

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

(भारत सरकार का उपक्रम)

पानीपत रिफाइनरी

डाकघर : पानीपत रिफाइनरी, पानीपत-132140



INDIAN OIL CORPORATION LTD.

(Govt. of India Undertaking)

PANIPAT REFINERY

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दिनांक: 28.01.13

प्रति श्री,

Through: Speed Post

The Additional Director(S)  
Ministry of Environment & Forests,  
Govt. of India,  
Regional Office (N.R.) Bays No. 24-25,  
Sector-31-A, Dakshin Marg,  
Chandigarh - 160047

Ref. No. J-11011/7/2004-IA.II(I) dated 09.08.2004

Sub: Compliance report of environmental conditions - expansion of Panipat Refinery (from 12 MMTA to 15 MMTA) and setting up of Indalin<sup>+</sup> unit at Panipat Refinery Complex

प्रिय महोदय,

पानीपत रिफाइनरी (संदर्भ. J-11011/7/2004-IA.II दिनांक 09/08/2004). साथमें जुलाई-2012 से डिसेम्बर-2012 का- पर्यावरण की स्थिति का अनुपालन छमाही रिपोर्ट उपलब्ध है। इसीएस के सभी निर्देश का अनुपालन किया है।

Please find enclosed herewith the half-yearly compliance report of the MoE&F stipulations for the period Jul'12 - Dec'12 w.r.t. Panipat Refinery (Ref. no. J-11011/7/2004-IA.II (I) dated 09.08.2004).

It may kindly be noted that, this is the compliance report of the above mentioned latest Environmental Clearance (EC) issued to Panipat Refinery, superseding all previously issued ECs.

धन्यवाद

आपका भवदीय

सतीश कुमार कालरा

उप महा प्रबन्धक(एचएसएंडई)

नकल: क्षेत्रिय अधिकारी, पानीपत; हरीयाणा राज्य प्रदूषण नियंत्रण बोर्ड

**COMPLIANCE TO ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEF FOR  
EXPANSION OF PANIPAT REFINERY (FROM 12 MMTPA TO 15 MMTPA) AND SETTING  
UP OF INDALIN\* UNIT AT PANIPAT REFINERY COMPLEX OF IOCL, PANIPAT REFINERY  
HARYANA**

Your Ref No. J-11011/7/2004-IA.II(I) dated 09.08.2004

**Specific conditions:**

Sl. No.	EC Conditions	Compliance Status
1.	The company shall ensure strict implementation / compliance to the stipulations made by MOEF vide OM no. J-11001/60/2000-IA-II dated 9 <sup>th</sup> April, 2001 for expansion of Panipat Refinery from 6 MMTPA to 12 MMTPA	Complied
2.	The gaseous emissions (SO <sub>2</sub> , NO <sub>x</sub> and HC, Benzene) from the various process units should conform to the standards prescribed under Environment (Protection) Rules, 1986 or norms stipulated by the SPCB whichever is more stringent. At no time, the emission level should go beyond the stipulated standards. In the event of failure pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	Complied. Gaseous emission from various process units meets the prescribed standards.
3.	Adequate ambient air quality monitoring stations, (SPM, SO <sub>2</sub> , NO <sub>x</sub> and HC, Benzene) should be set up in the refinery complex 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 should be installed for measurement of SO <sub>2</sub> and NO <sub>x</sub> . Data on VOC should be monitored and submitted to the SPCB / Ministry.	<p>A total of 7 nos. CAAQMS (2 nos. in Panipat city, 1 no. in Refinery township &amp; 4 nos. in Refinery) &amp; a mobile ambient air quality monitoring van are in operation. These were set up in consultation with HSPCB.</p> <p>All stacks have been provided with online SO<sub>2</sub> &amp; NO<sub>x</sub> analyzers.</p> <p>Fugitive emission monitoring for hydrocarbon and benzene is done through MoEF/HSPCB agency regularly on quarterly basis.</p> <p>All reports are submitted to HSPCB every month.</p>
4.	Fugitive emission of HC from product storage tank yard, crude oil tanks etc. must be regularly monitored. Sensors for detecting HC leakage should also be provided at strategic locations.	<p>Fugitive emission monitoring for hydrocarbon and benzene is done through MoEF/HSPCB agency regularly on quarterly basis.</p> <p>Hydrocarbon detectors have been provided at strategic locations.</p>

Sl. No.	EC Conditions	Compliance Status
5.	The company shall also ensure that the total SO <sub>2</sub> emissions from the Panipat Refinery after expansion shall not exceed i.e. 1000 kg/hr. The company shall install an additional Sulphur Recovery Unit (225 MT/day capacity) with 99.9% efficiency and the entire gas generated should be amine treated to reduce the SO <sub>2</sub> emissions level from the Refinery.	The total SO <sub>2</sub> emission of Panipat Refinery remains <1000 kg/hr.  5 <sup>th</sup> SRU having a capacity of 225 MT/day with design efficiency of 99.9% was installed, commissioned and is in operation.
6.	As per the commitment given, there should be zero effluent discharge due to the proposed expansion. The company should ensure that there will be no discharge of treated effluent into Thirana Drain and the treated effluent from the refinery is not discharged along with the treated effluent from PX-PTA plant. The entire treated waste water should be recycled for reuse in the plant operation and greenbelt development so as to maintain zero discharge. Further, the liquid effluent generated from the Refinery should be treated comprehensively to conform to the load based standards and concentration limits prescribed under Environment (Protection) Act, 1986 Rules.	There is no discharge of treated effluent into Thirana drain.  ETP-1 & ETP-2 treated effluent meets MINAS. These treated effluent are completely re-used as a feed to RO plant and as a makeup to Cooling Towers.  A part of PTA-ETP treated effluent re-used as a makeup to Cooling Towers. The balance is used for irrigation in our Greenbelts.
7.	The IOCL shall ensure installation of continuous flow measurement devices so that only the permitted quantity of treated effluent from PX-PTA plant (255 m <sup>3</sup> /hr) is discharged. Further, IOCL shall make all efforts to recycle and reuse the treated effluent from PX-PTA plant after commencing of the unit.	Flow meters were installed at the time of setting up PTA-ETP.  A part of PTA-ETP treated effluent re-used as a makeup to Cooling Towers. The balance is used for irrigation in our Greenbelts.
8.	Additional water requirement shall not exceed 400 m <sup>3</sup> /hr. The total quantity of effluent generation should not exceed 1280 m <sup>3</sup> /hr as indicated in the Environment Management Plan. The treated effluent should be reused/ recycled to achieve zero discharge.	The total allowable withdrawal of fresh water as per previous EC was 3000 m <sup>3</sup> /hr. Adding the additional quantity of 400 m <sup>3</sup> /hr, the overall total allowable water quantity is 3400 m <sup>3</sup> /hr. Presently, fresh water consumption of the Refinery is 1800-1900 m <sup>3</sup> /hr  A total quantity of effluent generation remains <1100 m <sup>3</sup> /hr.  ETP-1 & ETP-2 treated effluent meets MINAS. These treated effluent are completely re-used as a feed to RO plant and as a makeup to Cooling Towers.  A part of PTA-ETP treated effluent re-used as a makeup to Cooling Towers. The balance is used for irrigation in our Greenbelts.
9.	Green belt of adequate width and density should be provided to mitigate the effects of	Greenbelts with adequate width & density were already provided. These greenbelts

Sl. No.	EC Conditions	Compliance Status
	fugitive emissions all around the plant. The bio-sludge from the ETP should be used as manure in the green belt development. Company shall develop greenbelt in consultation with DFO as per CPCB guidelines.	were developed in consultation with District Forest Deptt. Bio-sludge from ETP is being used as a manure after converting it to semi solid form.
10.	The IOCL shall make efforts to sell petroleum coke (0.9 MMTPA) to organized industries having consent from the concerned State Pollution Control Board. Further, the Pet-coke from the Delayed Coker Unit should be conveyed to storage area by pipe conveyer system. The company should ensure to prevent seepage in Pet-coke stockpile / storage area to prevent soil and ground water pollution.	The Refinery gives Pet-coke to a separate IOCL division called Marketing Division which sells the same to various agencies.  Pet-coke is conveyed to storage area by pipe conveyer system.
11.	The oily sludge generated from the refinery operation should be subjected to melting pit treatment for recovery of oil. The recovered oil should be recycled. The residual oily sludge should be disposed off in the HDPE lined pits.	The raw oily sludge generated from the Refinery is subjected to Melting Pit treatment for recovery of oil. The recovered oil is recycled back with crude oil for processing.  The residual sludge is disposed off through Bio-remediation.  There are 4 nos. lined pits for storing raw oily sludge.
12.	The company should adopt mounded storage for LPG. The project authorities shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP and risk analysis report.	The Mounded Bullets are in operation.
13.	Occupational Health Surveillance of the workers should done on a regular basis and records maintained as per the Factories Act.	The Refinery has a full-fledged Occupational Health Centre (OHC) in operation. The OHC carries out health surveillance of the workers on a regular basis and records are maintained.
<b>General conditions</b>		
1.	The project authorities must strictly adhere to the stipulations made by the Haryana State Pollution Control Board and the State Government.	Complied
2.	No further expansion or modernization in the plant should be carried out without prior approval of the Ministry of Environment & Forests.	Complied
3.	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.	The stack SO2 emission level of the Refinery remains <1000 kg/hr.
4.	The overall noise levels in and around 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	The Refinery has provided silencers on compressor discharge, acoustic leggings on turbo generators & ejectors and acoustic chambers at the burners.

Sl. No.	EC Conditions	Compliance Status
	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).	The ambient noise level meets the standards.
5.	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 project.	Necessary approvals from CCOE were obtained before commissioning.
6.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management & Handling) Rules, 12003. Authorization from the State Pollution Control Board must be obtained for collections / treatment / storage / disposal of hazardous waste.	Complied. Authorisation from HSPCB has been obtained which is valid upto Mar'13.
7.	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 alongwith with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	Complied
8.	The stipulated conditions will be monitored by the Regional of this Ministry at Chandigarh / Central Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly.	A six monthly compliance report on all ECs is regularly sent.  All reports are regularly sent to HSPCB every month.
9.	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 <a href="http://www/envfor.nic.in">http://www/envfor.nic.in</a> 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 Regional Office.	Was complied.
10.	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 commencing the land development work.	Was complied