



REF: IOC/BGR/ENV/INDMAX ETC./MoEF&CC/2019-20/02

Date: 20/06/2020

To

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

Subject: BGR INDMAX & BS-VI Projects: EC Conditions, Action Plan and Targets.

Dear Sir,

With reference to above, we would like to submit the Action Plan and Targets for the EC conditions contemplated in the Environment Clearance issued to Bongaigaon Refinery for IndMax and BS-VI etc. Projects by MoEF&CC vide letter No.: J-11011/48/2016-IA-II(I), Dt. 19/04/2017 for your kind perusal.

Thanking you,

Yours faithfully,

(A.Basumatary))

DGM (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

Half yearly Report for BGR INDMAX & BS-VI Project (1st October, 2019 to 31st March, 2020)

INDMAX PROJECT



BS-VI PROJECT



Submitted by:

Indian Oil Corporation Limited

Bongaigaon Refinery

PO: Dhaligaon. District: Chirang. Assam

INTRODUCTION

IOCL, the energy of India is contributing the nation in its development by means of employment generation and through CSR activity. For the development of the nation as well as the company and for Environment protection, IOCL is adding new plant for environment friendly and value added product. IOCL, Bongaigaon Refinery is going to establish a new unit, INDMAX for LPG maximization and BS-VI project for cleaner fuel.

To establish the new unit, EIA study was done by M/s ABC TECHNO LABS INDIA PVT. LTD, Chennai.

Based on the EIA study, IOCL, BGR applied for EC to MoEF&CC on 31/05/2015.

Going through all the process and formalities, MoEF&CC granted EC No. J-11011/48/216-IA-II (I), Dated: 19th April 2017 to IOCL, BGR to establish following projects:

1. Refinery capacity enhancement from 2.35 MMTPA to 2.70 MMTPA
2. INDMAX FCC Unit, 740 TMTA
3. Prime- G+/ BS-VI projects (Including SRU, SDS/ARU)
4. DHDT capacity enhancement from 1.2 MMTPA to 1.8 MMTPA
5. HGU Revamp (Capacity enhancement from 25 TMTA to 30 TMTA)
6. CRU-MSQ Revamp

Compliance/ progress report for the above projects are listed below:

BGR INDMAX & BS-VI PROJECTS: EC CONDITIONS, ACTION PLAN AND TARGETS.
EC Reference: J-11011/48/2016-IA-II (I) Dt. 19.04.2017

Special Conditions:

EC SI No	Condition	Action	Target
(i)	<p>All pollution control and monitoring equipments shall be installed, tested and interlocked with the process.</p> <p>SPCB shall grant 'Consent to Operate' after ensuring that all the mentioned pollution control equipments, construction of storm water drain, rain water harvesting structure, Greenbelt, uploading of compliance report on the website etc have been implemented.</p>	<p>Total 19 nos of SO_x, NO_x, CO and PM analyzers have been installed in all 5 stacks of -</p> <ol style="list-style-type: none"> 1. ATF Splitter re boiler 2. New NHT furnace 3. New SRU furnace 4. INDMAX Flue Gas Boiler 5. PrimeG+ two new furnace, <p>Installation in SRU stack will be completed after mechanical completion of stack.</p>	-
		<p>Consent to Established Certificate issued by Pollution Control Board, Assam vide no. WB/BONG/T-2266/PT-I/08-09/40/936, Dated: 12th Jan 2018.</p> <p>Validity of CTE extended upto 11/01/2023, vide letter reference, no. WB/BONG/T-2266/PT-I/08-09/43/2237.</p> <p>Online Application for 'Consent to operate' has been submitted on 11.03.2020.</p>	-
		<p>Construction of storm water drains in the project area completed.</p>	Complied
		<p>Rain water harvesting scheme is under implementation along with the project.</p>	Two roof top RWH scheme commissioned in the new project
		<p>Details of setting up of green belt in different phases. (Phase-I & II)</p> <p>Phase-1: 10000 saplings planted in newly developed green belt area (Old debris yard area) during May-July 2017. Photograph of the green belt attached as Appendix-I.</p> <p><u>Details of plantation done in and around the complex, since 2017-18</u></p> <p>Year 2017-18: 29600 nos of Sapling Year 2018-19: 30060 nos. of sapling Year 2019-20: 14340 nos. of sapling</p> <p>Phase-2: After completion of the project, plantation will be continued in the following areas:</p> <p>(a) North/west side of the complex, in between LPG bottling plant and newly developed green belt area (b) Surrounding of PSF Building area (c) Downward direction and along road side of new project area.</p>	-
		<p>Uploading of EC compliance status report on the website is in practice.</p>	-

EC Sl. No	Condition	Action	Target
(ii)	<p>Ambient air quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R. No. 826(E) dated 16th September, 2009. The levels of PM10, PM2.5, SO2, NOx, VOC and CO shall be monitored in the ambient air and emissions from the stacks and displayed at a convenient location near the main gate of the company or at important public places.</p> <p>The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF&CC, the respective Zonal office of CPCB and the state Pollution Control Board (SPCB).</p>	<p>Ambient air quality data & Stack emission monitoring data of the existing units are displayed at BGR Main gate.</p> <p>Configuration done for Indmax and Prime G in existing system. Display shall be online once the units are commissioned.</p> <p>The results of monitored data are uploaded on IOCL website.</p> <p>Also half yearly status reports for the running units are submitted in the month of December and June to the Regional office of MoEF&CC, the Zonal office of CPCB and the State Pollution Control Board (SPCB).</p>	-
(iii)	<p>In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the SPCB.</p>	<p>Fugitive emissions are monitored from all vulnerable sources (i.e. Glands, flanges etc) and rectification is carried out if leakage is observed.</p> <p>Same will be followed for newly commissioned Units</p> <p>All liquid and gaseous products and chemicals are handled in the closed system.</p> <p>Water sprinkling system is being taken care off at loading area to control dust emission.</p> <p>Fugitive emission surveys are carried out to monitor emission in the work zone environment, product, raw materials storage area etc. and are regularly monitored.</p> <p>Fugitive emissions monitored confirm the emission limits stipulated by as per SPCB norms.</p>	- - - -

EC SI No	Condition	Action	Target
(iv)	The project proponent shall take due care and adopt best practices to ensure that there is no oil spill. However, to meet with any unforeseen situation and combat the oil spill, the PP shall prepare the Oil Spill Disaster Contingency Plan in line with the provisions of the National Oil Spill Disaster Contingency Plan. Regular mock drills shall also be conducted.	Emergency Response & Disaster Management Plan (ERDMP) is in place at BGR and mock drills conducted quarterly on various emergency scenarios. Last Off-site mock drill was conducted on 21/11/2019 in coordination with District Administration.	-
(v)	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.	The gaseous emission from DG set is dispersed through adequate stack height (3.0 Mtrs as per CPCB standards). DG set not available for new projects.	-
(vi)	Total fresh water requirement from existing source shall not exceed 370m ³ /hr and prior permission shall be obtained from the Competent Authority. No ground water shall be used without permission.	Permission for Fresh water requirement (ground water) from Competent Authority shall be obtained as & when required.	-
(vii)	Waste water shall be treated in ETP. The treated effluent water shall be reused as make up water for cooling tower and green belt development. No Effluent shall be discharged outside the plant premises.	a. Waste water is treated in ETP. b. The treated effluent water is reused as make up water for cooling tower, Fire water network and green belt development. c. Excess treated effluent is routed to Eco-pond for recharge of ground water and evaporation losses.	-
(viii)	Automatic / online monitoring system (24 x 7 monitoring devices) for flow measurement and relevant pollutants in the treatment system to be installed. The data to be made available to the respective SPCB and in the Company's website.	Online Continuous Effluent monitoring system for flow measurement and relevant pollutants in the treatment system is available. On-line data is made available to CPCB and SPCB.	-
(ix)	Adequate odour management plan and its mitigation measure to be implemented on priority.	Adequate odour management plan and its mitigation measure will be implemented along with the project.	-
(x)	Regular VOC monitoring to be done at vulnerable points.	Occupational Health section is monitoring the VOC at different vulnerable areas in the Refinery on monthly basis. Same will be followed for newly commissioned plants also.	-

EC SI No	Condition	Action	Target
(xi)	The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit.	The oily sludge is processed in melting pit for oil recovery and stored in brick lined sludge lagoon. Oily sludge from lagoon is processed for recovery of oil. The leftover residue is further bio-remediated before disposal.	-
(xii)	Comprehensive water audit to be conducted on annual basis and report to the concerned Regional Office of MoEF&CC. Outcome from the report to be implemented for conservation scheme.	M/s EIL conducted a comprehensive water audit & final report submitted. Copy of the Report will be submitted to the Regional Office of MoEF&CC after completion. Action plan formulated for implemented of short & long term conservation schemes.	-
(xiii)	Oil catchers/oil traps shall be provided at all possible locations in rain/ storm water drainage system inside the factory premises.	Provision is made for oil catchers/ oil traps in rain/ storm water drainage system in the new project.	-
(xiv)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arrestors shall be provided on tank farm. Solvent transfer shall be by pumps.	Hazardous chemicals are stored in tanks and drums.	-
		Flame arrestors are installed as per design of tanks in tank farm.	Complied
		Installation of transfer pumps is completed.	
(xv)	The by-products which fall under the purview of the Hazardous Waste Rules, be handled as per the provisions of the said Rules and necessary permissions shall be obtained.	Poly Ammonium Sulfide (PAS) dosing facility has been implemented in INDMAX FCCU for mitigation of Cyanide in effluent water generated from INDMAX. If required, the same will be further treated in upcoming effluent pre-treatment facility in future.	-
(xvi)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	The rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 is complied.	-
		Transportation of Hazardous Chemicals is followed as per the Motor Vehicle Act (MVA), 1989.	-

EC SI No	Condition	Action	Target
(xvii)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	Gas detectors, Hooters installed and commissioned in DHDT Revamp. Gas detectors installed and under commissioning in INDMAX, Prime G, NHT & SRU. Fire fighting system installed as per OISD-STD-116.	-
(xviii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers are done on a regular basis and records maintained as per the Factories Act.	-
(xix)	At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup /details shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.	As per MoEFCC guideline dtd. 1 st May 2018, ESC has been replaced with CER (Corporate Environment Responsibility). Expenditure incurred under CSR for the year: 2016-17: 304.84 lakhs 2017-18: 740.95 lakhs 2018-19: 960.00 lakhs 2019-20: 916.08 lakhs	CER budget for 2020-21: Approx. 900.00 lakhs
(xx)	A regular Environment Manager, having post graduate qualification in environmental sciences/ environmental engineering, to be appointed for looking after the environmental management practices in the plant.	One executive from HSE Dep't has completed one year PG Diploma course on Env. Management from Tezpur University. He has been entrusted to look after the environmental management practices in the plant.	-

EC SI No	Condition	Action	Target
(xxi)	As proposed, green belt over 33% shall be developed within plant premises with at least 10 meter wide green belt (perennial trees) on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	<p>Details of setting up of green belt in different phases. (Phase-I & II)</p> <p>Phase-1: 10000 saplings planted in newly developed green belt area (Old debris yard area) during May-July 2017. Photograph of the green belt attached as Appendix-I.</p> <p><u>Details of plantation done in and around the complex, since 2017-18</u></p> <p>Year 2017-18: 29600 nos of sapling Year 2018-19: 30060 nos of sapling Year 2019-20: 14340 nos of sapling</p> <p>Phase-2: After completion of the project, plantation will be continued in the following areas:</p> <p>(a) North/west side of the complex, in between LPG bottling plant and newly developed green belt area (b) Surrounding of PSF Building area (c) Downward direction and along road side of new project area.</p>	-

EC GENERAL CONDITIONS, ACTION PLAN & TARGETS

EC SI No	Condition	Action	Target
(i)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB) State Government and any other statutory authority.	Noted. Strict adherence to stipulations made by Statutory authorities will be complied along with project implementation.	-
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted.	-
(iii)	The location of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Noted and will be decided in consultation with SPCB after new project implementation.	-
(iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be followed.	NAAQS issued by the Ministry is being followed & complied.	-
(v)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise level shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Noted. Will be complied along with implementation of the project.	-
(vi)	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	Roof top Rain water harvesting schemes are under implementation along with the project.	-
(vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Training on safe handling of chemicals is imparted to all employees. Pre-employment and routine periodical medical examinations for all employees are undertaken on regular basis.	-

EC Sl. No	Condition	Action	Target
(viii)	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.	Noted. Environmental protection measures and safeguards as recommended in EIA will be complied with implementation of the project.	-
(ix)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	Measures for improving the socio-economic condition of the surrounding area is undertaken under CSR.	-
(x)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Measures are being undertaken in the nearby villages of the project area.	-
(xi)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Already exists.	-
(xii)	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purposes.	Dedicated fund is earmarked for environment management and pollution control measures.	-
(xiii)	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	Not Applicable. However, the clearance dated 19.04.2017 has been published in local dailies, "The Sentinel" and "Amar Asom" on 27.04.2017.	-
(xiv)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and concerned SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	Noted and is being complied.	-

EC Sl. No	Condition	Action	Target
(xv)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Noted and is being complied.	July-2020
(xvi)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Complied. The granting of Environment clearance dated 19.04.2017 has been published in "The Sentinel" and "Amar Asom" on 27.04.2017. The copy of the publication of EC forwarded to the Regional office of MoEF&CC, Shillong and SPCB office on 08.05.2017.	-
(xvii)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Complied. Date of final approval and the date of start of the project was informed to the Regional office as well as Ministry.	-

Tree Plantation

Tree Plantation 2017-18

The entire area inside BGR covered with greenery through massive plantation activities. Through massive plantation work and by giving protection to natural forest growth in side BGR premises, the entire area has become green. The entire plant area where processing plant facilities do not exist has a green cover. This helps in reduction of noise and air pollution level in one hand while on the other hand provides protection to ecological features of the area. The refinery has an excellent quality environment around its complex. Natural greenery can be seen all around the complex and in all seasons of the year. Tree Census was done by Divisional Forest Office, Chirang. As per census, 84545 numbers of plants which include trees including shrubs, ocular estimated 33000 numbers bamboos in 1150 no. bamboo culms and also trees planted by BGR during 2003 to 2012

In the financial year 2018-19, BGR has planted 30,062 nos. of sapling in and around the complex

During, 1st April, 2019 to 31st March, 2020 BGR has planted 14340 nos. of tree saplings

Tree Plantation 2017-18



**COMPLEX OLD DEBRIS YARD DEVELOPED INTO GREEN BELT. Planted in July'17,
GROWTH as on Dec'2020**

Tree Plantation 2017-18



IOCL, BGR TOWNSHIP PLANTATION. Planted on April'17 Growth as on 04.10.2019

Tree Plantation 2018-19



BGR TOWNSHIP PLANTATION, Planted Van mahotsav 2018, Growth as on April,2020

Tree Plantation 2019-20



North Bongaigaon High School, 5250 Sapling Planted by Miyawaki Method in the month of September, 2019

Tree Plantation 2017-18



Birhangaon State Dispensary Plantation, 10,000 nos. Sapling Planted by Miyawaki Method in the month of August,2017. Growth as on April, 2020

Tree Plantation 2019-20



Birhangaon State Dispensary Plantation, 5375 nos. Sapling Planted by Miyawaki Method in the month of September,2019. Growth as on April, 2020