

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

बोंगाइगाँव रिफाइनरी

डाकघर : धालीगाँव - 783 385

जिला : चिरांग (असम)

Indian Oil Corporation Limited

Bongaigaon Refinery

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रिफाइनरी प्रभाग  
Refineries Division

IOC/BGR/ENV/DHDT/MoEF/2014-15 /02

Date : 19.05. 2015

To

**The Chief Conservator of Forests**  
Regional Office, North East Region  
Ministry of Environment & Forests  
Law-U-SIB, Lumbatnagen, Near M.T.C. Workshop,  
Shillong – 793021

**Subject: Half yearly Report for the period of 1<sup>st</sup> October, 2014 to 31<sup>st</sup> March, 2015 For Diesel Hydro Treatment Plant**

Dear Sir,

With reference to above, we are enclosing the Six Monthly Report for the period of **1<sup>st</sup> October, 2014 to 31<sup>st</sup> March, 2015** for your kind perusal. The reports are being sent as per EIA Rules'2006 on the "Environmental Clearances" issued by MoEF to Bongaigaon Refinery (BGR), for "Diesel Hydro Treatment Project".

Thanking you,

Yours faithfully,

(A.K Agarwal)  
Chief Manager (HSE)

Copy to:

1. Member Secretary, Pollution Control Board, Assam  
Bamunimaidam, Guwahati - 781 021
2. Zonal Officer, Central Pollution Control Board  
Eastern Zonal Office, 'TUM-SIR', Lower Motinagar,  
Near Fire Brigade H.Q., Shillong – 793014

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## ANNEXURE-B:

### Hydro-treatment Project,

MoEF letter No. J.11011/78/2001-IA-II (I) dated 25/06/2002.  
Renewal of "Environment Clearance" by MoEF on 01.05.2006

### Six Monthly Status Report for the period: (1<sup>st</sup> October, 2014 to 31<sup>st</sup> March, 2015)

Sr. No.	Specific Conditions	Compliance Status
i	The company must comply with conditions and safeguards stipulated by the Ministry while granting environmental clearance to the refinery expansion project vide Ministry's OM No. J-11011/24/90-IA II (I) dated 3 <sup>rd</sup> June 1991	All conditions of the clearance were complied and verified by statutory agencies time to time.  (Please Refer to compliance report of Refinery Expansion project.)
ii	A comprehensive risk assessment study for the complex must be undertaken and report submitted to the Ministry before commissioning of the Diesel hydro-treatment project.	1.Rapid Risk Analysis (RRA) was carried by M/s EIL, New Delhi. Final report was submitted by EIL in September'2006. RRA report is already submitted to your good office vide our letter No. BRPL/ENV/MS-MAX/06-07/03 dated 08.11.2006. 2. HAZOP study for DHDT, Sulfur Block, HGU & OSBL Utilities & Off-sites area completed & report submitted by consultant, (EIL) & the HAZOP recommendations implemented. 3. Comprehensive Risk Assessment was conducted by M/s Chilworth Technology Pvt. Ltd. New Delhi and final report was submitted on 11.10.2010.
iii	The company must formulate and firm up a scheme/action plan for handling the oily sludge which is presently being disposed off into the oil sludge lagoon. The firmed up plan must be submitted to the Ministry within one year.	M/s Balmer Lawrie & Co. Limited was awarded the contract of oily sludge processing along with bio-remediation of residual solids. The party already completed the processing of oily sludge from sludge lagoons. Bio- remediation process of the residual part of sludge has also been completed.
iv	The project proponent shall also comply with all the environmental protection measures to mitigate the risks including the following:	Taken care of all the environmental protection measures and safeguards recommended in the EMP and risk analysis report and also revised CPCB guidelines etc. in design stage itself.
v	a. Provision of double mechanical seal for the pumps handling H <sub>2</sub> S to reduce the frequency of failure	Taken care of in design stage & available in process data sheets of respective pumps in BDEPs.
	b. Provision of adequate no. of H <sub>2</sub> S detector (s) in appropriate locations of the plant for early detection of the leak so that the release duration and hence the hazardous consequence is reduced.	Following no. of H <sub>2</sub> S detectors along with HC/H <sub>2</sub> detectors provided in various process units under DHDT project. DHDT : (HC = 7, H <sub>2</sub> S = 5, H <sub>2</sub> = 3) HGU : (HC = 10, CO = 4, H <sub>2</sub> = 4) ARU : (H <sub>2</sub> S = 6 & HC=1) SWSU : (H <sub>2</sub> S=5 & HC=1) SRU : (H <sub>2</sub> S=12, HC=3 & H <sub>2</sub> =2)
	c. Provision of emergency stop button for rich amine group in the control room to stop the pump.	Taken care of in design stage & indicated in respective P&IDs.

Sr. No.	Specific Conditions	Compliance Status
vi	Government of Assam (Dept. of Forest and Wildlife), must prepare a contingency plan to mitigate the adverse impact of the increased human activities on the wildlife habitat around the refinery, mainly w.r.t. Golden Langur. Funds for implementing mitigation strategies should be provided by the company. The refinery should also arrange to provide free gas to the villagers residing within Kakijana reserved forests as well as residents of Hapachara, Garegaon, Gorapara, Rabhapura and Chitkagaon, so that felling of trees for fuel wood is reduced .A comprehensive Action Taken Repot should be submitted within one year.	BGR requested to MoEF for exemption of these conditions vide letter no. ENV/STAT/01/01 dated 31.07.2002.

Sr. No.	General Conditions	Compliance Status
i	The project authority must adhere to the stipulations made by Assam State Pollution Control Board and State Government.	Stipulations made in the environmental clearance of the project are being addressed during detailed engineering also. The same has been addressed in the Basic Engineering Design Package, wherever applicable.
ii	No expansion or modification of the plant should be carried out without prior approval of this Ministry.	Noted
iii	Handling, manufacturing, storage and transportation of hazardous chemicals should be carried out in accordance with the Manufacturing, storage and transportation of hazardous chemicals Rules, 1989, as amended in 1991. Permission from State and Central nodal agencies in this regard must be obtained.	Noted
iv	Hazardous wastes, if any, must be handled and disposed as per Hazardous waste (Management and handling) Rules, 2000. Authorization from State Pollution Control Board in this regard must be obtained.	Noted Authorisation for handling and management of Hazardous Waste is accorded by SPCB, Assam under the Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, 2008.
v	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase so as to avoid felling of trees and pollution of water and the surrounding.	Infrastructure facilities like water supply, food canteen, sanitation are being provided phase wise to construction workers
vi	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc, on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	(a) Taken care of in design stage and mentioned in process data sheets for various equipments wherever applicable in BDEPs. (b) All precautionary measures are taken at the construction site to control the noise level & present activities do not generate noise of high db.

Sr. No.	General Conditions	Compliance Status
vii	Occupational health Surveillance of the workers should be done on a regular basis and records maintained.	Complied
viii	A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions should be set up under the control of Senior Executive.	BGR is already having a separate environmental management cell and full fledged laboratory to carry-out environmental management and monitoring functions. Environment Laboratory of BGR is accredited by NABL.
ix	The funds earmarked for the environmental protection measures should be reported to this Ministry and SPCB.	Noted
x	Six monthly status report on the project vis-a-vis Implementation of environmental measures should be submitted to this Ministry (Regional Office, Shillong/ CPCB/ SPCB).	Complied
xi	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with State Pollution Control Board/Committee and may also be seen at Website of the Ministry and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should forwarded to Ministry's Regional Office at Shillong.	Complied.
xii	The Project Authorities should inform the Regional Office as well as the Ministry the date of financial closer and final approval of the project by the concerned authorities and the date of land development work.	Board of Directors of the Company has approved revised cost estimate of <b>Rs.1681.42</b> Crore. The initial capitalization date is 13.08.2011 (original approved cost is Rs. 1431.91 crore) for this project on 28th May, 2008.  Closure shall be intimated in due course of time.

Sr. No	CONDITIONS (As given in concurrence to changes in Env. Clearance dated May 1, 2006)	
i	The total SO <sub>2</sub> emission level from the unit after the proposed up gradation shall not exceed 40 kg/MT of the feed.	Taken care in design stage itself.
ii	The company shall comply with the revised standards of NO <sub>x</sub> emission.	
iii	The total effluent generation shall not exceed 7.9 m <sup>3</sup> /hr The fresh water consumption shall not exceed 275 m <sup>3</sup> /hr.	
iv	No further modernization of project shall be carried out without prior permission of this Ministry.	Noted
v	The company shall comply with the conditions stipulated in the clearance order of even no. dated 25 <sup>th</sup> June, 2002.	Noted
vi	The company shall carry out a comprehensive risk assessment study and a copy submitted to the Ministry before commissioning of the Diesel Hydro Treatment Project.	Comprehensive Risk Assessment was completed by M/s Chilworth Technology Pvt. Ltd., New Delhi and Final report was submitted on 11.10.2010.

## **APPENDIX**

### **Status of Diesel Hydro-Treatment Project**

**(1<sup>st</sup> October, 2014 to 31<sup>st</sup> March, 2015)**

**Environmental Clearance for Diesel Hydro-treatment Project, MoEF's Letter No. J.1101/78/2001-IA-II (I) dated 25/06/2002**

#### **Status:**

Following are some of the important mile stones towards implementing of the project:

**1. Renewal of "Environment Clearance" from the Ministry of Environment & Forests:**

The Ministry of Environment & Forests had conveyed its 'No Objection' to the proposed revised Diesel up gradation project at IndianOil Bongaigaon Refinery vide their letter No. J-II0II/78/2001 — IA 11(1) dated 01.05.2006.

**2. Renewal of "NOC" from State Pollution Control Board:**

Pollution Control Board of Assam had renewed the NOC vide their letter No.WB/Z-II/T-1 345/2000-2001/138 Dated Guwahati, the 8th May, 2006

**3. Board approval for Project:**

Board of Directors of IOCL has approved revised cost estimate of Rs. 1681.42 crore (original approved cost is Rs. 1431.91 crore) for this project.

**4. Fresh REIA & RRA Study:**

Fresh REIA & RRA study for the project was carried out by M/s EIL, New Delhi. Final report was submitted in September, 2006.

Further, HAZOP study for DHDT unit (13.12.06 to 22.12.06), Sulfur Block (15.01.07 to 24.01.07), HGU (08.10.07 to 12.10.07) and OSBL Utilities & Off sites (16.10.07 to 17.10.07) completed and reports submitted by EIL on 04.01.07, 17.02.07, 27.10.07 & 31.10.07 respectively.

**5. Commissioning of various units under DHDT project:**

- (a) All the utilities & off sites viz. LP steam, MP steam, VHP steam, SW, DM, DW, Nitrogen, AP, AI, CK, Slop, GO, FG lines commissioned
- (b) H<sub>2</sub> unloading & Storage facility along with H<sub>2</sub> unloading Compressor commissioned
- (c) All the Seven Feed tanks commissioned
- (d) Nitrogen Plant & Flare System commissioned
- (e) Hydrogen Generation Unit (HGU) commissioned in March, 2011
- (f) Diesel Hydro Treatment (DHDT) Unit has been commissioned in August, 2011.
- (g) Amine Absorption Unit & Sour Water Stripping Unit commissioned
- (h) Sulfur Recovery Unit (SRU) commissioned in December, 2012.
- (i) Gas Turbine Generator (GTG) with Heat Recovery Steam Generator (HRSG) commissioned in May, 2013.