RESULT OF THE ENERGY AUDIT

IN

NO(1) REFINERY (THANLYIN)

(23rd NOV : 2006)

OUTLINE OF REFINERY

1. LOCATION

- Thanlyin Refinery is situated about 14 Kilometers East of Yangon across Bago River.

- East direction of the Refinery is Thanlyin Town, South direction is Bogyoke village & Navy Training Head Quarter, West direction is Yangon River & North direction is Bago River.

(2) MAIN PROCESS UNITS

(1) Crude Oil Distillation Unit (A)
(2) Crude Oil Distillation Unit (B)
(3) Crude Oil Distillation Unit (C)
(4) Special Boiling Point Solvent Plant
(5) Delayed Coking Unit

(3) FEED STOCK IN COD UNITS

Originally , these units were designed for Crude but we have carried out some modifications and now using Yetagon Condensate as feed stock since 2002.

REFINERY CONFIGURATION

	Capacity Barrel /Day	Date of Commission
(1) Crude Oil Distillation Unit (A)	6,000	1957
(2) Crude Oil Distillation Unit (B)	14,000	1963
(3) Crude Oil Distillation Unit (C)	6,000	1980
(4) Special Boiling Point Solvent Plant	1,400	1972
(5) Delayed Coking Unit	5,200	1986

CONDENSATE CHARGED AND PRODUCTION FOR THE YEAR 2004-2005 & 2005-2006

(IG)

SR.NO	DESCRIPTION	2004 - 2005		2005 -2006	
I	Condensate Charged	106,644,732		99,850,029	
II	PRODUCTS	YIELD	%	YIELD	%
1.	LPG	233,613	0.22	-	
2.	NAPHTHA	77,488,351	72.66	75,293,447	75.41
3.	ATF	14,085,756	13.21	11,401,825	11.42
4.	LK	21,056	0.02	-	
5.	MT	213,165	0.20	160,666	0.16
6.	MK	8,871,982	8.32	7,688,202	7.7
7.	GO	1,203,993	1.13	961,848	0.96
8.	TC	49,370	0.04	249,896	0.25
9.	SLOP	20,789	0.02	36,457	0.04
	TOTAL	102,188,075	95.82	95,792,341	95.94

ENERGY CONSUMPTION VOLUME AND INDICATORS

	2004 - 2005	2005 - 2006
PRODUCTION	102,188,075 IG	95,792,341 IG
POWER PLANT (NATURAL GAS)	1,373.108 MSCF 13,437 SCF/IG	1,414 MSCF 14,761 SCF/IG
COD "B"	175.509 MSCF	78.4 MSCF
COD " C"	58.414 MSCF	27.8 MSCF
COD "B + C"	2.289 SCF/IG	1.108 SCF/IG

IMPROVEMENT ITEMS (1)

(1) Insulation (Reduction of heat loss from outer surface)

As necessary action were carried out such as heat exchanger, towers, product pipe lines and Steam Lines.

(2) Optimization of overall steam balance

Steam Generation of Boiler was produced depend on plant requirement .

(3) Reduction of excess air at fired heaters

All fired heaters were operated under 5 % excess air.

IMPROVEMENT ITEMS (2)

(1) Addition or rearrangement of heat exchangers, condensers and coolers.

Future Plan.

(2) Maintenance and replacement of steam traps

As necessary

(3) Direct hot feed from one process unit to another

Nil.

IMPROVEMENT ITEMS (3)

(ADVISED BY AUDIT TEAM)

1. GOOD MAINTENANCE
   (1) Prevention of Facilities Failures / Breakdown
   (2) Control Instruments
   (3) Basic Data Collection

2. MEASURES FOR LOW – LOAD OPERATION
   Example : BFW Feed Pump & FDF for Power Boiler
   Measures : Any standing – idle equipment ?

3. ENERGY CONSERVATION ITEMS
   Examples : (1) Steam Systems
   - Utilization of Exaust Steam from Process
   - Prevention of Leakage
   - More Insulation (Valves, Flanges, etc.)

   (2) Combustion Control at Power Boiler / COD Fired Heaters.

THANK YOU