



असम ऑयल डिवीजन
Assam Oil Division

इंडियन ऑयल कॉर्पोरेशन लिमिटेड
एओडि - डिगबोई रिफाइनरी
पो.ओ. डिगबोई, पिन-786171, असम
Indian Oil Corporation Limited
AOD - Digboi Refinery
P. O. Digboi, PIN: 786171, Assam
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Ref.HSE: 097-711/23

Dated: 04th June'2023

To
The Regional Executive Engineer,
Pollution Control Board, Assam
Regional Office, Dibrugarh
Dibrugarh-786001

Respected Sir,

Sub: Digboi Refinery Environmental Statement for the year 2022-23

Enclosed please find the Environmental Statement of Digboi Refinery for the year 2022-23 prepared as per guidelines given by MoE&F in their notification dated 13.03.1992.

With regards,

Yours sincerely,

For Indian Oil Corporation Limited
(Assam Oil Division)
Digboi Refinery

(Tridib Saikia)
Chief Manager, HSE

त्रिदिव साईकीया /TRIDIB SAIKIA
सी.एम. (एच एस ई) /C.M. (HSE)
आई.ओ.सी.एल. (एओडी), डिगबोई
I.O.C.L. (AOD), DIGBOI

Copy to:

1. The Member Secretary, Pollution Control Board, Assam, Guwahati
2. The Regional Officer-Scientist F, Integrated Regional Office, Ministry of Environment Forest and Climate Change, Guwahati-781022
3. The Additional Director, CPCB, N.E. Zonal Office, Shillong

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EXECUTIVE SUMMARY

1. Digboi Refinery of Indian Oil Corporation Limited (Assam Oil Division) is the oldest refinery in the country. The original refinery at Digboi came up in 1901 and was rebuilt in 1923. It had an installed capacity of 0.5 MMTPA, which was enhanced in steps to 0.65 MMTPA. After nationalization and merger with Indian Oil Corporation Limited in 1981, the refinery had undergone modernization through the Digboi Refinery Modernization Project (DRMP). In the first phase, crude distillation capacity had been augmented to 0.65 MMTPA with the commissioning of new crude distillation unit (CDU/VDU) in 1996 along with a captive power plant consisting of 3x8.5 MW Gas Turbine and associated offsite facilities. The catalytic reformer unit (CRU) was commissioned in 1997 for production of unleaded motor spirit fuel. In 1999, the new Delayed Coking Unit (DCU) was commissioned and the old Dubbs Coking Unit shut down. The old and outdated wax treatment plants like Acid Washing and Bauxite Filtration have also been replaced by Wax Hydro Finishing Unit (WHFU) in June 2001, and thereby generation of Acidic Sludge has been completely eliminated. The Solvent De-waxing / De-oiling Unit (SDU) and Kero /Diesel Hydro treating Unit (HDT) were commissioned in May, 2003 and December 2003 respectively. The Captive Power Plant was also augmented with a new 20 MW Gas Turbine and associated 100 TPH waste heat recovery steam generation facilities.
2. With the commissioning of the SDU, the 1928 vintage Wax Extraction / De-oiling Units, which were generating a large quantity of slop oil, have been shut down. And with the commissioning of HDT, operations of the old Kerosene Treating unit (KTU) have also stopped. The Hydrotreater enables the refinery to produce environmentally friendly Low Sulfur Diesel and also facilitated phasing out of the toxic sulfur- dioxide earlier used for kerosene treating.
3. In keeping with the plan for phasing out outdated technologies and also progressing on the path of production of greener fuels, the Digboi Refinery has installed and commissioned its Motor Spirit Upgradation facility in Dec'2010. Thus, the refinery is currently producing both Motor Spirit and High Speed Diesel conforming to Bharat Stage -IV auto-fuel specifications. Digboi Refinery now produces BS-VI quality product since August 2019.
4. Digboi Refinery utilizes natural gas, which has very low Sulfur Content (<1.0 ppm), as fuel for its Captive Power Plant and process heaters. Hence, the emissions due to the operations of Digboi Refinery are well within the prescribed limits.
5. The Ministry of Environment & Forests, by their notification on 13th March, 1992 has specified that as per Environment (Protection) Second Amendment Rules, 1992, industries are required to carry out environmental Audit and submit a report for each financial year to the concerned State Pollution Board.
6. Chairman, Pollution Control Board, Assam Vide Letter No.WB/G-523/05-06/25 dated. Guwahati, the 22nd July 2005 had written to the Honorable Chairman, CPCB to declare Digboi Refinery as non-critically polluted unit.
7. The Environmental statement for the Year 2022-23 is enclosed herewith.
8. The report has been prepared as per prescribed format FORM-V (Rule-14) of MoE& F's notification dated 2nd April 1993.
9. Central Pollution Control Board along with IIT, New Delhi, had carried out an environmental assessment of Industrial clusters across the country based on Comprehensive Environment Pollution Index (CEPI) and Digboi Refinery has been placed at the **lowest level** amongst the 88 clusters of industries surveyed.

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR
ENDING THE 31st MARCH 2022**

PART- A

I. Name & address of the owner / occupier of the Industry Operation or Process:

**INDIAN OIL CORPORATION LIMITED
(ASSAM OIL DIVISION)
P.O.DIGBOI-786171
DIST: TINSUKIA
ASSAM**

II. Industry Category : (STC. Code) **SECONDARY OIL REFINERY**

III. Production Capacity : **650,000 MT of crude oil throughput per annum**

IV. Year of establishment : **1901**

V. Date of last Environmental Statement Submitted: **7th June, 2022**

PART- B

WATER AND MATERIAL CONSUMPTION

1. WATER CONSUMPTION (M3 / DAY)

	2021-22		2022-23	
	m ³ /Yr	m ³ /day	m ³ /Yr	m ³ /day
*1.Process Water including Boiler Feed Water	81,9954	2,246.44	77,5760	2,125.36
2.Boiler Feed water	Incl. above	Incl. above	Incl. above	Incl. above
3.Domestic Water	33,43,414	9,160.03	31,93,405	8,749.05

* Includes fresh water for cooling tower make-up, boiler feed water & direct use in process units.

<u>Name of products/</u>	<u>Water consumption per unit of products</u>	
	<u>Raw materials (m³/MT)</u>	
	<u>2021-22</u>	<u>2022-23</u>
CRUDE OIL	1.15	1.09

As products are not separately processed and all products are obtained from the same raw material i.e., crude oil, water consumption above has been indicated as m³/MT of crude processed which was **0.708 MMTPA** in 2021-22 and **0.71298 MMTPA** in 2022-23.

2. RAW MATERIALS CONSUMPTION

Name of Raw Materials	Name of products	Consumption of raw materials per unit of Products	
		2021-22	2022-23
	LIST OF PRODUCTS		
CRUDE OIL	LPG	1.7	1.61
	RAW NAPHTHA	0	0.04
	MS XP 100	0	0.89
	MS BS VI	18.72	16.64
	Less Light dist. ex RN(GR)	-1.66	-2.23
	H S D BS VI	55.76	58.19
	PARAFFIN WAX	4.62	4.3
	SULPHUR	0.02	0.05
	FO	0.18	0.72
	FO - Regular	14.53	10.27
	LSHS (Premium)	0	1.94
	CRMB	0	0
	PETROLEUM COKE	5.68	5.44
	INTERMEDIATE STOCK DIFFERENTIAL	-1.31	0.46
	OWN FUEL :LIQUID (HSD to CPP)	0.05	0.04
	OWN FUEL : GAS	3.86	3.42
	FLARE LOSS	0.14	0.15
	GRAND TOTAL	102.3	101.92

PART-C

Pollutants Generated (Parameters as specified in consent issued)

➤ **WATER EFFLUENT(As per Gazette of India.GSR-186 (E), dated 18.03.2008) Table -1**

Sl.No.	Pollutants	Quantity of Pollutants generated		Total Kg/Yr	% Variation from prescribed standard with reasons
		As per Revised Consent kg/1000 MT of crude processed	Actual in kg/1000 MT of crude processed		
1.1	pH	6~8.5			
1.2	Oil & Grease	2.0	0.000	0.000	Meets revised standard
1.3	Phenol	0.14	0.000	0.000	Do
1.4	Sulfide	0.20	0.000	0.000	Do
1.5	BOD	6.0	0.000	0.000	Do
1.6	COD	50.0	0.000	0.000	Do
1.7	TSS	8.0	0.000	0.000	Do
1.8	CN	0.08	0.000	0.000	Do
1.9	NH3 as N	6.0	0.000	0.000	Do
1.10	TKN	16.0	0.000	0.000	Do
1.11	P	1.2	0.000	0.000	Do
1.12	Cr ⁺⁶	0.04	0.000	0.000	Do
1.13	Cr(Total)	0.8	0.000	0.000	Do
1.14	PB	0.04	0.000	0.000	Do
1.15	Hg	0.004	0.000	0.000	Do
1.16	Zn	2.0	0.000	0.000	Do
1.17	Ni	0.4	0.000	0.000	Do
1.18	Cu	0.4	0.000	0.000	Do
1.19	V	0.8	0.000	0.000	Do
1.20	C ₆ H ₆	0.04	0.000	0.000	Do
1.21	α C ₆ H ₆	0.08	0.000	0.000	Do

NOTES:

- Total Crude processed during 2022-23= **712.98 TMT**
- Total treated effluent discharged during 2022-23= **0 m³**
- % Variation is calculated on the basis of average data of the year in accordance with permissible limit w.r.t Gazette of India.GSR-186 (E), dtd 18.03.2008
- Major part of treated effluent reused as firewater makeup, coke cutting water makeup, Wax Sector Cooling tower makeup, housekeeping, Horticulture.
- Storm water is released to natural drain (Digboi Nullah)

2 EMISSIONS

NOx & SO₂ Emission as per Revised Standards: Table -2

Furnace Stack	Fuel Type used for burning	SO ₂ emission (mg/NM ³)		NOx emission (mg/NM ³)	
		Limit	Actual	Limit	Actual
HGU	FG & NG	50.0	5.53843	350	19.819
CDU	FG & NG	50.0	4.76784	350	3.91313
VDU	FG & NG	50.0	3.31794	350	3.57418
CRU HDT	FG & NG	50.0	11.0524	350	NA
CRU OMSG	FG & NG	50.0	14.5604	350	NA
DCU	FG & NG	50.0	10.4809	350	1.7414
HDT	FG & NG	50.0	9.98378	350	5.02926
SDU	FG & NG	50.0	0.72156	350	8.27942
HRS-1/2/3	NG	50.0	2.13	350	6.24
HRS-4	NG	50.0	3.19566	350	56.1602

The Above Stack emission data is prepared based on the monthly average value fetched from Real Time Data Base of the analyzers installed at the furnace.

#NA - Analyzer not available.

Yearly average value Ambient Air quality data for 2022-23 as given below: Table -3

Pollutants	Concentration µgm / m ³									
	Limit ug/Nm ³	Station-1, CAAQMS (Welfare Centre)			Station-2, NE direction (Bazar gate)			Station-3, W direction (ETP)		
		Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
SO ₂	50(A)	9.7	0	3.89	9.96	8.97	9.4925	10.76	8.23	9.3425
NO _x	40 (A)	27.26	0	20.03	21.87	18.03	19.7	21	15.27	18.66917
PM ₁₀	60 (A)	26.78	4.62	14.98	61	56	57.79417	60.5	55.07	57.03667
PM _{2.5}	40 (A)	17.4	1.28	5.62	32.85	25.55	28.5475	33.88	24.07	28.07083
CO	02(8hrs)	1.61	0.82	1.18	1.46	1.3	1.393333	1.54	1.27	1.37
NH ₃	100(A)	3.94	0	2.84	14.2	10.28	12.31833	13.05	10.67	11.83667
O ₃	100(8hrs)	10.87	2.19	4.21	28.4	21	24.72583	26	21.08	23.83417
Pb	0.50(A)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As	06 (A)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni	20 (A)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
C ₆ H ₆	05 (A)	0.07	0	0.01	BDL	BDL	BDL	BDL	BDL	BDL
α C ₆ H ₆	01 (A)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Pollutants	Concentration $\mu\text{gm} / \text{m}^3$						
	Limit ug/Nm3	Station-4, NW direction (NTF)			Station-5, Cooling Tower(wax)		
		Max	Min	*Avg	Max	Min	*Avg
SO ₂	50 (A)	10.5	8.02	9.1725	11.06	8.24	9.085833
NO _x	40 (A)	22.12	16.24	18.94	20.22	14.06	18.13667
PM ₁₀	60 (A)	57.44	53.08	55.66667	57.22	53.04	55.48583
PM _{2.5}	40 (A)	31.33	25.28	27.93583	31.77	1.35	25.5425
CO	02 (8hrs)	1.52	1.27	1.371667	1.43	1.2	1.315
NH ₃	100 (A)	14	10.05	12.16583	14	10.83	11.85917
O ₃	100(8hrs)	26.2	22	24.15417	26.2	21.03	23.90583
Pb	0.50(A)	BDL	BDL	BDL	BDL	BDL	BDL
As	06 (A)	BDL	BDL	BDL	BDL	BDL	BDL
Ni	20 (A)	BDL	BDL	BDL	BDL	BDL	BDL
C ₆ H ₆	05 (A)	1.83	1	1.45	1.83	1.14	1.49
α C ₆ H ₆	01 (A)	BDL	BDL	BDL	BDL	BDL	BDL

PART D

Hazardous Wastes – Stock as on 1st April of each Year

(As specified under hazardous waste management and handling rules, 1989)

Sl. No	List of Items	Waste Category	Quantity (MTPA)	
			Stock as on 1st April of each Year	
			2021-22	2022-23
1	Oil Sludge from process ex ETP	4.1	0.00	180.00
2	Oil Sludge from tank cleaning*	4.1	10455.57	10358.04
3	Slop Oil	4.3	554.90	496.92
4	Organic Residues from process (including Bio-Sludge)	4.4	867.20	868.00
5	Spent Catalyst	4.2	82.00	0.00

* The above Oily Sludge from tank cleaning quantity relates to raw oily waste generated from tanks cleaning along with the residual oily sludge which is kept in main sludge pit area inside Refinery.

PART- E**SOLID WASTE**

Wastes	TOTAL QUANTITY GENERATED (MT)	
	2021-22	2022-23
A) From process ➤ Oily Sludge from ETP & Tank Cleaning	451.168	1197.289
B) From Pollution Control Facilities ➤ Oily Sludge ➤ Chemical Sludge ➤ Bio Sludge	Nil Nil 698.6	Nil Nil 262.8
C) Quantity Recycled	Nil	Nil
D) Spent Catalyst *(Non-precious)	35.44	0
E) Spent Catalyst (Precious)	11.67	0

PART-F**CHARACTERISTIC & DISPOSAL METHODS OF HAZARDOUS AND SOLID WASTES:****1. Characteristics****a) Oily Sludge**

Parameters	Units	value
Density	% Wt.	1.124
Oil	% Wt.	24-40
Water	% Vol.	25-35
Sediment	% Wt.	40-55

b) Bio-sludge (After Weathering): Heavy metal content

Heavy Metals Content	Cr	Cu	Ni	Pb	V	Zn	Co	As	Mn
Unit	ppm	mg/l	ppm	ppm	ppm	ppm	mg/l	mg/l	mg/l
Limit	5	25	20	5	24	250	80	5	5
Metals concentration	<0.1	<0.1	<0.1	<0.1	<0.1	0.12	<0.1	<0.02	10

NB: - Heavy metal content test done by M/S Mitra S.K. Private Limited.

2.0 DISPOSAL METHODS:

a) Oily Sludge:

- i) The oily sludge is being bio-remediated. Bio-remediation is done using soil mixed with sludge and then tilled for proper mixing. Then oil degrading microbes along with nutrients spread over the mixture of soil and sludge and tilling again. The mixture left for action of microbes for few months. Few months later tilling of sludge done again and random sample collected for testing oil%. If oil content found above 1%, same action done over the mixture till oil% come down to 1%. If the oil content is found below 1% along with the heavy metal concentration below the approved limit then the soil is disposed or used within refinery battery limit for filling or construction purpose.
- ii) Sale of Oily sludge to authorized re-cyclers through e-auction.

b) Bio-Sludge:

Bio-Sludge generated in ETP is allowed to dry in the sludge drying beds. The weathered sludge is then Bio remediated and used for land filling in low lying areas.

c) Spent Catalyst:

Spent catalysts are being disposed through CPCB approved buyers/recyclers through e-auction and IOCL tendering.

PART-G

Benefits of Pollution Control Measures:

1) Reuse /Recycling of Treated Effluent:

A permanent pumping system had been installed in ETP and commissioned in Nov'93. Recycling of treated effluent has since then been stepped up. In 2018-19, 97% of treated effluent is recycled into refinery and reused as Fire water make up ,for cleaning purposes and gardening. Another scheme for reuse was commissioned in Aug'11 for use of the treated effluent as make-up for coke-cutting water used in the delayed coking unit. For increasing reuse of treated effluent in wax sector cooling tower as make up water Dual Media Filter was commissioned in 28th March' 2014.

2) Oil Recovery from Sludge / Slop Recovery from API separators

Regular recovery of oil from oily sludge treatment facilities and directly from API separators is carried out. The recovered oil is then reprocessed in Distillation unit/Blended in Furnace oil. This recovery has helped in reducing hydrocarbon loss and pollution.

3) Tree plantation and Green Belt Development

Digboi Refinery and its township are surrounded by Upper Reserve Forest in all directions except in the north. There are plenty of trees in the refinery campus and the residential areas. Moreover, AOD has been drawing up plans for plantation of trees since 1983 in consultation with forest officers and the Digboi Horticultural Society. Nos. of trees planted in the last decade, including last FY 2022-23 are given below.

Year	Trees Planted
2002-03	1800
2003-04	300
2004-05	180
2005-06	150
2006-07	450
2007-08	580
2008-09	1150
2009-10	10953

2010-11	21897
2011-12	5500
2012-13	5000
2013-14	5133
2014-15	3,428
2015-16	2,168
2016-17	5,860
2017-18	1,000
2018-19	5,000
2019-20	5,290
2020-21	12,050
2021-22	45,100
2022-23	20,430
Total	1,53,419

4) **Energy Conservation Measures:**

- i) Numerous energy conservation measures have been implemented which have accounted for reduction in energy consumption and loss. These measures have enabled reduction in the "Specific Energy Consumption" of the refinery from about 112 MBN to a level of 61.5 in 2013-14. Digboi Refinery has been the proud recipient of the National Energy Conservation Award instituted by the Ministry of Power, Govt. of India, for the last three consecutive years and, in fact, was awarded the first prize in 2011 amongst all refineries in India.
- ii) Digboi Refinery won 1st Prize for "Furnace and Boiler Efficiency" as part of "OGCF Award – 2012" in the category of Refineries having Total Design Heat Duty less 500 MMKCAL/Hr. Digboi Refinery won second prize in OGFC Award 2014 for Furnace/Boiler Insulation Effectiveness on category-2 having total design heat duty less than 650 MMKCAL/hr.
- iii) De-Scaling, Decoking Technology for DCU furnace carried out in Jan.2016.
- iv) Improvement in heat rates by upgrading technology components for GT bucket & shrouds.
- v) Digboi Refinery has successfully implemented Energy Management System (EnMS) and got the certification of ISO 50001:2018 on 26th March 2022 by the certification body M/s Staunchly Management & System Services Private Limited (STAUNCHLY) who is accredited with Egyptian Accreditation Council (EGAC), a member of the International Accreditation Forum (IAF). The certification is valid for three (3) years i.e. up to 25th March 2025.

The details of ENCON schemes implemented during 2022-23 are enclosed in Annexure I

PART- H

Pollution Control Measures:

1. Schemes Implemented during 2022-23:

- i) More than 20,430 tree saplings were planted around Digboi Township during 2022-23.
- ii) Celebration of World Environment Day 2022.
- iii) In situ Bio-remediation of 600MT oily sludge Completed by M/S INNOTECH during 2022-23.
- iv) Sale of 3000 MT Oily sludge to authorized re-cyclers through e-auction. Out of 3000 MT, 695 MT has been uplifted by M/S STAR PETROCHEM during FY 2022-23.
- v) One Electronic display board in front of main gate is installed as stipulation of statutory bodies.
- vi) Installation of VOC Reduction schemes at ETP completed during FY 2022-23. Under this scheme, a fixed bed carbon adsorption process which shall meet the VOC emission requirement of MOEF norms. This unit will trap the volatile components in Effluent water and thereby help in reducing the Volatile Organic Compound up to 90 %, complying with the emission norms of the Environment protection Act. The VOC

facility was commissioned on 10.03.2023 after getting final commissioning approval from PESO.

2. Schemes under implementation

3. Environmental Monitoring 2022-23

- i) Monthly Sampling and Testing of 21 parameters of Treated Effluent done by M/S Mitra S.K. Private Limited.
- ii) Monthly Monitoring of Ambient Air Quality in four stations done by M/S Mitra S.K. Private Limited.
- iii) Quarterly Monitoring of Fugitive Emission under LDAR Program by M/S Mitra S.K. Private Limited
- iv) Digboi refinery adds a Gully Sucker to collect oil from Drains, Sump & OWS under Fire & Safety Department.

4. Long Term Projects of Digboi Refinery

- i) Sampling and testing of all the 21 parameters of Effluent and 12 Parameters of Ambient Air Quality and Stack Emission monitoring by SPCB /CPCB approved agencies.
- ii) A rain water harvesting project along with allied facilities, (SCP) Storage cum Percolation Pond with 28000m³ capacity, has been working successfully.

5. Achievements from 2011-2022

- i) Digboi Refinery become India's first refinery to bag Prestigious **"TPM Special Award 2018"** Digboi Refinery also recipient of the Award for TPM Excellence, Category-A in 2011 and Award for Excellence in Consistent TPM Commitment 2013 from JIPM, Japan.
- ii) Digboi Refinery awarded the First Prize for Hindi Implementation for 2019 – 2020 among Refineries in North Eastern Region and TOLICs in North Eastern Region.
- iii) AOD Digboi Refinery bagged the Third place honour of this prestigious A. V Ogle award for the year 2016-17 towards continued commitment for prevention of Fire, Accident and implementing Fire Safety standards in Refinery operation.
- iv) Digboi Refinery bagged National Level Award **"Sarba Shrestha Suraksha Puraskar (Golden Trophy & Certificate)** in manufacturing sector Group-A for 2016.
- v) Digboi Refinery won National Level Award **"Sarba Shrestha Suraksha Puraskar (Golden Trophy & Certificate)** in Group-A for 2015.
- vi) Digboi Refinery won National Level Award **"Shrestha Suraksha Puraskar (Golden Trophy & Certificate)** in Group-A for 2014.
- vii) Digboi Refinery bagged the **1st Prize** in the National Energy Conservation Award, 2011" and **2nd prize** in 2012 in the Refineries sector instituted by the Ministry of Power, GOI, for the four consecutive years.
- viii) AOD emerged jointly winner of Shri A V Ogale Running Shield for Safety & Fire Prevention for 2013-14.
- ix) QC Laboratory of Digboi Refinery has received Certificate of Accreditation in accordance with the international standard **ISO/IEC 17025:2017** in the field of Chemical Testing. The NABL accreditation is valid till 31.12.2023.
- x) Digboi Refinery was awarded the 3rd Prize by the Public Relations Society of India for its Environmental Awareness campaign related to its carbon offset initiative **"Black – 2 – Green "**
- xi) Digboi Refinery achieved the award for **"Excellence in Consistent TPM Commitment" by JIPM Japan in 2013-14.**
- xii) Digboi Refinery won 1st prize for "Boiler Efficiency" as a part of **"OGCF Award-2012"** in the category of Refinery having Total Design Heat Duty less 500Mmkcal/hr and won 2nd prize in 2014 having total design Heat Duty less than 650MMKCAL/hr
- xiii) Assam Oil School of Nursing won the award in the category of **"Outstanding CSR in the Oil & Gas Sector"** at an CSR conference in Delhi organized by 'Think Media' on 21st March,2014
- xiv) AOD received the Security Index Shield award for best Deterrence for 2014.

- xv) Indian Oil bags the Best-PSU Silver Trophy for its Skill Development program under CSR in the category Best PSU-Public Sector Training program for providing professional training to unemployed girls in the field of nursing and midwifery through its Assam Oil School of Nursing located at Digboi.
- xvi) Assam Oil College of Nursing received two awards-viz one of ABP News and other from M/S Blue Dart for women empowerment.
- xvii) Digboi Refinery produced environment friendly **XP100** petrol during FY 2020-21.
- xviii) Digboi Refinery has won prestigious "SHRESHTHA SURAKSHA PURASKAR" from National Safety Council of India (NSCI) for the Year-2021. The award was conferred based on safety performance of Digboi Refinery for three consecutive years, i.e. 2018, 2019 and 2020.
- xix) Digboi Refinery was certified with **ISO-14064-3:2019** Verification statement by M/s Chemept Solutions on March 31, 2022. Time period for GHG accounting: April 2020 to March 2021.
- xx) Digboi Refinery has successfully implemented Energy Management System (EnMS) and got the certification of **ISO 50001:2018** on 26th March 2022 by the certification body M/s Staunchly Management & System Services Private Limited (STAUNCHLY) who is accredited with Egyptian Accreditation Council (EGAC), a member of the International Accreditation Forum (IAF). The certification is valid for three (3) years i.e. up to 25th March 2025.

Annexure I

ENCON SCHEME 2022-23 DIGBOI REFINERY		
1. Recovery of Hydrogen from Refinery (CRU) Off-gases		
	Actual Benefit	Units
Total additional Hydrogen saving	43	Kg/hr
Total reduction in NG to HGU	151	Kg/hr
Increase in NG makeup to RFG header due to hydrogen removal	101	Kg/hr
Delta reduction in NG per year	396	MT/year
Total SRFT saving	455.0	SRFT
2. WRDS feeding from WPU feed tank and stoppage of 3 no's of WRDS feed tank operation.		
Total saving in LP steam	0.6	MT/hr
Total SRFT saving	355	SRFT

Total Savings: 810 SRFT