



इंडियन ऑयल कॉर्पोरेशन लिमिटेड

बोंगाइगाँव रिफाइनरी

डाकघर : घालीगाँव

जिला : चिरांग (असम)

पिन : 783385

Indian Oil Corporation Limited

Bongaigaon Refinery

P.O. : Dhaligaon

Dist. : Chirang (Assam)

Pin : 783385

रिफाइनरीज प्रभाग

Refineries Division

BGR/ENV/MoEF/2009/02

Date: 18.12.2009

To

The Chief Conservator of Forests
Regional Office, North East Region
Ministry of Environment & Forests
Upland Road, Laitumkhrah
Shillong – 793 003

Subject: Half yearly Report for the period of April, 2009 to September, 2009

Dear Sir,

With reference to above, we are enclosing the six monthly Report as Annexure for the period of **April, 2009 to September, 2009** for your perusal. The reports are being sent as per EIA Rules'2006 on the "Environmental Clearances" issued by MoEF to BGR for "Refinery expansion", "Diesel Hydro Treatment Plant", "MS Maximisation Projects", "MS Quality Improvement Project" & "Indmax Project" as Annexure-A, Annexure-B, Annexure-C, Annexure-D & Annexure-E respectively.

Thanking you,

Yours faithfully,

(A.R. Babuji)

Dy. General Manager (HSE & MS)

Enclosure:

1. Annexure – A with Appendix A1 to A4
2. Annexure – B with Appendix B
3. Annexure – C
4. Annexure – D with Appendix D
5. Annexure – E with Appendix E

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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रजिस्टर्ड ऑफिस : जी - 9, अली यावर जंग मार्ग, बान्द्रा (पूर्व), मुम्बई - 400 051

रिफाइनरी डिविजन : हेड क्वार्टर : इंडियनऑयल भवन, स्कोप कॉम्प्लेक्स, कोर - 2, 7, इंस्टिट्यूशनल एरिया, लोधी रोड, नई दिल्ली - 110 003

Regd. Office : G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai - 400 051

Refineries Division : Head Quarters : IndianOil Bhavan, SCOPE Complex, Core - 2, 7, Institutional Area, Lodhi Road, New Delhi - 110 003

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ANNEXURE-A:

Environmental Clearance for Refinery Expansion, De-bottlenecking of Reformer and LPG facility vide MoEF's letter No. J.11011/24/90-IA-II dated 03/06/1991:

Plant Commissioning dates:

- 1. Crude Distillation Unit: 09.05.95**
- 2. Delayed Coker Unit: 06.03.96**

Six Monthly Reports for the period April, 2009 to September, 2009

Sl. No.	Clearance conditions	Status
1.	Six monthly effluent quality (Point No. viii)	Furnished in Appendix-A1
2.	Six monthly ambient air quality/ stack monitoring Data	Furnished in Appendix-A2
3.	Tree Plantation Data	Furnished in Appendix-A3
4.	Special Information	Furnished in Appendix-A4

APPENDIX –A1

Effluent Discharged (Figure in M³/Hr)

(April, 2009 to September, 2009)

A	Industrial Effluent	147.9
B	Domestic Effluent from BGR Township	138.8
C	Total Effluent Treated (A + B)	286.7
D	Treated Effluent reused	278.2
E	Effluent discharged	8.5
F	M ³ of Effluent discharged for 1000 tones of Crude processed	34.1 against Std. 400

EFFLUENT QUALITY

A. Treated effluent quality

(April, 2009 to September, 2009)

S. No.	Parameter	Unit	MINAS	Max	Min	Avg.
1	PH value		6.0 - 8.5	8.0	6.5	7.1
2	Oil and grease	mg/l	5.0	4.8	0.8	2.2
3	Bio-chemical oxygen demand (3 d at 27°)	mg/l	15.0	7.0	2.0	3.4
4	Chemical Oxygen demand	mg/l	125.0	58.0	16.0	32.3
5	Suspended solids	mg/l	20.0	16.0	3.0	7.4
6	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	0.35	0.25	0.02	0.07
7	Sulphide (as S)	mg/l	0.50	0.12	0.02	0.07
8	CN	mg/l	0.20	BDL	BDL	BDL
9	Ammonia as N	mg/l	15.0	0.45	0.17	0.28
10	TKN	mg/l	40.0	1.35	0.62	0.91
11	P	mg/l	3.0	1.96	1.07	1.42
12	Cr (Hexavalent)	mg/l	0.10	BDL	BDL	BDL
13	Cr (Total)	mg/l	2.0	BDL	BDL	BDL
14	Pb	mg/l	0.10	BDL	BDL	BDL
15	Hg	mg/l	0.01	BDL	BDL	BDL
16	Zn	mg/l	5.0	BDL	BDL	BDL
17	Ni	mg/l	1.0	BDL	BDL	BDL
18	Cu	mg/l	1.0	BDL	BDL	BDL
19	V	mg/l	0.20	BDL	BDL	BDL
20	Benzene	mg/l	0.10	BDL	BDL	BDL
21	Benzo(a) pyrene	mg/l	0.20	BDL	BDL	BDL

EFFLUENT QUALITY

B. Final outlet (from the complex) effluent quality (April, 2008 to September, 2009)

S. No.	Parameter	Unit	MINAS	Max	Min	Avg.
1	PH value		6.0 - 8.5	8.5	6.5	7.6
2	Oil and grease	mg/l	5.0	5.0	0.8	2.4
3	Bio-chemical oxygen demand (3 d at 27°)	mg/l	15.0	10.0	3.0	4.6
4	Chemical Oxygen demand	mg/l	125.0	100.0	16.0	36.4
5	Suspended solids	mg/l	20.0	17.0	3.0	8.6
6	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	0.35	0.30	0.02	0.08
7	Sulphide (as S)	mg/l	0.50	0.15	0.02	0.08
8	CN	mg/l	0.20	BDL	BDL	BDL
9	Ammonia as N	mg/l	15.0	1.17	0.31	0.70
10	TKN	mg/l	40.0	1.67	0.70	1.29
11	P	mg/l	3.0	1.22	0.52	0.74
12	Cr (Hexavalent)	mg/l	0.10	BDL	BDL	BDL
13	Cr (Total)	mg/l	2.0	BDL	BDL	BDL
14	Pb	mg/l	0.10	BDL	BDL	BDL
15	Hg	mg/l	0.01	BDL	BDL	BDL
16	Zn	mg/l	5.0	BDL	BDL	BDL
17	Ni	mg/l	1.0	BDL	BDL	BDL
18	Cu	mg/l	1.0	BDL	BDL	BDL
19	V	mg/l	0.20	BDL	BDL	BDL
20	Benzene	mg/l	0.10	BDL	BDL	BDL
21	Benzo(a) pyrene	mg/l	0.20	BDL	BDL	BDL

Appendix - 2

**STACK MONITORING DATA FOR
(April, 2009 to September, 2009)**

STACK EMISSION DATA

A. SO₂ Emission (mg/Nm³):

Stacks	Emission Std.	Observed value (mg/Nm ³) April'09 to Sept'09		
		Min	Avg.	Max
CDU-I	For F.O. = 1700 For F.G. = 50	54	354	968
CDU-II		102	310	785
DCU-I		54	313	803
DCU-II		78	337	1256
CPP		84	349	757
Reformer		10	36	63
HO-1/2		5	32	69
Pretreater		20	77	166

B. NO_x Emission (mg/Nm³):

Stacks	Emission Std.	Observed value (mg/Nm ³) April'09 to Sept'09		
		Min	Avg.	Max
CDU-I	For F.O. = 450 For F.G. = 350	37	103	284
CDU-II		34	79	168
DCU-I		41	100	389
DCU-II		38	97	183
CPP		60	138	209
Reformer		50	184	430
HO-1/2		45	117	297
Pretreater		66	165	229

C. PM Emission (mg/Nm³):

Stacks	Emission Std.	Observed value (mg/Nm ³) April'09 to Sept'09		
		Min	Avg.	Max
CDU-I	For F.O. = 100 For F.G. = 10	17.0	35.3	45.0
CDU-II		28.0	40.3	51.0
DCU-I		38.0	56.3	70.0
DCU-II		32.0	56.0	92.0
CPP				
Reformer		5.0	34.0	90.0
HO-1/2		6.0	12.5	19.0
Pretreater		37.0	54	75

D. CO Emission (mg/Nm³):

Stacks	Emission Std.	Observed value (mg/Nm ³) April'09 to Sept'09		
		Min	Avg.	Max
CDU-I	For F.O. = 200 For F.G. = 150	10.0	49.0	88.0
CDU-II		6.0	47.5	89.0
DCU-I		6.0	19.0	32.0
DCU-II		3.0	59.5	116.0
CPP				
Reformer		99.0	150.0	201.0
HO-1/2		99.0	100.5	102.0
Pretreater		4.0	23	41

E. Ni + V Emission (mg/Nm³):

Stacks	Emission Std.	Observed value (mg/Nm ³) April'09 to Sept'09		
		Min	Avg.	Max
CDU-I	For F.O. = 5	0.010	0.023	0.041
CDU-II		0.002	0.008	0.016
DCU-I		0.008	0.020	0.028
DCU-II		0.001	0.131	0.382
CPP				
Reformer		0.004	0.395	0.674
HO-1/2		0.003	0.018	0.040
Pretreater		0.010	0.343	0.997

AMBIENT AIR QUALITY AROUND BGR COMPLEX
(Average of monthly sample Schedule – VII)
(April, 2009 to September, 2009)

Unit of measurement is $\mu\text{g}/\text{m}^3$ unless stated

Stations	Bartala Rail gate	Near Tube well No.14	Rural Health Centre	Near LPG Bottling plant	Near TW No.7 in Township	Continuous station
SO₂ (NAAQ Std. - 60/80)						
Max	BDL	BDL	BDL	BDL	BDL	35.1
Min	BDL	BDL	BDL	BDL	BDL	1.2
Average	BDL	BDL	BDL	BDL	BDL	9.9
No of observation	52	54	54	54	48	Continuous
NO_x (NAAQ Std. - 60/80)						
Max	20.0	15.0	18.0	13.0	16.0	40.8
Min	2.0	1.0	2.0	3.0	2.0	4.5
Average	8.5	5.4	7.9	6.1	6.5	31.1
No of observation	52	54	54	54	48	Continuous
SPM (NAAQ Std. – 140/200)						
Max	199.0	195.0	190.0	174.0	142.0	(Only RPM Measurement)
Min	26.0	12.0	18.0	14.0	12.0	
Average	89.3	60.7	99.0	71.4	53.5	
No of observation	52	54	54	54	48	
RPM (NAAQ Std. - 60/100)						
Max	91.0	67.0	95.0	62.0	55.0	82.2
Min	12.0	5.0	12.0	11.0	8.0	0.29
Average	40.4	25.9	39.9	28.3	27.3	9.91
No of observation	52	54	54	54	48	Continuous

Average data of all six stations

PARAMETER	RPM/PM10	SPM	NO _x	SO ₂	CO
Unit	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	mg/m^3
NAAQ Standards	60/100	140/200	60/80	60/80	2.0/4.0
Maximum	95.0	199.0	40.8	35.1	1.718
Minimum.	0.29	12.0	1.0	1.2	0.010
Average of the Quarter	28.6	74.8	10.9	9.9	0.268

- Note: 1. NAAQ Standard for Residential/Rural & Other areas.
2. NAAQS; Annual/24 Hrs. average for SO₂, NO_x, SPM & RPM (Unit: $\mu\text{g}/\text{m}^3$)
3. NAAQS; 24 Hrs./8 Hrs. average for CO (Unit: mg/m^3)

APPENDIX – A3

Tree Plantation (April, 2009 to September, 2009)

Through massive plantation work and by giving protection to natural forest growth in side BGR premises, the entire area has become green. The entire complex 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 provide 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.

Total trees planted in plant area & township: 60,000 nos. as per last census

However the company has undertaken continuous tree plantation activities to compensate the loss due to tree felling and maintain the green balance. Details of tree planted in this financial year (April, 2009 to September, 2009) are as follows:

Sl. No	Plantation Area	No of saplings planted	Types of saplings
1	Ecological Park - Inside Plant area	150	Fruits bearing trees (Kordoi, Nemu Tenga, etc.)
2	Parivesh Udyan, Near Central Service Building	137	Kordoi, Jalpai, Amlakhi Coconut, Krishna Chura Radhachura, Ajhar, Nemu tenga etc.
3	DPS , Dhaluigaon (Occasion of WED"09)	50	Neem, Amlokhi etc.
4	BRPL Vidyalaya (Occasion of WED"09)	50	Deva daru, Neem, Nahar etc.
	Dhaligaon High School (Occasion of WED"09)	100	Amlakhi, Neem, Mehogony, Jalpai etc.
	Sohini : Bongaigaon Refinery Ladies Association (Occasion of WED"09)	40	Deva daru, Neem, Sonaru etc.
	Bibekananda Kendriya Vidyalaya, Kajalgaon	500	Deva daru, Neem, Sonaru , Amlakhi, Mango etc.
	Total Tree Plantation	1027	

APPENDIX – A4

Additional Information

(April, 2009 to September, 2009)

Effluent reused during the period **(April, 2009 to September, 2009)** was >96% of the total effluent treated which includes plant effluents as well as Township sewer.

Under the Leak Detection and Repair programme (LDAR), BGR is conducting quarterly Fugitive Emission Survey. During the first two quarters of the financial year 2009-10, the company could not only avoid potential loss of 280 MTA (approx.) of light Hydrocarbon to the atmosphere through fugitive sources but also able to keep healthy work environment in the plant complex. Fugitive emission survey for the 3rd quarter of 2009-10 is under progress.

To ensure work area quality and health of equipments, quarterly noise surveys were conducted covering all the operating plants, control rooms and ambient surrounding the BGR complex. Noise Survey for the first two quarter of 2009-10 is completed, and no abnormality was reported. Noise Survey for the 3rd quarter of 2009-10 is under progress.

In recognition of its outstanding environment performance, BGR has been awarded the coveted and prestigious 'Indira Gandhi Paryavaran Puraskar' under the 'Organization Category' for the performance year 2006. The award was received by Shri S. Behuria, Chairman Indian Oil from Smt. Pratibha Patil, Hon'ble President of India at glittering function held at Vigyan Bhawan, New Delhi on 5th. June, 2009.

In recognition of its outstanding environment performance in environment management, BGR has been awarded the coveted and prestigious "Greentech Environment Excellence Award 2009 under Platinum Category. The award was received by Sri H. C. Vishwakarma, General Manager, Technical Service from Mr. Nick Herbert, MP and Shadow Secretary of State for Environment Forest and Rural Affairs, United Kingdom, at a glittering function held at the hotel, The Leela Kempinski, Kovalam, Kerala, on 10th October, 2009.

To ensure reuse of surplus treated effluent, ex-TTP tertiary treated water to REP cooling tower has been commissioned on 19.05.2009

BGR has installed a "Flare Gas Recovery System (FGRS)" for reduction of hydrocarbon loss and emissions to environment at an investvent of Rs.8.7 Crore (approx.) as an Energy Conservation Project which may qualify as Clean Development Mechanism (CDM) project. By installing FGRS there will be significant reduction in emissions of VOCs, NOx, N₂O, SOx & CO₂. This will help to facilitate Greenhouse Gas (GHG) abatement of the order of 8000 tonnes of CO₂ equivalent per annum. By installing the FGRS, BGR is able to reduce continuous flare operation, which subsequently reduces the associated smoke, thermal radiation, noise and pollutant emissions associated with flaring. The project was commissioned on 02.08.2009.

ANNEXURE-B:

Environmental Clearance for Diesel Hydro-treatment Project, MoEF letter No. J.11011/78/2001-IA-II (I) dated 25/06/2002.

Six Monthly Status report for the period (April, 2009 to September, 2009)

S N	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 expansion project vide Ministry's OM No. J-11011/24/90-IA II (I) dated 3 rd June 1991	All conditions of the clearance were complied and verified by statutory agencies time to time. (Please Refer to Annexure-A)
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). 3. Comprehensive Risk Assessment is under progress by engaging external agency namely M/s Chilworth Technology Pvt. Ltd. New Delhi and will be completed in December'2009.
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 Terra Consult India Pvt. Ltd., Mumbai is awarded contract to process accumulated sludge. M/s.Terra Consult India Pvt. Ltd., Mumbai had abandoned the site since August'08. Contract was terminated on 25.01.09. A time bound program for disposal of accumulated oily sludge is chalked out and accordingly action is initiated for lining of new contract. Accordingly, NIT issued on Global basis and Tender received from three parties. Technical Bids were opened on 11 th August'2009, Technical Committee Recommendations submitted, and put for financial concurrence. It is expected that job will be awarded by 31 st December, 2009.
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.

S N	Specific Conditions	Compliance Status
v	a. Provision of double mechanical seal for the pumps handling H ₂ 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 ₂ 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.	H ₂ S detectors along with H.C/ H ₂ detectors are indicated in respective P&IDs for various process units under DHDT project. Items procured & is being installed
	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.
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 has already requested to MoEF for exemption of these conditions vide letter no. ENV/STAT/01/01 dated 31.07.02.
B.GENERAL CONDITIONS		
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 Waste (Management & Handling) Rules, 1989 as amended till date.

S N	Specific Conditions	Compliance Status
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.	(a) Infrastructure facilities like water supply, food canteen, sanitation are being provided phase wise to construction workers (b) All precautionary measures are taken at the construction site to control the noise level & present activities do not generate noise of high db.
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).	Taken care of in design stage and mentioned in process data sheets for various equipments wherever applicable in BDEPs
vii	Occupational health Surveillance of the workers should be done on a regular basis and records maintained.	Contractors have been advised to carry out periodic health check-up of workers under their control.
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 various management and monitoring functions. BGR Env. Laboratory is certified from CPCB, N.Delhi.
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).	Noted Last six monthly status report for the period December June '08 to November '08 on the project was submitted on 26/12/2008
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 http://envfor.nic.in The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to Ministry's Regional Office at Shillong.	Complied.

S N	Specific Conditions	Compliance Status
xii	The Project Authorities should 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 land development work.	Board of Directors of the Company has approved revised cost estimate of Rs.1646.39 crores (original approved cost is Rs. 1431.91 crores) for this project on 28th May, 2008. Closure shall be intimated in due course of time.
CONDITIONS (As given in concurrence to changes in Env Clearance dated May 1, 2006)		
i	The total SO ₂ emission level from the unit after the proposed upgradation 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 _x emission.	
iii	The total effluent generation shall not exceed 7.9 m ³ /hr. The fresh water consumption shall not exceed 275 m ³ /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 th 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 is under progress by engaging external agency namely M/s Chilworth Technology Pvt. Ltd. New Delhi and will be completed in December'2009.

APPENDIX – B

Status of Diesel Hydro-treatment Project

(April, 2009 to September, 2009)

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 upgradation project at Bongaigaon Refinery & Petrochemicals Limited vide their letter No. J-II011/78/2001 — 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. 1646.39 crores (original approved cost is Rs. 1431.91 crores) for this project on 28th May, 2008.

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 & Offsites (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. Site development work:

(a) All site enabling activities have been completed

(b) Activities related to Civil & Structural Works like PCC works, slab casting, RCC works, roads, culverts & drains etc. are nearing completion. Majority of the equipments, piping materials, instrumentation items & electrical items received at site.

(c) Work against various LSTK package items/supplies are also in progress at site. Mechanical works, Electrical works & Instrumentation works for unit areas as well as utilities & offsite area are in progress.

(d) The overall physical progress of the project as on 30.09.09 is 87.10%.

ANNEXURE-C:

Status of MS Maximisation Project

(April, 2009 to September, 2009)

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

Sl. 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 are within limits, the HC detector 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 remained 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 recovery system.
(viii)	Flare Gas Recovery System will be installed for reduction of Hydrocarbon loss and emissions of VOCs, NO _x , SO _x & CO ₂ to the environment.	FRGS was commissioned on 2 nd August,2009.

Sl. No.	Specific Conditions	Compliance Status
(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.
(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 is 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
(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 all records are maintained.
(xiv)	The company shall ensure that no halogenated 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. The stream summary is enclosed

SI No	Specific Conditions	Compliance status
(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 required for 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 The water generated is 0.002 - 0.005 m ³ /day vs stipulated figures 0.15 m ³ /hr.
(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.	Will be 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.	Greenbelt is already existed. 2/3 of plant area is having green cover.
(xxii)	The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Being complied

SI No	Specific Conditions	Compliance status
(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 had implemented 2 roof top rain water harvesting projects in BGR T/s in the year 2008-09 to recharge the ground water table.
(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

B. GENERAL CONDITIONS

SI 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 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

SI No	Specific Conditions	Compliance status
(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
(xi)	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
(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

SI No	Specific Conditions	Compliance status
(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.	The date of financial closure will be informed once it takes place.
(xiv)	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 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>
(xv)	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 various management and monitoring functions.</p> <p>BGR Env. Laboratory is certified from CPCB, N.Delhi.</p>

ANNEXURE-D:

Compliance Status w.r.t. Env. Clearance of MS Quality Improvement Project

(April, 2009 to September, 2009)

Environmental Clearance for “MS Quality Improvement Project (Light Naptha Isomerisation using existing Xylene Isomerisation unit)” at Dhaligaon, Chirang, Assam by M/s Bongaigaon Refinery & Petrochemicals Ltd. vide MoEF’s letter No. J.11011/1171/2007-IA-II (I) dated 5/02/2008.

Sl No	Specific Conditions	Compliance Status
i	The company shall comply with new standards/norms that are being proposed by the CPCB for petrochemical plants and refineries.	Basic Design Engineering Package / Process Package have been prepared in line with the revised standards / norms for Oil Refinery and being implemented in the project.
ii	The company shall comply with all the stipulations of environmental clearance issued vide File No. – 11011/375/2006-IA.II(I) dated 22 nd March, 2007.	BGR had advertised “Public Notice” in three local news papers that are widely circulated in the region namely “The Assam Tribune” English daily, “Asomiya Pratidin” an Assamese daily & “Sanseyari Bodosa” a Bodo daily on 26 th February, 2008
iii	The process emissions (SO ₂ , NO _x , HC, VOCs and Benzene) from various units shall conform to the standards prescribed by the Assam State Pollution Control Board from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Detailed Engg in progress considering the revised standards / norms for Oil Refinery and conditions /guidelines issued by SPCB and being implemented in the project.
iv	The improvement project shall be through the retrofitting of existing xylenes fractionation, Isomerisation and parex units and within the existing land.	The improvement project is only through the retrofitting of existing xylenes fractionation, Isomerisation and parex units and within the existing land.
v	Quarterly monitoring of fugitive emissions shall be carried out as per the guidelines of CPCB by fugitive emission detectors (GMI Leak Surveyor) and reports shall be submitted to the Ministry’s regional office at Shillong.	Noted
vi	For control of fugitive emission all unsaturated hydro carbon will be routed to the flare system and the flare system shall be designed for smoke less burning.	Taken care during implementation of the project.
vii	The company shall strictly follow all the recommendation mentioned in the charter on corporate responsibility for environmental protection (CREP).	Noted

SI No	Specific Conditions	Compliance status
vii	Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the Factory Act.	Already in compliance
ix	Greenbelt shall be developed to mitigate the effect of fugitive emission all around the plant in a minimum 30% plant area in consultation with DFO as per CPCB guidelines.	Greenbelt is already existed. 2/3 of plant area is having green cover.
x	The Company shall make the suitable arrangement for disposal of catalyst waste and alumina balls. The report of waste disposal shall be submitted to Ministry's Regional Office at Shillong.	Noted
xi	The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during flaring.	Noted
xii	To prevent fire and explosion at Oil and Gas facility, potential ignition sources should be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.	Noted
B.GENERAL CONDITIONS		
SI 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 and any other statutory body.	Taken care during implementation of the project.
ii	No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and Forests. In case of deviations or alternations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to the Ministry.	Noted
iii	At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system, the respective well site should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved. Provision of adequate height of stack attached to DG sets & flare is to be done.	Taken care during implementation of the project.

SI No	General Conditions	Compliance status
iv	Wastewater shall be properly collected and treated so as to conform to the standards prescribed under EP Act & Rules and mentioned in the Consents provided by the relevant SPCB.	Taken care during implementation of the project.
v	The overall noise levels in and around the premises shall be limited within the prescribed standards (75 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).	Taken care during implementation of the project.
vi	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, if required. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.	Noted
vii	Disposal of hazardous wastes shall be as per the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/ treatment/storage/disposal of hazardous wastes.	Noted
viii	The project authorities will provide adequate funds as non-recurring and recurring expenditure 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.	Noted
ix	The company shall develop rain water harvesting structures to harvest the run off water for recharge of ground water.	Noted
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.	Noted

SI No	General 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 & 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.	BGR had advertised "Public Notice" in three local news papers that are widely circulated in the region namely "The Assam Tribune" English daily, "Asomiya Pratidin" an Assamese daily & "Sanseyari Bodosa" a Bodo daily on 26 th February, 2008. The information is already submitted to statutory agencies.
xii	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.	BGR is already having a separate environmental management cell and full fledged laboratory to carry-out various management and monitoring functions. BGR Env. Laboratory is certified from CPCB, Delhi.
xiii	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	Noted

APPENDIX: D

Status of MS Quality Improvement Project

(April, 2009 to September, 2009)

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

1. Grant of “Environment Clearance” from the Ministry of Environment & Forest:

The Ministry of Environment & Forests has accorded ‘Environment Clearance’ for “MS Quality Improvement Project (Light Naptha Isomerisation using existing Xylene Isomerisation unit)” at Dhaligaon, Chirang, Assam by M/s Bongaigaon Refinery & Petrochemicals Ltd. vide MoEF’s letter No. J.11011/1171/2007-IA-II (I) dated 5/02/2008.

2. Press Advertisement for grant of “Environment Clearance”:

BGR had advertised “Public Notice” in three local news papers that are widely circulated in the region namely “The Assam Tribune” English daily, “Asomiya Pratidin” an Assamese daily & “Sanseyari Bodosa” a Bodo daily on 26th February, 2008 in order to 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>.

3. Grant of “NOC” from State Pollution Control Board:

Pollution Control Board, Assam has granted “No Objection Certificate” for the said project vide their letter No.WB/Z-II/T-2012/07-08/05/996 Dated Guwahati, the 13th Feb, 2008.

4. Board approval for project:

The Board of Directors has approved the project on 25th April, 2008 at an estimated cost of Rs. 293.6 crore including a foreign exchange component of Rs. 39.3 crore and financing cost of Rs 12.7 crore.

5. Project Status:

- a. Detailed engineering for the project is in progress by M/s Uhde India Private Ltd. Orders for major long lead items placed.
- b. Piling job has been completed.
- c. Civil & Mechanical Activities are in progress.
- d. Mechanical erection is in progress

The overall physical progress of the project as on 30.11.09 is 89.95 % against schedule of 67.11%.

6. Facilities for construction workers:

- a. Infrastructure facilities like water supply, sanitation, etc are provided to the construction workers.
- b. All precautionary measures are taken in the construction site to control noise level & present activities do not generate noise of high db.
- c. Contractors have been advised to carry out periodic health check up pf workers under their control.

ANNEXURE-E:

Status of Indmax Project

(April, 2009 to September, 2009)

Environmental Clearance for “Indmax Project (INDMAX FCC Unit along with Indmax Gasoline De-Sulphurisation Unit) to eliminate production of black oils (LDO, LVFO & LSHS) and Naphtha” by M/s Bongaigaon Refinery & Petrochemicals Ltd. vide MoEF’s letter No. J-11011/9/2008- IA II (I) dated 02/09/2008.

S.N	SPECIFIC CONDITIONS	Compliance Status
i	M/s BRPL shall comply with new standards/norms for Oil Refinery Industry notified under the Environment (Protection) Rules, 1986 vide G.S.R.186(E) dated 18 th March 2008. The design of INDMAX FCC unit shall incorporate process features and equipments to comply with the emission and effluent standards for petroleum refinery.	Basic Design Engineering Package / Process Package have been prepared in line with the existing standards / norms for Oil Refinery Industry which will be further reviewed during Detailed Engineering, if required. Detailed engineering / implementation would start after approval of the project
ii.	The process emissions (SO ₂ , NO _x , CO & HC) from various units shall conform to the standards prescribed by the Assam State Pollution Control Board from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved. The company shall use sweet fuel gas and install low NO _x burner in the furnace.	
iii.	Ambient air quality monitoring stations, [SPM, SO ₂ , NO _x and NMHC, Benzene] shall be set up in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs. Continuous on-line stack monitoring equipment shall be installed for measurement of SO ₂ & NO _x .	
iv.	Monitoring of fugitive emissions shall be carried out as per the guidelines of CPCB and reports shall be submitted to the Ministry’s regional office at Shillong. For control of fugitive emission all unsaturated hydro carbon will be routed to the flare system and the flare system shall be designed for smoke less burning.	
v.	Fugitive emissions of HC from product storage tank yards etc must be regularly monitored. Sensors for detecting HC leakage shall also be provided at strategic locations.	
vi	The sour water containing H ₂ S and NH ₃ shall be treated in sour water stripper. The combined streams of strip sour water from the INDMAX FCC unit and INDMAX Gasoline Desulphurization unit shall be treated in the ETP followed by tertiary treatment plant to meet the prescribed standards for petroleum refinery. Efforts shall be made to recycle the treated effluent.	

S.N	SPECIFIC CONDITIONS	Compliance Status
vii.	The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. At place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during flaring.	All necessary measures have been considered to prevent fire hazards and oil spillage. Elevated flare system considered with KOD in the flare header.
viii.	To prevent fire and explosion at Oil and Gas facility, potential ignition sources shall be kept to a minimum and adequate separation distance between potential ignition sources and flammable material shall be in place.	Equipment layout is based on OISD norms. Further, HAZOP study has been carried out on the P&IDs. Besides, HAZOP study will be carried out during Detailed Engineering also.
ix.	Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the Factory Act.	Since the project is not yet approved. There is no worker under the project. However, regular health check-up is carried out for the employees of Bongaigaon Refinery which will be continued / extended for workers working under Indmxa Project.
x.	Greenbelt shall be developed to mitigate the effect of fugitive emission all around the plant in a minimum 33% plant area in consultation with DFO as per CPCB guidelines.	Greenbelt is already existed. 2/3 of plant area is having green cover.
xi.	M/s BRPL shall undertake measures for rain water harvesting to recharge the ground water and minimize fresh water consumption.	BGR had implemented 2 roof top rain water harvesting projects in BGR T/s in the year 2008-09 to recharge the ground water table.
B. General Conditions		
S.N	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 and any other statutory body.	Stipulations made in the environmental clearance of the project would be addressed during detailed engineering also. The same has been addressed in the Basic Engineering Design Package, wherever applicable.
ii.	No further expansion or modification in the project shall be carried without prior approval of the Ministry of Environment and Forests. In case of deviations or alternations in the project proposal from those submitted to the Ministry for clearance, a fresh reference shall be made to the Ministry.	In case of requirement of expansion / modification of the project in future, prior approval of the Ministry of Environment and Forests shall be taken.
iii.	At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system, the respective well site should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved. Provision of adequate height of stack attached to DG sets & flare is to be done.	In the event of failure of any pollution control system, the respective site shall be kept out of operation until the desired efficiency has been achieved. Height of stack attached to DG sets & flare is as per existing CPCB guidelines.

S.N	General Conditions	Compliance Status
iv.	Wastewater shall be properly collected and treated so as to conform to the standards prescribed under EP Act & Rules and mentioned in the Consents provided by the relevant SPCB.	Waste water shall be routed through pipeline to ETP for treatment.
v.	The overall noise levels in and around the premises shall be limited within the prescribed standards (75 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).	Low noise equipments shall be considered during implementation of the project.
vi.	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, if required. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.	On-site and Off-site Disaster Management Plans are already in place which shall be reviewed and modified (if required) at appropriate time of implementation of the project.
vii.	Disposal of hazardous wastes shall be as per the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.	Noted
viii.	The project authorities will provide adequate funds as non-recurring and recurring expenditure 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.	Noted
ix.	The company shall develop rain water harvesting structures to harvest the run off water for recharge of ground water.	Noted
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.	Noted

S.N	General 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 & 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.	Published in 3 local news paper viz. The Assam Tribune (English Daily), "Dainik Agradoot" (Assamese daily) and "Sanseyari Bodosa (Bodo daily) on 26.09.2008
xii.	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.	BGR is already having a separate environmental management cell and full fledged laboratory to carry-out various management and monitoring functions. BGR Env. Laboratory is certified from CPCB, N.Delhi.
xiii.	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	Noted

APPENDIX-E:

Status of Indmax Project

(April, 2009 to September, 2009)

Following are some of the important mile stones towards implementation of the Indmax project:

1. Grant of “Environment Clearance” from the Ministry of Environment & Forest:

The Ministry of Environment & Forests has accorded ‘Environment Clearance’ for “Indmax Project (INDMAX FCC Unit along with Indmax Gasoline De-Sulphurisation Unit) to eliminate production of black oils (LDO, LVFO & LSHS) and Naphtha” at Dhaligaon, Chirang, Assam by M/s Bongaigaon Refinery & Petrochemicals Ltd. vide MoEF’s letter No. J-11011/9/2008- IA II (I) dated 02/09/2008.

2. Press Advertisement for grant of “Environment Clearance”:

BGR had advertised “Public Notice” in three local news papers that are widely circulated in the region namely “The Assam Tribune” English daily, “Dainik Agradoot” Assamese daily & “Sanseyari Bodosa” Bodo daily on 26th September, 2008 in order to 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>.

3. Application for “NOC” from State Pollution Control Board:

BGR had applied “No Objection Certificate (NOC)” to the Pollution Control Board, Assam vide our letter No. BGR/ENV/INDMAX/NOC/08-09/01 dated 14th November, 2008. NOC has been obtained from PCBA on 27th April, 2009.

5. Project Status:

Detailed Feasibility Report:

- i. Detailed Feasibility Report (DFR) dated 04.05.2009, which was prepared based on Conventional mode of implementation and submitted to IOCL Projects on 29.05.2009 for appraisal / evaluation by financial institution and ‘Project Appraisal Group’ of IOCL, is being revised for LSTK mode of implementation.
- ii. After completion of revision, DFR would be appraised / evaluated through financial institution and ‘Project Appraisal Group’ of IOCL for investment approval.