

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

बोंगाइगॉव रिफाइनरी

डाकघर : धालीगॉव - 783 385

जिला : चिरांग (असम)

Indian Oil Corporation Limited

Bongaigaon Refinery

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रिफाइनरी प्रभाग

Refineries Division

IOC/BGR/ENV/MSMax/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, Lumbatnngen, Near M.T.C. Workshop,

Shillong – 793021

Subject: Half yearly Report for the period of 1st October, 2014 to 31st March, 2015 for "MS Maximisation Project".

Dear Sir,

With reference to above, we are enclosing the Six Monthly Reports for the period of **1st October, 2014 to 31st 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 "MS Maximisation 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

Status of MS Maximisation Project

(1st October, 2014 to 31st March, 2015)

Environmental Clearance for “Expansion of Pretreater & Reformer from 107,000 TPA to 160,000 TPA of Naphtha for Motor Spirit (MS) Maximisation Project” at Dhaligaon, Chirang, Assam by M/s Bongaigaon Refinery & Petrochemicals Ltd. vide MoEF’s letter No.J.11011/375/2006-IA-II (I) dated 22/03/2007;

Project was commissioned on 31.01.2009

Sr. No.	Specific Conditions	Compliance Status
(i)	The gaseous emissions (SO ₂ , NO _x , HC, VOC and Benzene) from various process units shall conform to the standards prescribed by the concerned State Pollution Control Board. All the measures detailed in the EMP and response to the Public Hearing shall be taken to control the point/stack and fugitive gaseous emissions from the proposed facilities, process plants and storage units etc. for ensuring that the ambient air quality around the Refinery due to the expansion is maintained at the predicted 24 hourly average maximum concentration.	Complied The gaseous emission is within limits, the HC detectors give continuous reading of the emissions at various locations.
(ii)	There will be no increase in the pollution load for any parameter, except the waste water and solid waste generation, due to the expansion project.	No increase in emission pollutant load.
(iii)	No additional stack is envisaged for the revamp of Pretreater and Reformer.	No new stack in the project
(iv)	The emission levels of the other pollutants shall remain within the existing levels.	The emission levels of the other pollutants are within the existing levels
(v)	Low Sulphur internal fuel oil & fuel gas will be fired in process heaters and boilers.	Low sulphur fuel oil & low sulphur fuel gas is only burnt in the system
(vi)	Quarterly monitoring of fugitive emissions will be carried out by Fugitive Emission Detectors (GMI Leak Surveyor). Guidelines of CPCB will be followed for monitoring fugitive emissions.	Quarterly Fugitive Emission Survey is carried out using GMI Leak Detector as per new CPCB Guidelines for monitoring
(vii)	For control of fugitive emissions, all unsaturated hydrocarbons will be routed to the flare system. The flare system shall be designed for smokeless burning.	There is no open vent. All process systems are routed to the Flare Gas Recovery System (FGRS).
(viii)	Flare Gas Recovery System will be installed for reduction of Hydrocarbon loss and emissions of VOCs, NO _x , SO ₂ & CO ₂ to the environment.	FGRS was commissioned on 2 nd August, 2009.
(ix)	Regular Ambient Air Quality Monitoring shall be carried out. The location and results of existing monitoring stations will be reviewed in consultation with the concerned State Pollution Control Board based on the occurrence of maximum ground level concentration and downwind direction of wind. Additional stations shall be set up, if required. It will be ensured that at least one monitoring station is set up in up-wind & in down-wind direction along with those in other directions.	Regular Ambient Air Quality Monitoring is being carried out. The locations of ambient stations are decided on the basis of the highest ground level concentration of Pollutants based on dispersion modeling in consultation with PCBA. Since there is no increase in emission of stack pollutants, review for relocation/ additional station is not envisaged.

Sr. No.	Specific Conditions	Compliance Status
(x)	Online data for air emission shall be transferred to the CPCB and SPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated regularly. The monitoring protocol shall ensure continuous monitoring of all the parameters.	All the stacks emission (on-line) data are being submitted to statutory agencies at regular intervals The instruments used for stacks/ ambient air monitoring are being regularly calibrated and monitoring is being done as per new "Effluent & Emission Rules, 2008".
(xi)	The practice of acoustic plant design shall be adopted to limit noise exposure for personnel to an 8 hr time weighted average of 90 db (A).	Complied. Quarterly Noise survey is conducted and no abnormality is noticed.
(xii)	All the Pumps and other equipment's where there is a likelihood of HC leakages shall be provided with LEL indicators and hydrocarbon detectors. Provision for immediate isolation of equipments, in case of a leakage will also be made. The company shall adopt Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions.	Complied Additional 2 HC, 2 H ₂ & 1 H ₂ S detectors have been installed in addition to earlier installed 3 H ₂ & 6 HC detectors LDAR program is being conducted quarterly in accordance with New Effluent & Emission Standards, 2008.
(xiii)	The product loading gantry shall be connected to the product sphere in closed circuit through the vapor arm connected to the tanker. Data on fugitive emission shall be regularly monitored and records will be maintained.	Not Applicable to this project Fugitive emission survey is being conducted on regular intervals and records are maintained.
(xiv)	The company shall ensure that no halogenate organic is sent to the flares. If any stream of the halogenated organic are present, then the respective streams may be incinerated. If there are no technically feasible or economically viable reduction/recovery options. Any stream containing organic carbon, other than halogenated shall be connected to proper flaring system, if not to a recovery device or an incinerator.	There is no halogenated organic component in the streams of this project.
(xv)	All new standards/norms that are being proposed by the CPCB for Petrochemical Plants and Refineries shall be applicable for the proposed expansion unit. The company shall conform to the process vent standards for organic chemicals including non-VOCs and all possible VOCs i.e. TOCs standards and process vent standards for top priority chemicals. Regular monitoring will be carried out for VOC and HC and On-line monitors for VOC measurements may be installed.	New Emission & Effluent Standards'2008 are being complied
(xvi)	No additional fresh water will be required for the expansion project. The total requirement of 197 m ³ /hr of fresh water will be met from the existing water withdrawal permissions.	Ensured. No additional fresh water is being consumed in this project.
(xvii)	Waste water generation after the expansion project will be around 0.015 m ³ /hr which will be treated in the existing ETP. Part of the treated effluent shall be recycled and remaining shall be disposed into the Tunia Nala through closed pipeline.	Complied

Sr. No.	Specific Conditions	Compliance Status
(xviii)	Regular monitoring of relevant parameters for the under ground water in the surrounding areas will be undertaken and the results will be submitted to the relevant States Pollution Control Board.	Complied
(xix)	Solid waste generated as Pretreater and Reformer Catalysts, Sulphur guard absorbent and Alumina Balls will be disposed off as per the authorisation from State Pollution Control Board.	Complied
(xx)	Oily sludge shall be sent to melting pit treatment for recovery of oil. The recovered oil shall be recycled into the refinery system. The residual sludge will be stored in HDPE lined pit for disposal after treatment. The sludge will be incinerated in the premises only.	Being complied
(xxi)	Green belt shall be provided to mitigate the effects of fugitive emissions all around the plant in a minimum of 33% of the plant area in consultation with DFO as per CPCB guidelines.	Green belt has been existed. Almost 2/3 of plant area is covered with greenery.
(xxii)	The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Being complied
(xxiii)	The Company shall harvest surface as well as rainwater from rooftops of the buildings proposed in the expansion project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	BGR has implemented two more roof top rain water harvesting projects in BGR campus to recharge the ground water table during this period.
(xxiv)	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Complied
(xxv)	The Company shall implement all the recommendations made in the EIA /EMP report and risk assessment report.	All recommendation has been complied
(xxvi)	The company will undertake all relevant measures, as indicated during the Public Hearing for improving the Socio-economic conditions of the surrounding area.	Complied

C. GENERAL CONDITIONS

Sr. No.	General Conditions	Compliance status
(i)	The project authorities must strictly adhere to the stipulations made by the concerned State Pollution Control Board (SPCB) and the State Government.	Complied
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Noted
(iii)	At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.	Complied Provision for emergency shutdown of unit is provided
(iv)	Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the SPCB. Regular monitoring shall be carried out for relevant parameters for both surface and ground water.	Complied all the stipulations made in the NOC issued by SPCB. Regular monitoring of all relevant parameters is being carried out and reports are being regularly submitted.
(v)	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Complied
(vi)	The overall noise levels in and around the plant area shall be limited within the prescribed 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).	Complied
(vii)	The project authorities must strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the expansion project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.	Complied
(viii)	Authorization from the State Pollution Control Board must be obtained for collections/ treatment/ storage/ disposal of hazardous wastes.	Yes, whenever applicable
(ix)	The project authorities will provide adequate funds both recurring and non-recurring 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 provided should not be diverted for any other purposes.	Funds were made available for implementing all recommendations
(x)	The stipulated conditions will be monitored by the concerned Regional Office of this Ministry /Central Pollution Control Board/State Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly. It will also be displayed on the Website of the Company.	Complied

Sr. No	Specific Conditions	Compliance Status
(xi)	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at http://www.envfor.nic.in . This should 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 should be forwarded to the concerned Regional office of this Ministry.	Complied
(xii)	The date of Financial Closure and final approval of the project by the concerned authorities and the date of commencing the land development work as well as the commissioning of the project will be informed to the Ministry and its Regional Office.	<ul style="list-style-type: none"> • Project commissioned on: 31.01.2009 • Financial Closure: 29.07.2010 • No land development activity was there in this project
(xiii)	Proper House keeping and adequate occupational health Programmes shall be taken up. Regular Occupational Health Surveillance Programme for the relevant diseases shall be carried out and the records shall be maintained properly for at least 30-40 years. Sufficient preventive measures shall be adopted to avoid direct exposure to emission and other Hydrocarbons etc.	<p>BGR has already implemented TPM across the refinery. Regular housekeeping is an integral part of the system.</p> <p>Regular health check-up is carried out for the employees and records are maintained.</p> <p>All necessary precautions/ preventive measures are taken to avoid direct exposure to emission and other Hydrocarbons etc.</p>
(xiv)	A separate environment management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of a Senior Executive.	<p>BGR is already having a separate environmental management cell and full fledged laboratory to carry-out environment management and monitoring functions.</p> <p>BGR Environment Laboratory is accredited by NABL.</p>