667	Supply of various items of buildings materials	6,032.40	-	6,032.40
8.	B. Chukwueta, Enugu	3670	" "	5,969.70	-	5,969.70
9.	Godwon Kwachukwu, Owerri	3695	Supply of Forestry Pollythene bags.	9,900.00	-	9,900.00
10.	SCOATRAC, Enugu	3707	Supply of Generator Spare Parts	11,236.00	-	11,236.00
11.	Mr. M. E. Uzoenyi, Enugu	3717	Supply of protective clothing materials	2,587.50	-	2,587.50
12.	SCOATRAC, Enugu	3720	Supply of Spare Parts	12,270.66	-	12,270.66
13.	J. Onumaegbulam, Owerri	3732	Supply of Electrical Materials	2,728.00	-	2,728.00

S/NO.	NAME OF CONTRACTOR/CONSULTANTS	LPO NO.	NATURE OF CONTRACT/SUPPLIES	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
14.	P. C. Asuri, Owerri	3733	Supply of Electrical materials	4,477.00	-	4,477.00
15.	G. Offorah, Omer	3734-3737	Supply of Workshop Tools	1,757.50	-	1,757.50
16.	Emmyone Enterprises, Umuahia.	3741-3742	Supply of Spare Parts for A/C & fridges	9,916.00	-	9,916.00
17.	Mrs. V. Eze, Ogidi	3745	Supply of forestry polythene bags	5,500.00	-	5,500.00
18.	Mr. J. Obianefo	3746	" " "	5,500.00	-	5,500.00
19.	Chief K.C. Ifeanyi, Moano	3747-48	Supply of Electrical materials	8,182.25	-	8,182.25
20.	Stephen Orji, Owerri	3750	Supply of perforated nursery bags	6,050.00	-	6,050.00
21.	Mrs. E. Okonkwo, Enugu	3752	" " "	5,050.00	-	5,050.00
22.	B.C. Okonkwo, Umuahia	3754	Supply of Electrical materials	2,012.50	-	2,012.50
23.	H. Egbuna, Owerri	3756	Supply of Uniform Materials	5,798.00	-	5,798.00
24.	Athan Akpunonu, Owerri	3757	" " "	5,347.50	-	5,347.50
25.	Uzoma O. Izuogu, Aba	3759	" " "	4,645.30	-	4,645.30
26.	T. Obianefo, Owerri	3760	" " "	5,940.00	-	5,940.00
27.	C. U. C. Duru, Owerri	3761	" " "	7,050.00	-	7,050.00
28.	Mrs. D. N. Atulomeh, Umuahia	3762	" " "	2,722.50	-	2,722.50

S/NO.	NAME OF CONTRACTOR/CONSULTANT	LPO NO.	NATURE OF CONTRACT/SUPPLIES	VALUE OF CONTRACT	AMOUNT PAID	BALANCE
29.	Emmyone Enterprises, Umuahia	3763-3764	Supply of spare parts for typewriters	5,670.50	-	5,670.50
30.	Nive O. Enterprises, Owerri	3769-3770	Supply of photocopying machine spare parts	8,332.50	-	8,332.50
31.	Jokon Enterprises Nig., Enugu	3771	Supply of 1no petrol tank for Enugu Office	2,242.50	-	2,242.50
32.	J.S.O. Nwokike, Onitsha	3772	Supply of motor spare parts	5,500.00	-	5,500.00
33.	African Petroleum, P.M.	3773	Supply of lubricants	41,949.60	-	41,949.60
34.	C. Medunatum, Onitsha	3777	Supply of plumbing materials	5,280.00	-	5,280.00
35.	Director Water Engr. Team, Owerri	3778-3779	" " "	7,480.00	-	7,480.00
36.	Austin Eze, Abe	3781	Supply of Tractor Spare Parts	3,740.00	-	3,740.00
37.	Richard U.E. Ijeaku, Abe	3782	Supply of building materials	6,500.80	-	6,500.80
38.	Patrick Ijeoma, Owerri	3783	" " "	6,500.80	-	6,500.80
39.	E.S. Obi, Emekuku, Owerri	3784	Supply of motor vehicle tyres & tubes	4,785.00	-	4,785.00
40.	Ukwood Furniture & Co. Onitsha	3785	Supply of various items of furniture & equipment	8,000.00	-	8,000.00
41.	Chima E. Chima, Awka	3786	Supply of Electric typewriter etc.	25,300.00	-	25,300.00
			TOTAL =	#356,648.97	-	#356,648.97

FEDERAL MINISTRY OF AGRICULTURE, WATER RESOURCES
AND RURAL DEVELOPMENT

ANAMBRA/IMO RIVER BASIN DEVELOPMENT AUTHORITY

PERSONNEL COSTS

(BASIS ON PROPOSED STAFF LIST)

KM10
OWERRI - ABA ROAD
ACBALA.

SEPTEMBER, 1988.

ANNEX III

RECURRENT EXPENDITURE

HEAD 023800000004.

MINISTRY: F.M.A.W.R.R.D./A.I.R.B.D.A.

Classification Code and Type	G.L.	Estimate 1988		Estimate 1989		Actual Expenditure 1987 M
		No. of Staff	M	No. of Staff	N	
	01	-	-	-	-	187,068
	02	47	77,550.00	47	3,060	427,680
	03	70	121,800.00	70	147,840	586,694
	04	63	120,960.00	63	150,066	396,324
	05	30	68,220.00	30	81,180	154,632
	06	325	910,650.00	359	1,114,700	156,492
Total for 01-06		535	1,299,180	569	1,656,846	1,708,890
	07	37	135,198.00	37	163,170	237,762
	08	18	81,432.00	18	97,524	287,190
	09	15	86,400.00	15	103,230	298,185
	10	15	103,950.00	15	123,480	290,772
	11	-	-	-	-	-
	12	39	338,598.00	39	435,474	112,866
	13	110	1,063,920.00	110	1,322,640	119,344
Total for 07-13		234	1,809,498.00	234	2,245,518	1,346,119
	14	11	118,998.00	8	107,280	43,272
	15	6	36,234.00	6	92,628	84,546
	16	1	13,506.00	1	17,046	13,506
	17	-	-	-	-	-
Total for 14-17		18	168,738.00	15	216,954	141,324
Total for 01-17		787	3,277,416.00	818	4,119,318	3,196,333
Directors-General						
Ministers						
Allowances			655,483		1,049,632	644,754
Serial Total		787	3,932,899	818	5,168,950	3,841,087

ANADRA/TMO RIVER BASIN DEVELOPMENT AUTHORITY
1989 DRAFT ESTIMATE, PERSONNEL ENROLLMENT
ADMINISTRATION AND FINANCE DEPARTMENT

APPENDIX III

S/No	TITLE OF POST	GL	ESTABLISHMENT 1989		FILLED	VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE				NOS.	EXPENDITURE
	<u>HEADQUARTERS</u>								
	<u>ADMINISTRATION SECTION</u>								
1.	General Manager	16	1		1	-	-	1	17,046.00
2.	Assistant General Manager (A.G.M.)	15	1		1	-	-	1	15,438.00
3.	Secretary Admin.	14	1		-	1	-	1	12,410.00
4.	Under Secretary	13	1		1	-	2	3	25,072.00
5.	Asst. Chief Public Rel. Officer	13	1		-	1	-	1	14,048.00
6.	Chief Executive Officers	12	6		3	-	4	6	72,144.00
7.	Asst. Chief Legal Officer	13	1		1	-	-	1	12,024.00
8.	Personal Secretary I	10	4		2	-	-	4	32,928.00
9.	Confidential Secretary	09	12		10	-	2	12	82,584.00
10.	Senior Typists	07	11		6	-	5	11	48,510.00
11.	Asst. Executive Officer	06	4		2	-	2	4	12,200.00
12.	Typists Grade I	06	8		9	-	-	8	26,400.00
13.	Sr. Clerical Officer	05	14		20	-	-	14	37,884.00
14.	Radio Operator	03	2		1	-	1	2	4,224.00
15.	Telephone Operator	03	2		1	-	1	2	4,224.00
16.	Messenger	03	20		20	-	-	20	42,240.00

APPENDIX III

ANAMBRA/IMO RIVER BASIN DEVELOPMENT AUTHORITY
1989 DRAFT ESTIMATE, PERSONNEL EMOLUMENT - ADMINISTRATION & FINANCE DEPARTMENT

/NO.	TITLE OF POST	GL	ESTABLISHMENT 1988		FILLED.	VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE				NOS.	EXPENDITURE
1.	HEADQUARTERS (Administration Section)								
7.	Cleaner	03	20		20	-	-	20	42240.00
	Sub Total								524,616.00
	Security Section								
18.	Principal Security Officer	12	1		-	-	1	1	11,166.00
19.	Higher Security Officer	08	1		1	-	1	2	15,836.00
20.	Assistant Security Officer	06	2		2	-	-	2	6,600.00
21.	Security Guard	02	30		70	-	-	30	59,400.00
	Sub Total								88,002.00
	Audit Section								
22.	Chief Internal Auditor	14	1		-	1	-	1	13,410.00
23.	Asst. Chief Internal Auditor	13	1		-	-	-	1	12,024.00
24.	Executive Officer (Audit)	07	2		-	-	-	2	8,820.00
25.	Senior Clerical Officers (Audit)	05	5		3	-	2	5	13,530.00
	Sub Total								47,784.00
	Primary School Section								
26.	Headmaster/Mistress	10	1		1	-	-	1	8,232.00
27.	Assistant Headmaster/Mistress	08	1		1	-	-	1	5,418.00
28.	Teachers	07	10					10	44,100.00
29.	Porters	03	3					3	6,336.00

ANAMBRA/IMO RIVER BASIN DEVELOPMENT AUTHORITY
1989 DRAFT ESTIMATE, PERSONNEL EMPLOYMENT
APPENDIX III

S/NO.	TITLE OF POST	CL	ESTABLISHMENT 1988		VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			ESTABLISHMENT 1988 NOS.	EXPENDITURE			NOS.	EXPENDITURE
	<u>CLINIC SECTION</u>							
30.	Medical Director	13	1		-		1	12024
31.	Nursing Sister/Staff Nurse	12	1		-		1	11166
32.	Midwife/Surse	09	1		-		3	6822
33.	Health assistants	04	1		-		4	2382
	<u>SUB TOTAL</u>							96480
	<u>CATERING SECTION</u>							
34.	Catering Officer	10	1		1		1	3232
35.	Cook	06	1		-		3	2300
36.	Steward	03	2		-		4	4224
	<u>SUB TOTAL</u>							15756
	<u>FINANCE (ACCOUNTS) DIVISION</u>							
37.	Chief Accountant	14	1		-		1	13410
38.	Assistant Chief accountant	13	1		-		3	36072
39.	Principal Stores Officer	12	1		-		1	11166
40.	Senior Stores Officer	09	1		-		1	6882
41.	Stores Officer	07	2		-		2	8820
42.	Asst. Exec. Officer (accounts)	06	2		-		2	6600
43.	Senr. Clerical Officer (acct)	05	6		-		6	16236

ANAMERA/IMO RIVER BASIN DEVELOPMENT AUTHORITY
 1989 DRAFT ESTIMATE, PERSONNEL EMOLUMENT
 ADMINISTRATION AND FINANCE DEPARTMENT

APPENDIX III

S/NO.	TITLE OF POST	G.I.	ESTABLISHMENT 1988 NOS.	EXPENDITURE	FILLED	VACANCY	ADDITIONAL	PROPOSAL 1989 NOS.	EXPENDITURE
44.	Stores Assistant	03	3		3	-		3	6,336.00
45.	Stores Attendants	02	2		2	-		2	3,960.00
	Sub Total								109,482.00
	<u>Transport Section</u>								
46.	Higher Transport Officer	08	1		1	-		1	5,418.00
47.	Chief Driver	07	1		1	-		1	4,416.00
48.	Senior Driver/Mechanic	06	3		3	-		3	9,900.00
49.	Motor Driver/Mechanic	04	16		20	-		16	36,112.00
50.	Motor Drivers/Mates	03	9		3	-	1	9	19,008.00
	Sub Total								75,846.00
	<u>Land Tenure and Resettlement Section</u>								
51.	Principal Land Officer	12	1		1	1		1	11,166.00
52.	Land Officer	08	1		-	1		1	5,418.00
53.	Assistant Land Officer	06	1		-	1		1	3,300.00
54.	Enumerators	04	4		-	4		4	9,528.00
	Sub Total								29,412.00

ANAMBRA/IMO RIVER BASIN DEVELOPMENT AUTHORITY
1988 DRAFT ESTIMATE, PERSONNEL EMPLOYMENT

APPENDIX III

PLANNING AND DESIGN DEPARTMENT

S/NO.	TITLE OF POST	CL	ESTABLISHMENT 1987		VACANCY	ADDITIONAL	PROPOSAL FOR 1988	
			NOS.	EXPENDITURE			NOS.	EXPENDITURE
	Designs (Surveyors Division)							
55.	Assistant General Manager (P. & D)	15	1				1	1543.
56.	Chief Engineer (Design)	14	1				1	1340
57.	Assistant Chief Engineer (Elect)	13	1					1204
58.	Assistant Chief Engineer (Mech.)	13	1					1204
59.	Assistant Chief Engineer (Civil)	13	1					1204
60.	Assistant Chief Hydrologist	13	1					202
61.	Assistant Chief Geologist	13	1					2024
62.	Hydrogeologist	13	1				1	2024
63.	Geophysicist	13	1				1	2024
64.	Quantity Surveyor	13	1				1	2024
65.	Lead Surveyor	13	1				1	2024
66.	Chief Tech. Officer (Civil)	13	1				1	2024
67.	Chief Tech. Officer (Mech.)	13	1				1	2024
68.	Chief Tech. Officer (Elect)	13	1				1	2024
69.	Technical Assistants	06	6				6	19800
	Sub Total						20	192,936.00

ANAMBA IWO RIVER BASIN DEVELOPMENT AUTHORITY
1989 DRAFT ESTIMATE, PERSONNEL EMOLUMENT
PLANNING & DESIGN DEPARTMENT
APPENDIX III

S/NO	PLANNING/MONITORING/TRAINING/DATA COLLECTION DIVISION	GL	NOS	ESTABLISHMENT 1989		VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
				FILLED	EXPENDITURE			NOS	EXPENDITURE
70.	Chief Planning Officer	14	1					1	13410
71.	Asst. Chief Planning Officer (Elect)	13	1					1	12024
72.	Asst. Chief Planning Officer (Civil)	13	1					1	12024
73.	Asst. Chief Planning Officer (Mech)	13	1					1	12024
74.	Asst. Chief Planning Officer (Water)	13	1					1	12024
75.	Asst. Chief Land Surveyor	13	1					1	12024
76.	Asst. Chief Hydrologist	13	1					1	12024
77.	Asst. Chief Geologist	13	1					1	12024
78.	Asst. Chief Geophysicist	13	1					1	12024
79.	Asst. Chief Ceophysicist	13	1					1	12024
80.	Asst. Chief Economist	13	1					1	12024
81.	Asst. Chief Training Officer	13	1					1	12024
84.	Asst. Chief Sociologist	13	1					1	12024
83.	Asst. Chief Statistician	13	1					1	12024
84.	Chief Tech. Officer (Civil)	13	1					1	12024
85.	Chief Tech. Officer (Mech)	13	1					1	12024
86.	Asst. Chief Soil Scientist	13	1					1	12024

APPENDIX-III

PLANNING & DESIGN CONTD.

PLANNING & DESIGN CONTD.

S/N	PLANNING/MONITORING/TRAINING/DATA COLLECTION DIVISION	POST	ESTABLISHMENT/1988	DATA FILED	VACANCY	ADDITIONAL PROPOSAL FOR 1988	EXPENDITURE
87.	Chief Tech. Officer (Elect)	13	1		1	1	12,024
88.	Chief Tech. Officer (Lands)	13	1		1	1	12,024
89.	Chief Tech. Officer (Agric)	13	1		1	1	12,024
90.	Asst. Chief Irrig. Agronomist	13	1		1	1	12,024
91.	Asst. Tech. Officer	06	10				33,000
92.	Asst. Water Res/Engr./Officer	13	1		1	1	12,024
93.	Asst. Chief Librarian	13	1		1	1	12,024
	SUB-TOTAL						210,538.00
	IRRIGATION AGRONOMY AND EXTENSION DIVISION						
94.	Chief Agronomist	14	1			1	13,410
95.	Asst. Chief Scientific Officer	13	1		1	1	12,024
96.	Asst. Chief Soil Conservationist	13	1		1	1	12,024
97.	Asst. Chief Public Health Officer	13	1		1	1	12,024
98.	Asst. Chief Forestry Officer	13	1		1	1	12,024
99.	Asst. Chief Fisheries Officer	13	1		1	1	12,024
100.	Chief Tech. Officer (Soils)	13	1		1	1	12,024
101.	Chief Tech. Officer (Forestry)	13	1		1	1	12,024
102.	Chief Tech. Officer (Fisheries)	13	1		1	1	12,024

APPENDIX III

S/No.	PLANNING/MONITORING/TRAINING/DATA COLLECTION DIVISION	CL	ESTABLISHMENT 1988 NOS	FILLED	VACANCY	ADDITIONAL NOS	PROPOSAL FOR 1989 EXPENDITURE
103	IRRI. AGRONOMY & EXTENSION DIV. CONTD. Asst. Tech Officers	06	6			6	19,800
	SUB TOTAL						129,024. =
104.	CONSTRUCTION, OPERATIONAL & MAINTENANCE DEPT. Asst. General Manager (COM)	15	1	1		1	15,438
105.	Chief Engineer (Const.)	14	1			1	13,410
106.	Asst. Chief Engineer (Civil)	13	1			1	12,024
107.	Asst. Chief Engineer (Mech)	13	1			1	12,024
108	Asst. Chief Engineer (Elect)	13	1			1	12,024
109.	Asst. Chief Drillers	13	2			2	24,048
110.	Asst. Chief Tech. Officer (Civil)	13	1			1	12,024
111.	Asst. Chief Tech. Officer (Mech)	13	1			1	12,024
112.	Asst. Chief Tech. Officer (Elect.)	13	1			1	12,024
113:	Asst. Chief Tech. Officer (Drillings)	13	1			1	12,024
114.	Asst. Tech. Officer (Irrigation)	13	1			1	12,024
115.	Asst. Tech. Officer (Surveyors)	13	1			1	12,024
116.	Asst. Tech. Officers	06	10			10	33,000
117.	Tech. Officers	07	4			4	17,640
	SUB TOTAL						211,752

APPENDIX III

S/NO	PLANNING/MONITORING/TRAINING COLLECTION DIVISION	GL	ESTABLISHMENT 1987		VACANCY	ADDITIONAL	PROPOSAL FOR 1988	
			NOS	EXPENDITURE			NOS	EXPENDITURE
118	Chief Engineer (Operation)	14	1				1	13410
119	Asst. Chief Water Res. Engr.	13	1				1	12024
120	Asst. Chief Engr. (Civil)	13	1				1	12024
121	Chief Tech. Officers (Civil)	13	2				2	24048
122	Chief Tech. Officer (Mech.)	13	2				2	24048
123	Chief Tech. Officer (Elect)	13	2				2	24048
124	Chief Tech. Officer (Constr)	13	2				2	24048
125	Asst. Tech. Officers	06	20				20	66000
	SUB TOTAL							199,550.00
	MAINTENANCE DIVISION							
126	Chief Engineer (Maintenance)	14					1	17410
127	Asst. Chief Engr. (Civil)	13					1	12024
128	Asst. Chief Engr. (Water)	13					1	12024
129	Asst. Chief Engr. (Mech.)	13					1	12024
130	Asst. Chief Architect	13					1	12024
131	Chief Tech. Officer (Civil)	13					1	12024

APPENDIX III

S/NO.	MAINTENANCE DIVISION CONTD.	CL	ESTABLISHMENT 1988		VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			Nos.	EXPENDITURE			FILLED	NOS. EXPENDITURE
132.	Chief Tech. Officer (Elect.)	13					1	12024.00
133.	Chief Tech. Officer (Mech.)	13					1	12024.00
134.	Chief Tech. Officer (Water)	13					1	12024.00
135.	Asst. Mech.	04					8	19056.00
136.	Mechanics	06					11	36300.00
137.	Senior Tech. Officer (Civil)	09					1	6082.00
138.	Tech. Officer (Civil)	08					1	5418.00
139.	Mech/Mates	03					1	2112.00
140.	Mates	02					3	5940.00
	SUB TOTAL						34	185,310.00

ANAYERA/IMO RIVER BASIN DEVELOPMENT AUTHORITY
1989 DRAFT ESTIMATE, PERSONNEL EVOLVEMENT

APPENDIX III

AREA OFFICE AGULERI

S/NO.	TITLE OF POST	GL NOS.	ESTABLISHMENT 1988		FILLED	VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE				NOS.	EXPENDITURE
141.	Area Officer	15	1					1	13410
142.	Under Secretary	13	1					1	12024
143.	Asst. Chief Accountant	13	1					1	12024
144.	Asst. Chief Engr. (Maintenance)	13	1					1	12024
145.	Senior Asst. Secretary	10	1					1	3232
146.	Principal Civil Engineer	12	1					1	11166
147.	Principal Mech./Elect. Engineer	12	1					1	11166
148.	Principal Hydrologist	12	1					1	11166
149.	Principal Land Surveyor	12	1					1	11166
150.	Principal Quantity Surveyor	12	1					1	11166
151.	Principal Planning Officer	12	1					1	11166
152.	Principal Soil Scientist	12	1					1	11166
153.	Principal Technical Officers	10	7					7	57624
154.	Assistant Technical Officers	06	12					12	39600
155.	Clerical Officers	04	4					4	9528
156.	Confidential Secretary I	08	1					1	5418
157.	Typist Grade I	06	4					4	13200
158.	Radio/Telephone Operators	06	4					2	6600
159.	Technical Officers	08						1	5418
	SUB TOTAL								273261

ANAMBRA/IMO RIVER BASIN DEVELOPMENT AUTHORITY

APPENDIX III

1989 DRAFT ESTIMATE, PERSONNEL EMOLUMENT

AREA OFFICE AGULERI

S/NO.	TITLE OF POST	GL	ESTABLISHMENT 1989		VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE			NOS.	EXPENDITURE
	<u>SECURITY SECTION</u>							
160.	Security Officer	07	1				1	4419.00
161.	Security Guard	02	8				5	15840.00
162.	Sub Total						9	20259.00
163.	<u>CATERING SECTION</u>							
164.	Cook	05	1				1	2706.00
165.	Steward	03	2				2	4224.00
	Sub Total						3	6930.00
	<u>STORES</u>							
166.	Stores Officer	07	1				1	4410.00
167.	Store Keeper	04	1				1	2382.00
168.	Stores Assistant	03	2				2	4224.00
169.	Messengers/Cleaners	02	4				4	7920.00
	Sub Total						8	18936.00
	<u>CLINIC SECTION</u>							
170.	Staff Nurse/Midwife	10	1				1	8232.00
171.	Auxiliary Nurse	03	2				2	4224.00
	Sub Total						3	12456.00

APPENDIX III

ANAMBRA-IMO RIVER BASIN DEVELOPMENT AUTHORITY

1989 DRAFT ESTIMATE. PERSONNEL EMOLUMENT

AREA OFFICE AGULERI

S/NO.	TITLE OF POST	GL	NOS.	ESTABLISHMENT 1988 EXPENDITURE	FILLED	VACANCY	ADDITIONAL	PROPOSLS FOR 1989 NOS.	EXPENDITURE
172.	Transport Section Driver/Mech.	06						4	13,200.00
173.	Heavy Equipment Drivers	06						4	13,200.00
174.	Driver Mates	04						5	11,910.00
175.	Tractor Drivers	06						5	19,800.00
176.	Mechanic/Cooperators	06						4	13,200.00
177.	Mechanic/Mates	04						3	7,146.00
178.	Higher/Tech. Offr. Mech.	07						4	17,640.00
179.	Field Assto.	03						2	4,224.00
	Sub-Total	=						30	100,320.00

ANAMBRA-IMO RIVER BASIN DEVELOPMENT AUTHORITY

1989 DRAFT ESTIMATE, PERSONNEL EMOLUMENT

LOWER ANAMBRA IRRIGATION PROJECT - OMOR

S/NO.	TITLE OF POST	GL	ESTABLISHMENT 1988		FILLED	VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE				NOS.	EXPENDITURE
120.	ADMINISTRATION/FIN. DIV. Project Manager	14	1		1			1	13,410.00
131.	Exec. Secretary/Admin. Officer	13	2		1		1	2	24,024.00
132.	Asst. Chief Accountant/ Fin. Officer	13	4					4	48,096.00
153.	Sen. Clerical Officer	05	4		4			4	10,524.00
154.	Typist Grade I	06	4		4			4	13,200.00
155.	Asst. Chief Store Officer	12	2					2	22,332.00
156.	Principal Land Officer	12	2					2	22,332.00
157.	Store Keeper	06	16					16	52,800.00
188.	Principal Land Surveyor	12	2					2	22,332.00
189.	Principal Transport Offr.	12	2					2	22,332.00
190.	Asst. Catering Officer	06	4					4	13,200.00
191.	Nurse/Widwife	08	4					4	21,672.00

LOWER ANAMERA IRRIGATION PROJECT - OMOR

3/NO.	TITLE OF POST	GL.	ESTABLISHMENT 1988		VACANCY	ADDITIONAL	PROPOSAL 1989	
			Nos.	EXPENDITURE			Nos.	EXPENDITURE
<u>ADMINISTRATION FIN. DIV.</u>								
92.	Security officers	08	4				4	21,672
93.	Motor Vehicle drivers	06	20				20	66,000
	SUB TOTAL: =						71	374,250
<u>EXTENSION SECTION</u>								
194.	Asst. Chief Irrig. Agronomist	13	2				2	24,048
195.	Asst. Agric. Supt.	12	1				1	140,856
196.	Asst. Chief Chemistry	13	2				2	24,048
197.	Asst. Chief Tech. Offr.	12	4				4	140,856
198.	Asst. Agric. Supt.	06	10				10	33,000
199.	AGRIC. ASST. INSTRUCTORS	04	10				10	21,520
	SUB TOTAL: =						32	386,628
<u>FIELD OPERATIONS AND MAINTENANCE</u>								
200.	Asst. Chief Irrig. Engr.	13	2				2	24,048
201.	Asst. Chief Irrig. Supts.	12	4				4	44,664

LOWER ANAMBRA IRRIGATION PROJECT OMOR

S/NO.	TITLE OF POST	GL	ESTABLISHMENT 1988		VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE			NOS.	EXPENDITURE
202.	Irrigation Assistant	06	10				10	33000
203.	Irrigation Field Overseers	04	10				10	23820
204.	Asst. Chief Tech. Officer (Mech.)	12	2				2	22332
205.	Chief Tech. Officer (Civil)	12	2				2	22332
206.	Mech/Plant Operator	06	20				20	66000
207.	Static Plant Operator	06	10				10	33000
208.	Heavy Equipment Operator	06	12				12	39600
209.	Heavy Equipment Operator	06	3				3	24100
210.	Tractor Operator	06	60				50	122000
	Sub Total						140	533196
<p>WATER SUPPLY AND REGULATION UNIT</p>								
211.	Chief Mech. Supts.	13					2	24000
212.	Asst. Chief Engr. (Elect)	13					1	12024
213.	Chief Supt. (Elect)	13					1	12024

S/NO.	TITLE OF POST	GR	ESTABLISHMENT 1988		FILLED	VACANCY	ADDITIONAL	PROPOSAL FOR 1989	
			NOS.	EXPENDITURE				NOS.	EXPENDITURE
214.	Chief Irrigation (Engr.)	13	2					2	24,048
215.	Pump Operator/Ditch Riders	06	20					20	66,000
216.	Sub Total							<u>26</u>	138,144
<u>BASE WORKSHOP</u>									
216.	Workshop Manager	12	1					1	11,166
217.	Principal Tech. Officer (Mech.)	12	1					1	11,166
218.	Principal Mech. Supt.	12	2					2	22,332
219.	Foreman Mech.	08	2					2	10,536
220.	Mechanic/Fitter	06	7					7	23,100
221.	Auto-Electrician	06	3					3	26,400
222.	Artician Painter	06	2					2	6,600
223.	Artician Welder	06	2					2	6,600
	Sub Total							<u>25</u>	18,200
	GRAND TOTAL							<u>294</u>	4,119,318

8. 円借款事業で購入された機材リスト

円借款事業費で購入された機材

O / M. EQUIPMENT

O/M EQUIPMENT	No.s	NOTE
1. BACK-HOE	2	PC 60 - 5
2. BULLDOZER	2	D 41 P (小松)
3. WHEEL LOADER	1	WA 100 小松
4. MOTOR GRADER	2	GD 461 A (小松)
5. WATER TANKER	1	TWE 6 - PV
6. ROAD ROLLER	1	KD 76088 - (サカイ)
7. TAMPER	3	
8. PORTABLE CONCRETE MIXER	2	
9. PUMP	2	
10. GENERATOR 90 KVA	1	
" 125 KVA	1	
11. THRESHER 9.5 PS	60	クボタディーゼル Enger RK 95 - N
12. DUMP TRUCK 11 TON	2	
13. DUMP TRUCK 2 TON	3	
14. MAINTENANCE SERVICE TRUCK	1	
15. REPAIR SHOP TOOLS	L.S	
16. SPARE PARTS	L.S	

AGRICULTURAL EQUIPMENT

	1 ton	TOTAL Nos
1.	4 WHEEL DRIVEN TYPE 60HP CLASS TRACTOR	136
2.	ROTORVATOR 1.8m	102
3.	RATARY CUTTER 1.5m	34
4.	KNAPSACK TYPE SPRAYER	102
5.	TRAILER 2 ton	34
6.	MAINTENANCE SERVICE TRUCK 4 ton	4
7.	ATTACHMENT. EQUIPMENT AND SPARE PARTS	1 lot

JICA