

APPENDIXES

APPENDIX A

TABLES

TOTAL NUMBER : 80

TOTAL NUMBER OF : 43

EXECUTIVE : 11% : 89%

JOB ;

MANAGEMENT : 27% MAINTENANCE

OPERATION : 4% SECURITY : 30

AGE ;

20'S : 10% , 30'S : 53% , 40'S : 27% , 50'S

INCOME PER MONTH ;

< RM1000 : 35% , RM1000-2000 : 54%

RM2000-3000 : 7% , >RM3000 : 4%

TABLE 2
RESPONSES ON MISSION
AND OBJECTIVE

	YES	NO
1. DOES TNB HAS A CORPORATE MISSION?	100%	0%
2. IF THE TNB DOES HAVE A CORPORATE MISSION , DOES IT BEING WRITTEN?	79%	21%
3. DOES YOUR STATION HAVE ITS OWN MISSION OR OBJECTIVE?	51%	49%
4. IF YOUR STATION DOES HAVE ITS OWN MISSION , DOES IT BEING WRITTEN?	12%	88%

TABLE 3
RESPONSES ON BUSINESS OPPORTUNITIES
IN SULTAN IDRIS-II POWER STATION

	YES	NO
1. OTHER THAN ELECTRICITY GENERATION, IS THERE ANY ACTIVITIES THAT CAN BRING FINANCIAL INCOME TO THE STATION?	31%	69%

LIST OF SUGGESTED BUSINESS ACTIVITIES
AND % OF RESPONDENTS SUGGESTION ;

ACTIVITIES:	% OF SUGGESTION
1. TO ATTRACT VISITORS AND TOURISTS THROUGH ORGANISING CAMPS AND JUNGLE TRACKING .	18%
2. RENTING OF SPORTS FACILITIES	16%
3. OPENNING OF SWIMMING POOL TO PUBLIC	16%
4. FISH-FARMING	4%
5. RENTING OF GUEST HOUSE	2%
6. RENTING OF PLACES AND FACILITIES FOR FILM SHOOTING	2%
7. OTHERS	

TABLE 4

ATTITUDE OF STAFF TOWARDS
BUSINESS ACTIVITIES

	YES	NO
1. ARE YOU WILLING TO VOLUNTARILY PARTICIPATE IN ACTIVITIES THAT MAY BRING FINANCIAL INCOME TO THE STATION?	47%	53%
2. ARE YOU WILLING TO PARTICIPATE IN ACTIVITIES THAT MAY BRING FINANCIAL INCOME TO YOU AND THE STATION?	75%	25%
3. DO YOU HAVE FREE TIME DURING YOUR WORKING HOURS TO BE SPENT ON OTHER ACTIVITIES BESIDES ATTENDING TO YOUR DUTY?	73%	27%

TABLE 5
NUMBER OF HOURS A DAY THAT
COULD BE SPENT ON OTHER
ACTIVITIES

NO.OF.HOURS		% OF RESPONDENTS
3 HOURS A DAY	:	9%
2 HOURS A DAY	:	46%
1 HOUR A DAY	:	9%
> 1 HOUR A DAY	:	9%

TOTAL STATION'S MONTHLY FINANCIAL PLAN
(REVISED 1994/95)

TABLE 6

NO.	KETERANGAN	KOD	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	TOTAL
	TOTAL		RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM
			294700.00	325650.00	295600.00	327900.00	597164.00	545850.00	305835.00	290650.00	497700.00	361430.00	831950.00	818950.00	5493379.00
1.	Stry. Gen. Eng. Super.	11030	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	7240.08	86881.00
2.	Stry. Gen. Eng. Others	11130	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	4642.83	55714.00
3.	Stry. Switchbrd. att'dn.	11230	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	38942.42	467309.00
4.	Salaries Clerical Services	11330	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	6438.17	77258.00
5.	Water royalty	13432	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	21531.42	258377.00
6.	Lubricating oil	14130	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	1533.33	18400.00
7.	Engine Room & Store	14330	791.67	791.67	791.67	791.67	791.67	791.67	791.67	791.67	791.67	791.67	791.67	791.67	9500.00
8.	Transp./travel.Others	15030	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	9166.67	110000.00
9.	Stry. R&M Engine/Turb.	16430	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	13839.83	166078.00
10.	Mtrl. R&M Engine/Turb.	16530	11000.00	4000.00	11000.00	4000.00	10000.00	18000.00	10000.00	4000.00	145000.00	4000.00	10000.00	5000.00	236000.00
11.	Stry. Switchgear. Trans. EM	17030	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	11184.83	134218.00
12.	Mtrl. S/gear. Trans. EM	17130	2500.00	3500.00	3500.00	23000.00	3500.00	210500.00	12500.00	3500.00	24600.00	12500.00	3500.00	2500.00	305600.00
13.	Stry. Buildg. & Civil. Wk.	17330	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	5636.67	67640.00
14.	Cukai Tanah	17411	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500000.00	500000.00	1000000.00
15.	Mtrl. Buildg. & Civil. Wk.	17530	2500.00	2500.00	2500.00	20200.00	2500.00	36300.00	2500.00	2500.00	3250.00	5250.00	23500.00	24500.00	128000.00
16.	Cntr. Serv. Bldg. & Civil.	17532	17000.00	17000.00	15000.00	17000.00	17000.00	17000.00	17000.00	17000.00	17000.00	17000.00	17000.00	15000.00	200000.00
17.	Maint. of Computer	17631	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.	Stry. Chemical Services	17633	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	3155.00	37860.00
19.	Mtrl. Chem. Serv	17634	200.00	500.00	200.00	200.00	250.00	250.00	250.00	250.00	200.00	3950.00	4150.00	200.00	10600.00
20.	Loose tools & Equip.	17730	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	275.00	3300.00
21.	Stry. Sprt. Comp. Kilat C.	63180	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	3000.00
22.	Mtrl. Sprt. Comp. Kilat C.	63190	50.00	50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	21000.00
23.	Mtrl. Sprts. Grnd.	63390	250.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	16800.00	300.00	250.00	20000.00

53	Sports Leave	6630	633.17	633.17	633.17	633.17	633.17	633.17	633.17	633.17	633.17	633.17	633.17	633.17	7598.00
54	Loc.Lv. & Stat.pd.hldy.	6631	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	16375.25	196503.00
55	Sick Leave Pay	6632	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	2729.17	32750.00
56	Dhoby Allowance	6633	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	2516.25	30195.00
57	Hardship Allowance	6634	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	4801.75	57621.00
57	Electricity Allowance	6637	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	2980.75	35769.00
58	Unrecorded leave	6638	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	3820.83	45850.00
59	EPF	6639	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	17997.83	215974.00
60	BONUS	6646	0.00	0.00	0.00	0.00	300214.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300214.00
61	Entertainment Allow.	6649	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	Stry.Staff Qtrs.	66745	287.50	287.50	287.50	287.50	287.50	287.50	287.50	287.50	287.50	287.50	287.50	287.50	3450.00
63	Mtrl.Staff Qtrs.	6675	0.00	36500.00	1500.00	1500.00	1500.00	1500.00	1500.00	1500.00	45500.00	1500.00	1500.00	0.00	94000.00
64	Mtrl.Furnit.Staff Qtrs.	6677	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	Car Allowance	57100	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	3458.33	41500.00
66	Motorcy.& bicy.Allow.	57200	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	3000.00
67	Travelling Claims	57400	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	5416.67	65000.00

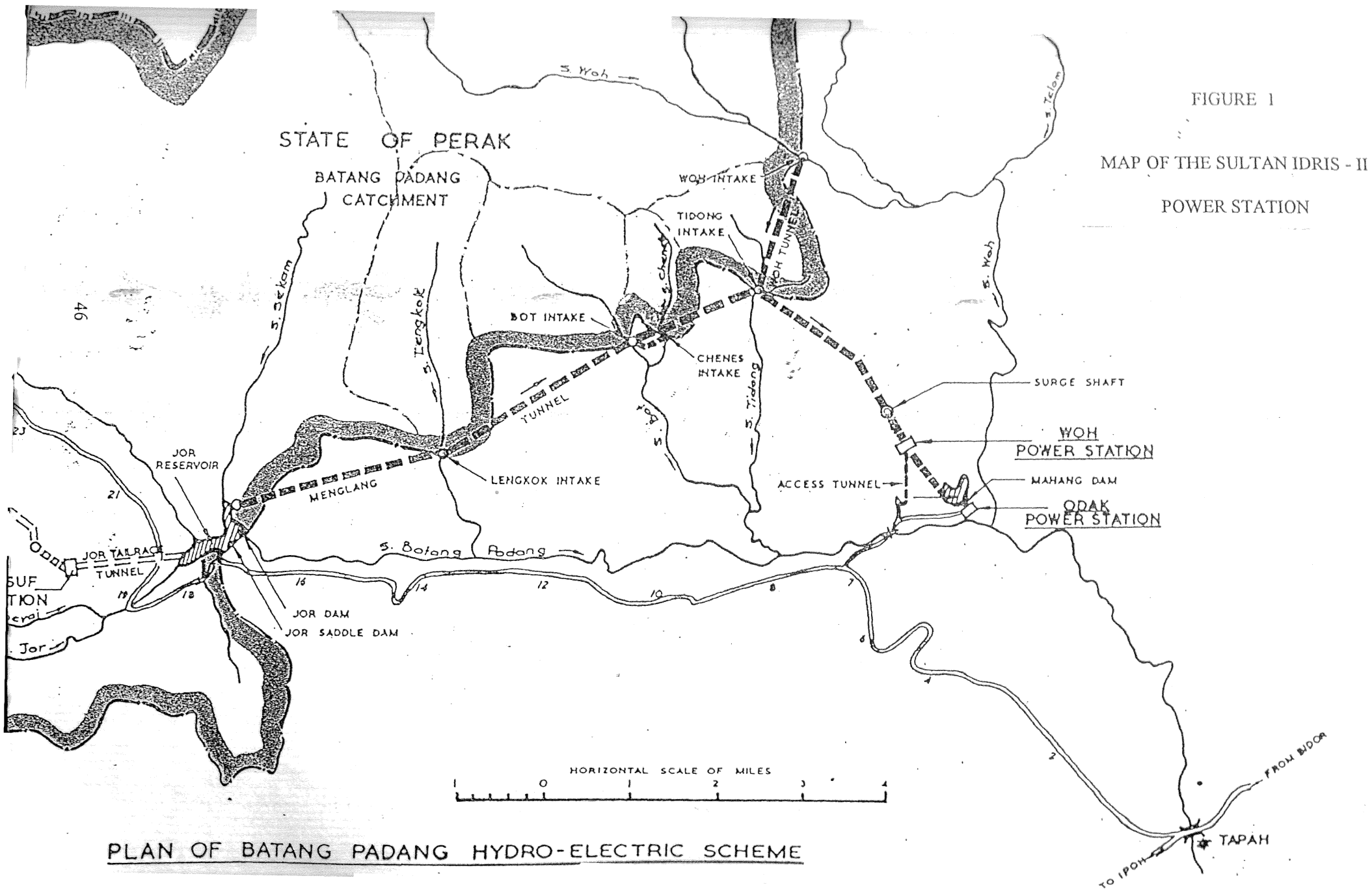
TABLE 7

SULTAN IDRIS - II POWER STATION
ELECTRICITY UNITS GENERATED
IN KW/HOUR (1994/1995)

SEPTEMBER	1994	-	44,274,530
OKTOBER	1994	-	48,180,350
NOVEMBER	1994	-	45,972,290
DECEMBER	1994	-	36,724,310
JANUARY	1995	-	32,396,857
FEBRUARY	1995	-	27,093,800
MARCH	1995	-	29,948,880
APRIL	1995	-	36,639,520
MAY	1995	-	36,980,750
JUNE	1995	-	35,397,250
JULY	1995	-	30,805,240
AUGUST	1995	-	54,912,310
TOTAL			459,326,087

APPENDIX B

FIGURES

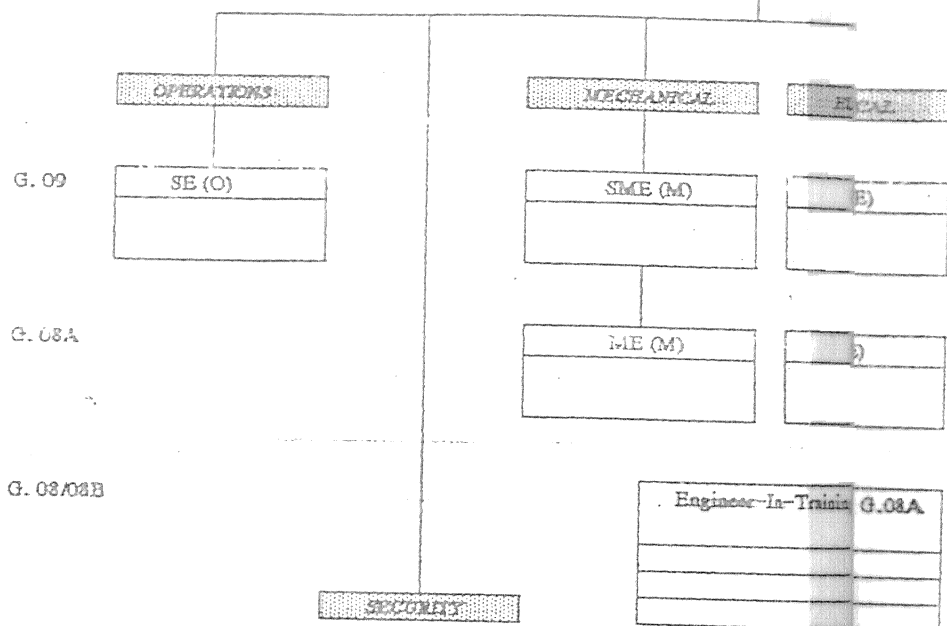


CAMEN HIK
OFA

G. 10

G. 09A

DEPUTY STATION MANAGER
(Sulawesi Idris Power Station)



G. 09

G. 08A

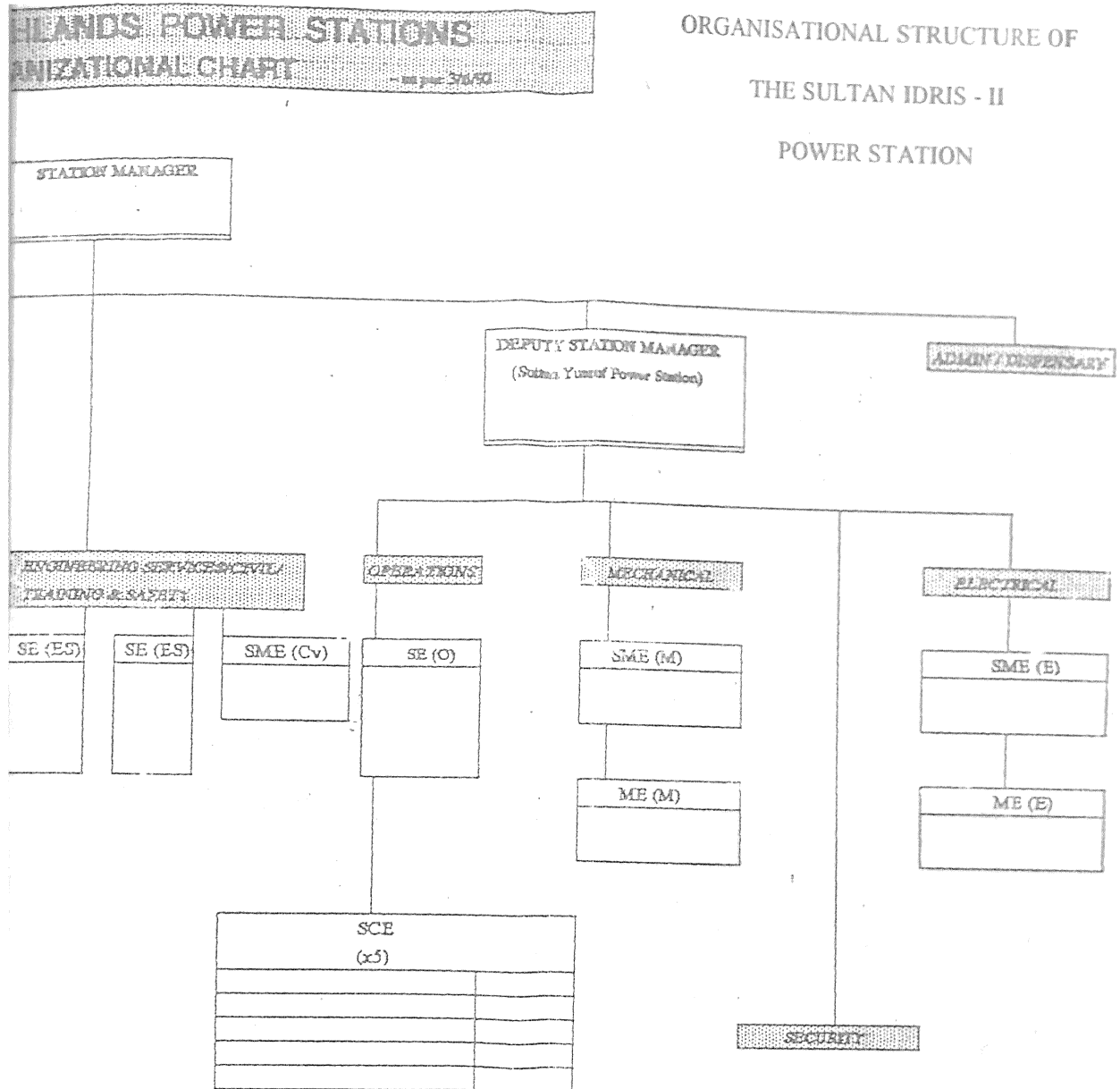
G. 08/08B

	Propose
G. 10	1
G. 09A	2
G. 09	9
G. 08A	4
TOTAL	16
G. 08/08B	5

Index :	
SE(O)	Senior Engineer (Operation)
SME(M)	Senior Maintenance Engineer (Mechanical)
SME(E)	Senior Maintenance Engineer (Electrical)
ME(M)	Maintenance Engineer (Mechanical)
ME(E)	Maintenance Engineer (Electrical)

FIGURE 2

ORGANISATIONAL STRUCTURE OF
THE SULTAN IDRIS - II
POWER STATION



E(ES)	Sr. Engineer (Engineering Services)	SE(O)	Senior Engineer (Operation)
ME(Cv)	Senior Maintenance Engineer (Civil)	SME(M)	Senior Maintenance Engineer (Mechanical)
(ES)	Engineer (Engineering Services)	SME(E)	Senior Maintenance Engineer (Electrical)
		ME(M)	Maintenance Engineer (Mechanical)
		ME(E)	Maintenance Engineer (Electrical)
		SCE	Shift Charge Engineer



Figure 3. Checkpoint Leading to the Underground Power Station



Figure 4. Entrance to the Underground Power Station



Figure 5. Access Tunnel into the Underground Station

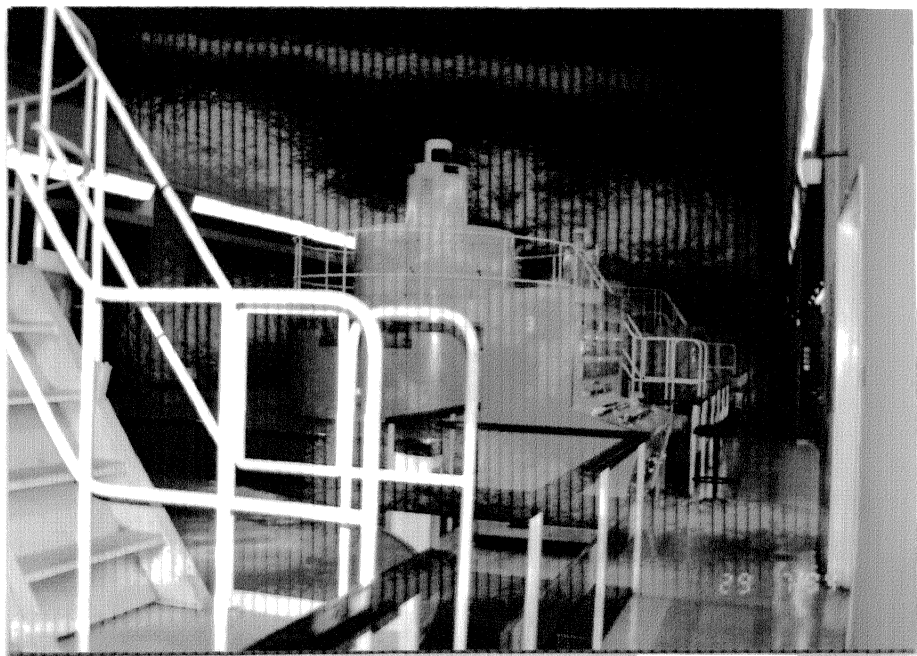


Figure 6. The 3*50MW Turbine Generators inside the Cavern



Figure 7. General View of The Swimming Pool.

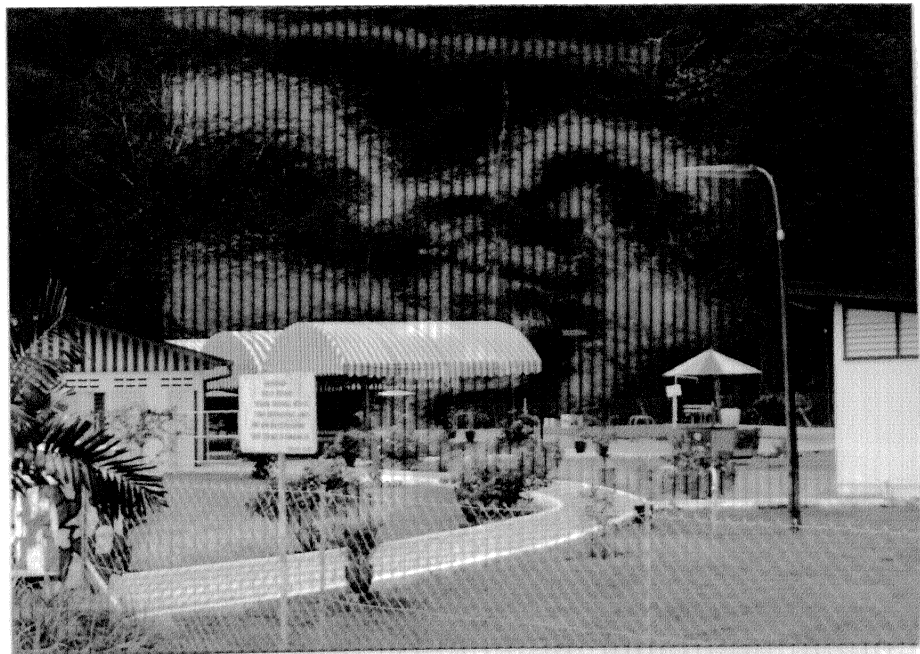


Figure 8. The Swimming Pool.



Figure 9. The Camping Site beside
the Swimming Pool.



Figure 10. Camping Site at the River
Bank.



Figure 11. Camping Site.



Figure 12. Jungle Track.



Figure 13. Jungle Track.



Figure 14. The Batang Padang River ;
Suitable for Canoeing



Figure 15. The Batang Padang River ;
Small Rapids.



Figure 16. The Batang Padang River.



Figure 17. The Orang Aslis' Settlement.



Figure 18. Orang Asli's Long House.

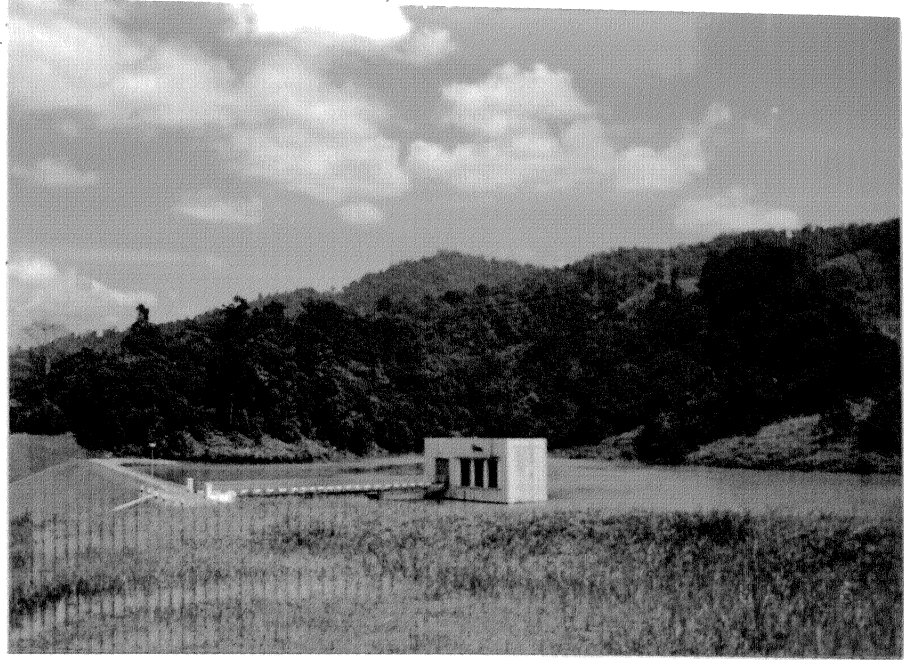


Figure 19. The Mahang Dam and Reservoir.



Figure 20. The Mahang Reservoir.



Figure 21. The Reservoir Bank.



Figure 22. The Sports Facilities ;
Football Field.



Figure 23. The Sports Facilities ;
Volleyball Court.



Figure 24. Children Playground.



Figure 25. The Utility Hall and
some Sports Facilities



Figure 26. The Golf Course.



Figure 27. The Woh Recreation Park



Figure 28. The Woh Caravan Park..

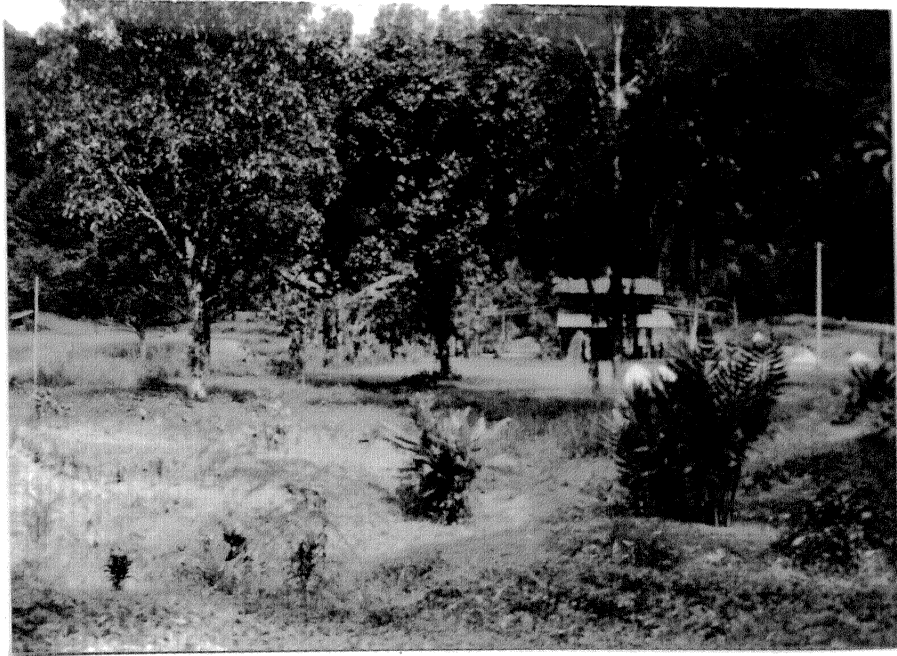


Figure 29. Camping Site with Inferior Facilities

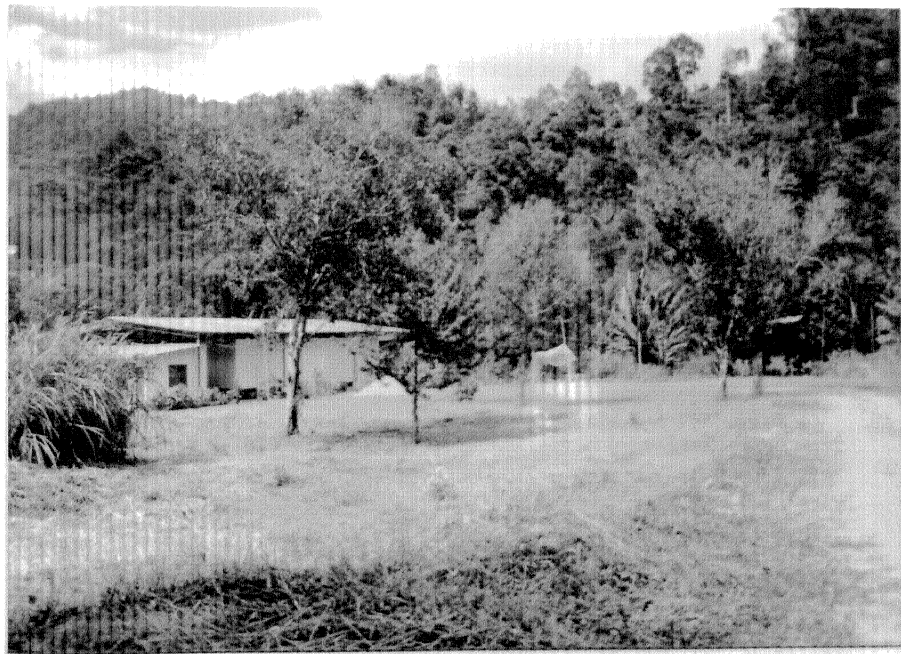


Figure 30. Camping Site with Inferior Facilities



Figure 31. Fish Farm with Smaller
Pondage



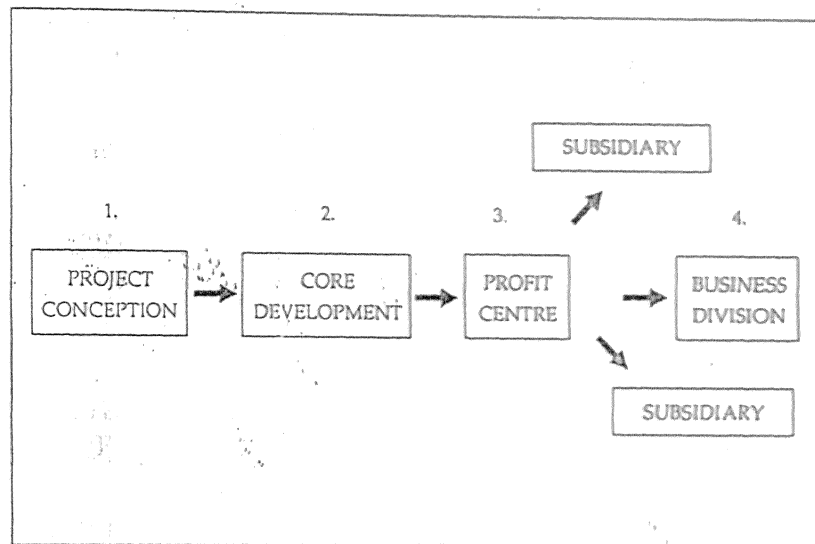
Figure 32. Fish Farm with Smaller
Pondage.

FIGURE 33

CHART 1
THE JSEDC INTRAPRENEURING APPROACH

RIDING ON THE BACK OF THE EXECUTION
OF JSEDC BUSINESS DEVELOPMENT PLANS

TYPICAL BUSINESS DEVELOPMENT PATTERN



APPENDIX C

MEMORANDUM OF ASSOCIATION

OF THE TNB (P.P. 1~9)

THE COMPANIES ACT, 1965

COMPANY LIMITED BY SHARES

MEMORANDUM OF ASSOCIATION

OF

TENAGA NASIONAL BERHAD

- | | | |
|----|--|--|
| 1. | The name of the Company is TENAGA NASIONAL BERHAD. | Name |
| 2. | The registered office of the Company will be situated in Malaysia. | Office |
| 3. | The objects for which the Company is established are:- | Objects |
| | (1) To carry on at the States of Malaya, or elsewhere the business of supply of electricity and in connection therewith to construct, lay down, establish, fix and carry out all necessary cables, wires, lines, accumulators, lamps and works and to generate, transmit, transform, distribute and sell energy either in bulk or to individual consumers and to light cities, town, streets, docks, markets, theatres, buildings and places both public and private. | Supply of electricity and works in connection thereto |
| | (2) To purchase, construct, reconstruct, maintain and operate supply lines, generating stations, transformer stations and all other appropriate stations, building and works, including subject to compliance with any written law relating to the issue of water licences for the time being enforce, the abstraction of water from any lake, river, stream or other natural source, and the doing of such acts as may be necessary for the purpose of utilizing and returning or otherwise disposing of the water so abstracted. | To construct supply lines generating and transformer stations etc. |

(3) To carry on the business of any matter relating to electricity, the business of suppliers of electricity for the purpose of light, heat, motive power, for pumping, or otherwise, and also the business of manufacturers and dealers in all apparatus and things, required for or capable of being used in connection with the generation, transmission, distribution, supply, accumulation and employment of electricity.

Other business
related to
electricity

(4) To provide consultancy and advisory services concerning anything that it does in exercise of its powers or has power to do, and to establish and promote any form of cooperation or arrangement with any institutions or utilities inside or outside the country in connection with the generation, transmission, distribution, supply, accumulation and employment of electricity or anything related thereto.

To provide
consultancy and
advisory services
concerning
electricity

(5) To carry on any other business which may seem to the Company capable of being conveniently carried on in connection with the above or calculated directly or indirectly to enhance the value of or render profitable any of the Company's property or rights.

Any other
business in
connection
therewith

(6) To amalgamate or enter into partnership or into any arrangement for sharing profits, union of interests, cooperation, joint adventure, reciprocal concession or otherwise, with any person or company carrying on or engaged in, or about to carry on or engage in, any business or transaction which this Company is authorised to carry on or engage in, or any business or transaction capable of being conducted so as directly or indirectly to benefit this Company. And to lend money to, guarantee the contracts of or otherwise assist any such person or company and to take or otherwise acquire shares and securities of any such person or company and to sell, hold, reissue, with or without guarantee, or otherwise deal with the same.

To amalgamate,
enter into
partnership or
arrangement etc.

(7) To promote any other company for the purpose of acquiring all or any of the property and liabilities of this Company or for any other purpose which may seem directly or indirectly calculated to benefit this Company.

To promote other company

(8) Generally to purchase, take on lease, or in exchange, hire or otherwise acquire any real and personal property and any rights or privileges which the Company may think necessary or convenient for the purposes of its business and in particular any land, buildings, easements, machinery, plant and stock-in-trade.

Purchase lease, hire properties, rights and privileges

(9) To purchase or otherwise acquire any patents, brevets d'invention, licences, concessions and the like, the acquisition for which may seem calculated directly or indirectly to benefit this Company and to use, exercise, develop or grant licences in respect of, or otherwise turn to account, the property and rights so acquired.

To acquire patents, licences, concessions etc.

(10) To enter into arrangements with any authorities, municipal, local or otherwise that may seem conducive to the Company's objects or any of them and to obtain from any such authority any rights, privileges and concessions which the Company may think it desirable to obtain and to carry out, exercise and comply with any such arrangements, rights, privileges and concessions.

To enter into arrangements with authorities etc.

(11) To acquire from the Government of Malaysia and State governments or from any company or partnership, person or persons, by purchase or otherwise, the lands, privileges, easements and powers requisite to the objects of the Company.

To acquire lands, privileges, etc.

(12) To distribute any of the property of the Company among the members in kind or otherwise but so that no distribution amounting to a reduction of capital shall be made without the sanction required by law.

To distribute property among members

(13) To develop and turn to account any land acquired by or in which the Company is interested and in particular by laying out and preparing the same for building purposes, constructing, altering, pulling down, decorating, maintaining, fitting up and improving buildings and conveniences and by planting, paving, draining, farming, cultivating, letting on building lease or building agreement and to advance money to and entering into contracts and arrangements of all kinds with builders, tenants and others.

To develop and
turn land into
account

(14) To construct, improve, maintain, work, manage, carry out or control any roads, ways, tramways, railways, branches or sidings, reservoirs, watercourses, wharves, manufactories, warehouses, electric works, shops, stores and other works and conveniences which may seem calculated directly or indirectly to advance the Company's interests and contribute to, subsidize or otherwise assist or take part in any such operations.

To construct
roads, tramways,
railways etc.

(15) To sell, improve, manage, develop, lease, mortgage, dispose of, turn to account or otherwise deal with all or any part of the property of the Company.

To deal with all
or any part of
the property of
the Company

(16) To sell the undertaking of the Company or any part thereof for such consideration as the Company may think fit and in particular for shares, debentures or securities of any other company having objects altogether or in part in similar to those of this Company.

To sell
undertaking of
the Company

(17) To receive money on deposit at interest or otherwise and to lend money and in particular to customers and others having dealing with the Company and to guarantee the performance of contracts by any such persons.

To receive money
on deposit

(18) To invest and deal with the moneys of the Company not immediately required upon such securities and in such manner as may from time to time be determined.

To invest and
deal with moneys

(19) To borrow or raise or secure the payment of money in such manner as the Company may think fit and to secure the same or the repayment or performance of any debt, liability, contract, guarantee or other engagement incurred or to be entered into by the Company or by any other person in any way and in particular by the issue of debentures, perpetual and otherwise, charged upon all or any of the Company's property (both present and future), including its uncalled capital, to purchase, redeem or pay off any such securities and enter into currency and interest rate swaps.

To borrow and
secure repayment

(20) To remunerate any person or company for services rendered, or to be rendered, in placing or assisting to place or guaranteeing the placing of any of the shares in the Company's capital or any debentures or other securities of the Company or in or about the organisation, formation or promotion of the Company or the conduct of its business.

To remunerate
persons

(21) To procure the Company to be registered or recognised in any country or place outside Malaysia.

To procure
Company to be
registered outside
Malaysia

(22) To purchase, subscribe for, underwrite, invest in, take or otherwise acquire and hold any shares, stocks, bonds, options, debentures, debenture stock obligations or securities in or of any company, corporation, public body, supreme, municipal, local or otherwise of any Government or State, and to act as and perform all the functions of a holding company.

To invest in
shares etc.

(23) To give or lend money to, or give a guarantee for the benefit of, any person with whom it has entered into an Agreement by virtue of paragraph (6) for the purpose of enabling him to carry out the agreement and, for the purposes of its business, to give or lend money to or give a guarantee for the benefit of, any other person for the purposes of an undertaking carried out by him or, where that person is a body corporate, an undertaking carried out by a subsidiary of the person.

To lend money
and give
guarantee

(24) To do any thing for the purpose of advancing the skill of persons employed by it or that of persons who, though not so employed, are engaging themselves, or have it in contemplation to engage themselves, in work of a kind in the case of which it has or may have a direct or indirect concern in the products hereof.

To advance
the skill of
persons employed
etc.

(25) To promote (either by itself or by others) research into matters which affect, or arise out of, the carrying out of its business.

To promote
research

(26) To promote the doing of such work as is requisite to enable the results of research (whether promoted by it or not) into matters affecting, or arising out of, the carrying out of its business, and the results of research promoted by it into other matters.

To promote
application of the
results of
research

(27) To provide assistance (including financial assistance) to, or promote the activities of, any institution or person if, in its opinion, the consequence of doing so will enure for its benefit.

To provide
assistance

(28) To provide for the instruction and training of the administrative and technical personnel of the Company and to provide houses, hostels and such like accommodation for persons engaged in its business.

To provide for
instruction and
training

(29) To make loans to persons employed by it including in particular, loans to assist them to acquire housing accommodation, means of transport, rent electrical appliances and to guarantee loans made to persons so employed (including, in particular, loans made by banks, cooperative societies and other bodies for housing purposes).

To make loans to
persons employed

(30) To promote recreational activities for, and activities conducive to the welfare of persons who are, or have been, employed by it and the families of such persons and to assist the promotion by others of such activities.

To promote
recreational
activities

(31) To furnish any authority or person outside Malaysia with assistance (whether financial, technical or of any other nature) if, in its opinion, the consequences of doing so will enure for its benefit.

To furnish assistance to authorities etc.

(32) To establish and support or aid in the establishment and support of associations, institutions, funds, trusts and conveniences calculated to benefit employees or Directors or past employees or Directors of the Company or of its predecessors in business, or the dependents or connections of any such persons; and to grant pensions, allowances, gratuities and bonuses and to make payments towards insurance; and to subscribe or guarantee money for charitable, patriotic or benevolent objects or for any exhibition or for any public, general or useful object.

To establish or aid associations

(33) To invest and borrow money in pursuance of its objects as it thinks fit.

To invest and borrow

(34) To manufacture, buy, sell, exchange, alter, improve, manipulate, prepare for market and otherwise deal in all kinds of plant, machinery, apparatus, tools, utensils, materials and things.

To deal in plant and machinery

(35) To acquire, and undertake the whole or any part of the business, property and liabilities of any person or company carrying on any business which the Company is authorised to carry on, or possessed of property suitable for the purposes of the Company.

To acquire business

(36) To draw, take, accept, endorse, discount, execute and issue promissory notes, bills of exchange, bills of lading and other negotiable or transferable instruments.

To draw and issue promissory notes etc.

(37) To adopt such means of making known and advertising the business and products of the Company as may seem expedient.

To advertise business and products

(38) To apply for, secure, acquire by grant, legislative enactment, assignment, transfer, purchase or otherwise and to exercise, carry out and enjoy any charter, licence, power, authority or franchise, concession, right or privilege which any Government or authority or any corporation or other public body may be empowered to grant; and to pay for, aid in and contribute towards carrying the same into effect; and to appropriate any of the Company's shares, debentures or other securities and assets to defray the necessary costs, charges and expenses thereof.

To apply for
charter, licenses
etc.

(39) To apply for, promote and obtain any statute, order, regulation, or other authorization or enactment which may seem calculated directly or indirectly to benefit the Company; and to oppose any bills, proceedings or applications which may seem calculated directly or indirectly to prejudice the Company's interests.

To apply for or
promote any
statute,
regulation etc.

(40) To issue and allot fully or partly paid shares in the capital of the Company in payment or part payment for any movable or immovable property purchased or otherwise acquired by the Company or any services rendered to the Company.

To issue shares in
the capital of the
Company in lieu
of payment

(41) To take or hold mortgages, liens and charges to secure payment of the purchase price, or any unpaid balance of the purchase price, of any part of the Company's property of whatsoever kind sold by the Company, or any money due to the Company from purchasers and others.

To hold mortgage
to secure
payments, etc.

(42) To pay out of the funds of the Company all expenses which the Company may lawfully pay with respect to the formation and registration of the Company or the issue of its capital, including brokerage and commissions, for obtaining applications for or taking, placing or underwriting or procuring the underwriting of shares, debentures or other securities of the Company.

To pay for
formation
expenses
brokerage etc.

- | | |
|---|--|
| (43) To transact any lawful business in aid of Malaysia in the prosecution of any war or hostilities in which Malaysia is engaged. | To transact business in aid of Malaysia |
| (44) To carry out all or any of the objects of the Company and do all or any of the above things in any part of the world and either as principal, agent, contractor, or trustee, or trustees or agents or otherwise, and either alone or in conjunction with others. | To carry out business in any part of the world |
| (45) To do all such other things as are incidental or conducive to the attainment of the objects and the exercise of the powers of the Company. | To do all things incidental to Company's objects |
| 4. The objects set forth in any sub-clause of this clause shall not be restrictively construed but the widest interpretation shall be given thereto, and they shall not, except when the context expressly so requires, be in any way limited to or restricted by reference to or inference from any object or objects set forth in such sub-clause or from the terms of any other sub-clause or by the name of the Company. None of such sub-clauses or the object or objects therein specified or the powers thereby conferred shall be deemed subsidiary or ancillary to the objects or powers mentioned in any other sub-clause, but the Company shall have full power to exercise all or any of the powers and to achieve or to endeavour to achieve all or any of the objects conferred by and provided in any one or more of the said sub-clauses provided always that nothing in this Memorandum contained shall empower the Company to carry on any life assurance business or fire insurance business or the business of banking. The word "Company" in this Clause shall be deemed to include any partnership or other body of persons, whether incorporated or not incorporated and whether domiciled in Malaysia or elsewhere. | Objects shall not be restrictively construed |
| 5. The liability of the members of the Company is limited. | Liability of Members |

APPENDIX D
CORPORATE MISSION
OF THE TNB

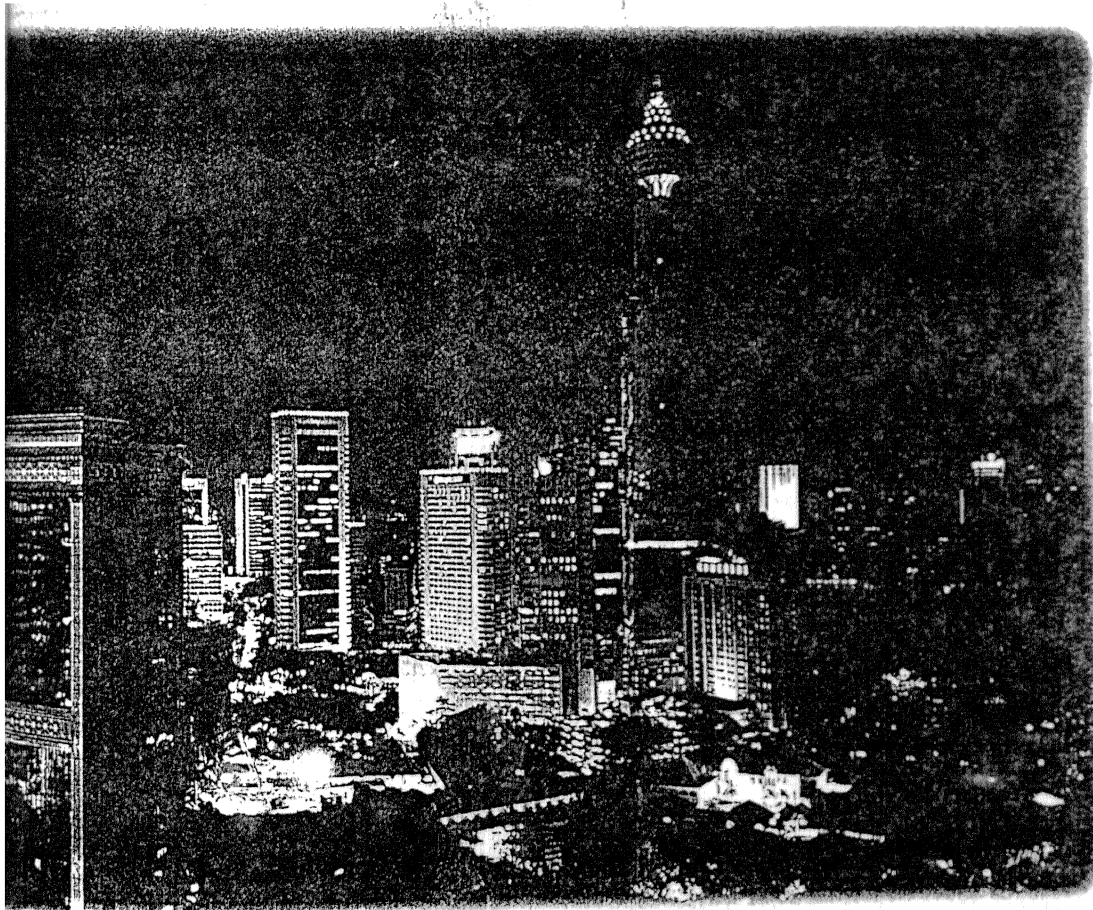
MISI KORPORAT CORPORATE MISSION

5

Untuk menyediakan satu infrastruktur ekonomi negara
yang penting dengan cara:

Sentiasa memenuhi keperluan pelanggan untuk bekalan tenaga
yang selamat, yang berdaya harap dan kompetitif;

Menggalakkan pertumbuhan organisasi-organisasi bisnes yang cekap
yang boleh memenuhi keperluan industri bekalan tenaga di samping
memenuhi kehendak semua pemegang saham, pekerja-pekerja dan lain-lain
pihak yang mempunyai kepentingan.



To provide an essential part of the national economic infrastructure by:

Continuously meeting customers' requirements for energy
safely, reliably and competitively;

Encouraging the growth of efficient enterprises to service the needs of the
energy supply industry whilst meeting the needs of all shareholders, employees
and other stakeholders.

APPENDIX E

LIST OF STAFF COMPLIMENTS FOR

THE SULTAN IDRIS - II

POWER STATION

UN NO: ZHWH R16
TARIKH: 28/06/95

M.S: 88

TENAGA NASIONAL BERHAD
SENARAI PERUNTUKAN JAWATAN YANG DI-ULUSKAN
TAHUN 1995

STESEN/JABATAN: 2104 S.J.SULTAN IDRIS II (WOH)

KOD KERJA	KOD GAJI	JAWATAN	TUGAS	RI- JMT LULUS
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BAHAGIAN: (K26) KENDALIAN

232010P046	JG14	JURUTEKNIK T/K	PEMBANTU KAWALAN	5
233010P132	JG11	JURUTEKNIK T/B	PENGENDALI KAWALAN	5
233010P136	JG11	JURUTEKNIK T/B	PENG.LOJI TARBIN AIR	5
243J18X000	JG09	PEN.PENG. LOJI T/AIR	-	5
453303A041	JG06	ATENDAN MESIN BANTU	ATENDAN LOJI	5

BAHAGIAN: (K33) KENDERAAN

50726A030	JG07	PEMANDU LORI & VAN	AM	5
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BAHAGIAN: (K41) KESELAMATAN

542040K064	JG09	PGWL.KESELAMATAN T/K	KETUA GERAKAN	1
543040P395	JG07	PGWL.KESELAMATAN T/B	PENGAWAL	10

BAHAGIAN: (K47) KIMIA

243J17X000	JG09	PEN.PG.LOJI PEMB.AIR	-	1
453303L018	JG06	ATENDAN MESIN BANTU	LOJI PEMBERSIH AIR	1

BAHAGIAN: (P59) PENTADBIRAN

333012A030	JG11	KERANI T/B	AM	2
333012K045	JG11	KERANI T/B	KERANI BESAR	1
343072A030	JG07	DPR.TELEFON/JURUTAIR	AM	2
543965P407	JG05	PEMB. AM REND. T/P	PELAYAN PEJABAT	1

BAHAGIAN: (P89) PIKHID. KEJURUTERAAN

233010K022	JG11	JURUTEKNIK T/B	KEJURUTERAAN	1
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BAHAGIAN: (P92) PIKHIDMAT. PERUBATAN

222015P132	JG14	PEMB.PERUBATAN T/K	PENJAGA DISPENSARI	1
233012P311	JG13	JURURAWAT T/B	PERUBATAN AM	1
544023P311	JG07	ATENDAN RUMAH SAKIT	PERUBATAN AM	1

BAHAGIAN: (S11) SENGGARAAN ELEKTRIK

232010P349	JG14	JURUTEKNIK T/K	POMEN SENGG.ELEKTRIK	1
233010S020	JG11	JURUTEKNIK T/B	SENGGARAAN ELEKTRIK	1
453T63J016	JG08	TUKANG K2 T/PIASA	JURUELEKTRIK	2
482T63S020	JG11	TUKANG K2 T/KANAN	SENGGARAAN ELEKTRIK	2

BAHAGIAN: (S49) STOR/PENGURUSAN BAHAN

333018P013	JG11	PILHNGGARA STOR T/B	PENJAGA STOP	1
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UN NO: ZHWHR16
ARIKH: 28/06/95

M.S: 89

TENAGA NASIONAL BERHAD
SENARAI PERUNTUKAN JAWATAN YANG DIULUSKAN
TAHUN 1995

STESSEN/JABATAN: 2104 S.J.SULTAN IDRIS II (WDH)

KOD KERJA	KOD GAJI	JAWATAN	TUGAS	RIL JWT LULUS
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BAHAGIAN: (S49) STOR/PIGURUSAN BAHAN

344050S057	JG07	PILENGGARA STOR REN.	STOR	1
550706S057	JG05	PEKERJA AM	STOR	1

BAHAGIAN: (S69) SENGGARAAN JENTERA

232010P340	JG14	JURUTEKNIK T/K	POMEN SENG. MEKANIKAL	1
233010S068	JG11	JURUTEKNIK T/B	SENGGARAAN JENTERA	1
51325M05	JG07	PEMANDU KERIN	MEKANIKAL	1
453T63J113	JG08	TUKANG K2 T/BIASA	JURUGEGAS JENTERA	4
482T63S068	JG11	TUKANG K2 T/KANAN	SENGGARAAN JENTERA	3

BAHAGIAN: (V13) SENGGARAAN AWAM

243J15X00	JG09	PEN. PY. KERJA AWAM	-	2
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APPENDIX F

RESEARCH QUESTIONNAIRE

Borang Kajiselidik :

Sila tandakan ✓ dikotak yang berkenaan

Butir-butir diri anda :

1. Executive ☐ Ya ☐ Tidak
2. Pekerjaan ; ☐ Pengurusan ☐ Kendalian
☐ Senggaraan ☐ Keselamatan
3. Umur (thn) ☐ 20han ☐ 30han ☐ 40han ☐ 50han
4. Pendapatan sebulan ☐ kurang RM 1000 ☐ RM1000 ke 2000
☐ RM 2000 ke 3000 ☐ Lebih RM 3000

Soalan-soalan :

- 5 Adakah TNB mempunyai mempunyai misi korporat (corporate mission)? ☐ Ya ☐ Tidak
6. Kalau TNB mempunyai misi korporat , adakah ia dituliskan ? ☐ Ya ☐ Tidak
7. Adakah stesen anda mempunyai misi ataupun matlamat yang tersendiri ? ☐ Ya ☐ Tidak
8. Kalau stesen anda mempunyai misi tersendiri , adakah ia dituliskan ? ☐ Ya ☐ Tidak
9. Selain mengeluarkan tenaga letrik adakah aktiviti lain yang boleh mendatangkan kewangan kepada stesen ? ☐ Ada ☐ Tidak
- Kalau ada , sila berikan contoh : a).....
yang anda ingat : b).....
c).....
d).....
10. Mahukah anda melibatkan diri didalam aktiviti lain yang boleh mendatangkan kewangan kepada stesen secara sukarela ? ☐ Ya ☐ Tidak
11. Mahukah anda melibatkan diri didalam aktiviti lain yang boleh mendatangkan kewangan kepada stesen dan juga kepada anda ? ☐ Ya ☐ Tidak
12. Adakah anda mempunyai masa untuk diluangkan bagi aktiviti lain sewaktu masa kerja disamping tugas anda yang sedia ada ? ☐ Ya ☐ Tidak

Kalau ada , berapa jamkah dalam sehari yang boleh diluangkan jam.

APPENDIX G
MANPOWER REQUIREMENTS STUDY ON
THE SULTAN IDRIS - II POWER
STATION

SULTAN IDRIS - II POWER STATION
SUMMARY OF THE MANPOWER REQUIREMENTS
STUDY

SECTION	TOTAL MANHOURS	STUDY FINDINGS	CURRENT MANPOWER
MECHANICAL	13885	8 PERSONS	9 PERSONS
ELECTRICAL	11544	7 PERSONS	6 PERSONS

S.J SULTAN IDRIS II WOH

123' C' ANNUPOL

MECHANICAL SECTION

ANNUAL PREVENTIVE MAINTENANCE POLICY

PLANT ITEM	QTY	WORK SUMMARY	FREQUENCY	PERS- ONNEL	MAN HOUR ONLINE OFFLINE
Head tank	2	Head tank cleaning	3 monthly	5	160
7 th miles water treatment plant	1	Cleaning chlorine injection pump Greasing & lubrication	monthly	4	96
8th miles water treatment plant	1	Cleaning chlorine injection pump Greasing & lubrication	monthly	4	96
Swimming pool water treatment plant	1	Cleaning and greasing	monthly	4	96
Chenes intake	1	Servicing and greasing valves	6 monthly	4	32
Bot intake	1	Servicing and greasing valves	6 monthly	4	32
Woh intake	1	Servicing and greasing valves	6 monthly	4	64
Tidong intake	1	Servicing and greasing valves	6 monthly	4	32
Over velocity valve	2	OVV trip test Servicing and greasing	3 monthly	4	96
Accumulator water strainer	2	Strainer cleaning and inspection	3 monthly	4	192
Carbon seal	3	Leakage inspection	weekly	2	62
Air compressor	6	Servicing and inspection	yearly	3	432
Switchyard air condition plant	1	Clean filter & check drain pipe and belting	monthly	4	96
Woh relay room air condition plant	1	Cleaning and inspection	monthly	4	96
Fire fighting spray deluge valve	3	Cleaning and inspection	3 monthly	3	54
125 ton station crane - main hoist	1	Servicing and inspection	6 monthly	4	32
20 ton station - aux. hoist	1	Servicing and inspection	6 monthly	4	16
Microwire filter 6000B	12	Cleaning and inspection	3 monthly	3	216
Choking plate strainer	6	Cleaning and inspection	2 monthly	3	432
WOH turbine & brake pit, jacking oil pump	3	Cleaning and inspection	2 monthly	8	720
Generator/ transformer cooling water pump	6	Inspection and overhaul	2 yearly	4	420
Odak discharge regulator valve	1	Servicing and inspection	6 monthly	4	48

LEMBAGA LETRIK NEGARA

Odak turbine pit & generator end shield	3 Cleaning and inspection	monthly	5	900
Woh Turbine Generator	3 Inspection & Overhaul	8 yearly	14	4192.8
WOH & Odak machines	3 Inspection	weekly	3	624
WOH drainage pump	3 Inspection & Overhaul	5 yearly	6	259
Vent. & headtank pump	6 Inspection & Overhaul	2 yearly	4	420
Odak Turbine Generator	3 Inspection & Overhaul	8 yearly	8	270
WOH Carbon seal	3 Inspection	3 yearly	8	1600
Station & LVC valves greasing	1 Servicing & greasing	monthly	3	216
LVC crane servicing	1 Servicing & greasing	6 monthly	4	48
UVC crane servicing	1 Servicing & greasing	6 monthly	4	48
Odak intake gate gears	3 Servicing & greasing	3 monthly	3	72
Governor oil tank	3 top up	monthly	3	144
Compressor air filters	6 Servicing	monthly	2	144
WOH Turbine Generator	3 Inspection	yearly	8	1152
WOH Ventilation Coolers	1 Cleaning & inspection	3 monthly	4	96
Switchyard CO2 system	1 Inspection	3 monthly	4	96
Portable fire extinguishers	90 Inspection & servicing	yearly	3	36
Odak crane	1 Servicing & greasing	6 monthly	4	48

TOTAL : 5051 8834.8

OVERALL TOTAL : 13085.8

MANPOWER REQ. : 8.42380

NB. MANPOWER REQUIREMENT = (ONLINE MANHOURS + OFFLINE MANHOURS)/(31.7*52)

OFFLINE MANHOURS WERE TREATED SAME AS ONLINE MANHOURS BECAUSE THE EXTRA OVERTIME INCURRED IS QUITE SMALL AND ALSO DUE TO THE FLUCTUATION OF MANPOWER THAT OCCURS.

31.7 = AVERAGE AVAILABLE MANHOURS PER WEEK PER PERSON

52 = NUMBER OF WEEKS PER YEAR

LEMBAGA LETRIK NEGARA

S.J SULTAN IDRIS 11 WOH

ELECTRICAL SECTION

ANNUAL PREVENTIVE MAINTENANCE POLICY

123: C. Annual R

PLANT ITEM	QTY	WORK SUMMARY	FREQUENCY	PERS- ONNEL ONLINE	MAN HOUR OFFLINE
Bus section 11 kv OCB	12	Change Oil/clean contacts/megger	6 monthly	4	424
Battery 220 V DC	2	Clean terminals/check sp.grav./change distilled water & gen. cleaning	monthly	4	768
Battery 110 V DC	2	Clean terminals/check sp.grav./change distilled water & gen. cleaning	monthly	4	768
Battery 25 V DC	2	Clean terminals/check sp.grav./change distilled water & gen. cleaning	monthly	4	768
Battery 50 V DC	1	Clean terminals/check sp.grav./change distilled water & gen. cleaning	monthly	2	384
7th Mile W/T Plant Emerg.supply pump motor	1	Clean contacts/meggering motor/check terminals/test run motor	monthly	4	48
8th Mile W/T plant injection pump motor	1	Clean contacts/meggering motor/check terminals/test run motor	monthly	4	48
8th Mile W/T plant Back flushing pump motor	1	Clean contacts/meggering motor/check terminals/test run motor	monthly	4	48
Swim.pool circ. pump motor	2	Clean contacts/meggering motor/check terminals/test run motor	monthly	4	96
Water treatment plant Chemical dosing pump	2	Clean contacts/meggering motor/check terminals/test run motor	monthly	4	96
LVC control oil system AC oil pump for inlet valve	1	Check & clean starter, contactors/megger motor windings/service limit switches	6 monthly	4	64
LVC control oil system DC oil pump for inlet valve	1	Check & clean starter, contactors/megger motor windings/service limit switches	6 monthly	4	64
Spinning reserve air system Air compressot	2	Servicing starter & contactors for contr. panels/meggering motor winding	6 monthly	4	128
Generator brake air system Air compressor motor	2	Servicing starter & contactors for contr. panels/meggering motor winding	6 monthly	4	128
Governor air system Air compressor motor	2	Servicing starter & contactors for contr. panels/meggering motor winding	6 monthly	4	128
Ventilation system Machine Hall Vent.fan	8	Servicing starter & contactors for contr. panels/meggering motor winding	6 monthly	4	256

LEMBAGA LETRIK NEGARA

Air cond. system (switch yard) Air cond. plant	5	Servicing air cond.unit & clean filters	monthly	4	480
Air cond. system WOH P/S relay room	2	Servicing air cond.unit & clean filters	monthly	4	96
Air cond. system Admin. building	17	Servicing air cond.unit & clean filters	monthly	4	816
Air cond. system Dispensary Air cond.	2	Servicing air cond.unit & clean filters	monthly	4	96
Crane Acces gallery 40T	1	Check/ service contacts/motor greasing & inspection	6 monthly	4	128
Crane WOH crane 125T	1	Check/ service contacts/motor greasing & inspection	6 monthly	4	256
Crane WOH crane 20T	1	Check/ service contacts/motor greasing & inspection	6 monthly	4	128
11 KV Transmission system 1400 kw Induction generator	3	Change oil/contacts cleaning & monitoring Megger trip coil/ test oil	3 monthly	4	384
Raw water pump system Supply pump motor	3	Meggering motor winding/clean & service contactors & MWF cubicle	6 monthly	4	192
Governor oil system AC & DC governor oil pump motors	6	Servicing starter contactors/meggering motor IR/ cleaning	6 monthly	4	384
Turbine Generator Main Generator	3	Brushgear & AVR maintenance	3 monthly	8	1728
Generator jacking oil system	3	Check L/S & relays/jacking motor maint. test sequence of solenoid valves	6 monthly	8	192
Cooling water system GT pump motor	6	Meggering motor winding/clean & service contactors & MWF cubicle	6 monthly	4	384
Vent cooling water system Cooling water pump motor	3	Meggering motor winding/clean & service contactors & MWF cubicle	6 monthly	4	192
Odak P.S battery (110 V DC)	1	Clean terminals/check sp.grav./change distilled water & gen. cleaning	monthly	4	384
Odak Turbine Generator	3	Check & cleaning contacts and limit switches	monthly	4	1152
TOTAL :					7752 3456
OVERALL TOTAL :					11208

MANPOWER REQ. : 6.79932

NB. MANPOWER REQUIREMENTS = (ONLINE MANHOURS + OFFLINE MANHOURS)/(31.7*52)

∴ OFFLINE MANHOURS WERE TREATED SAME AS ONLINE MANHOURS BECAUSE OVERTIME INCURRED IS QUITE SMALL AND ALSO THE FLUCTUATION OF MANPOWER THAT OCCURS.

31.7 = AVERAGE MANHOURS AVAILABLE PER PERSON PER WEEK