

	Conditions	Compliance		
Sl. No.	SPECIFIC CONDITIONS			
1.	Gas produced during testing shall be flared with appropriate flaring booms.	e Noted and would be complied with.		
2.	The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.	Flare system design and stack height will meet the OISD guidelines. Flare stack emission monitoring will also be carried out as per Environment (Protection) Rules, 1986 for oil drilling industry during flaring of gases during drilling phase.		
3.	Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 <sup>th</sup> November, 2009 for PM <sub>10</sub> , PM <sub>2.5</sub> ,SO <sub>2</sub> , NO <sub>X</sub> , CO, CH <sub>4</sub> , HC, Non-methane HC etc.	Complied. Regular Monthly Ambient Air Quality was carried out at IOC-Kalri-1 and the data are attached as <b>Annexure-1</b> .		
4.	Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.	Mercury analysis report for air and drill cuttings for IOC-Kalri-1 is attached as Annexure-2.		
5.	Approach road shall be made pucca to minimize generation of suspended dust.	To be taken up during construction phase based on evaluation of the condition of approach road to drill sites. Additionally dust generation will be minimized by water sprinkling (if required)		
6.	The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.	Silent enclosed DG set was installed at IOC-Kalri-1. Regular DG set stack analysis was carried out at IOC-Kalri-1.		



7.	Total water requirement shall not exceed 40 m <sup>3</sup> /day and prior	Noted and would be complied with.
	permission shall be obtained from the concerned agency.	
8.	The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.	Noted and would be complied during drilling activities. For exploratory well IOC-Khambel-1 and IOC-Kalri-1, waste water generated during drilling was collected in impervious HDPE lined pits. Portable ETP was installed at drill site for treatment of waste water generated during drilling activities of both the wells, IOC-Khambel-1 and IOC-Kalri-1.
9.	Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal.	HDPE lined pits were used for disposal of drilling waste water as per guidelines for disposal of solid waste, drill cuttings and drilling fluids for onshore drilling operation notified vide GSR.546 (E) dated 30th August, 2005. Drill cuttings and other hazardous wastes will be disposed in authorized TSDF. Noted and would be complied during drilling activities.
10.	Good sanitation facility should be provided at the drilling site. As proposed, domestic sewage shall be disposed off through modular STP.	Sufficient number of portable toilet are provided at drill site and waste water is being treated through septic tank-soak pit
11.	Oil spillage scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.	Oil spill response scheme has been prepared and implemented onsite. Onsite spill kits have been provided to avoid minor spills. Additionally proper measures will be taken care to fulfill the condition. Noted and would be complied during drilling activities.
12.	The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling	Noted. Adequate measures will be taken to comply the guidelines during drilling activities.



	operation notified vide GSR.546(E) dated 30th August, 2005.	
13.	The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.	Noted and would be complied during drilling activities. Fire fighting equipments and personal protective equipments are provided at the site. Comprehensive HSE manual has been prepared for the drilling activities and same is being implemented. Emergency Response Plan is prepared based on the guidelines by OISD, DGMS and Govt. of India. ERP is followed during drilling operations.
14.	The company shall develop a contingency plan for H2S release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal H2S detectors in locations of high risk of exposure along with self containing breathing apparatus.	Contingency plan for H2S release has been prepared and implemented for drilling operations.
15.	The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and its Regional Office at Bhopal.	Noted. Adequate measures will be taken to comply with the guidelines during drilling activities.
16.	Blow Out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.	<ul><li>Blow out Preventer system was installed at IOC-Kalri-1. Details of blow out preventer (BOP) system used for each hole section is attached as Annexure-3.</li><li>For the remaining wells the same shall be installed at commencement of drilling.</li></ul>
17.	Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.	Emergency Response Plan is prepared based on the guidelines by OISD, DGMS and Govt. of India. ERP is followed during drilling operations.
18.	The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and	

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## 6<sup>th</sup> Compliance Report for the NELP-VII Block CB-ONN-2005/2, Cambay Basin Gujarat

		T
	drilling site shall be restored the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.	
19.	Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.	Noted. Adequate measures will be taken to comply with the guidelines.
20.	In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.	Noted and Accepted.
21.	Restoration of the project site after completion of drilling shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal.	Noted and Accepted.
22.	Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bhopal.	Noted. Adequate measures will be taken to comply with the guidelines.
23.	Company shall ensure good housekeeping at the drilling site.	IOC is ensuring good housekeeping at the drilling site.
24.	Company shall prepare project specific environmental manual and a copy shall be made available at the drilling site for the compliance.	IOC has prepared project specific environmental manual for ongoing drilling campaign as well as ensuring compilation of the same during drilling operations.
25.	Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J- 11013/41/2006-IA.II(I) dated 26 <sup>th</sup> April, 2011 and implemented.	Environment Policy of IOC is attached as <b>Annexure-4</b> .



Sl. No.	GENERAL CONDITIONS					
1.	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority.					
2.	No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & 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.	Ministry of Environment & Forests will be informed and prior approval regarding any modification in the project will be taken.				
3.	The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.	Noted. Adequate measures will be taken to comply with the guidelines.				
4.	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 levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Noise Level Monitoring report is attached as Annexure-5.				
5.	A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.	Monitoring from MoE&F approved lab (M/s Detox Corporation) is being carried out as per site requirement. Details in this regard are attached as <b>Annexure-6</b> .				



6.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Complied. A copy of clearance letter has been sent to concerned Municipal Corporation, Urban Local Body and the Local NGO.
7.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the GPCB. The criteria pollutant levels namely; $PM_{10}$ , $SO_2$ , $NO_X$ , HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied. Regular monitoring for ambient air quality was carried out at IOC-Kalri-1 Noted. Adequate measures will be taken to comply with the guidelines during the drilling operations of remaining exploratory wells
8.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the GPCB. The Regional Office of this Ministry /CPCB / GPCB shall monitor the stipulated conditions.	Complied. Previous six monthly reports on status of the compliance of the Environmental Clearance conditions have been submitted to the regional office of the MoE&F, the respective Zonal Office of CPCB and the GPCB; further proper measures will be taken care to fulfill the condition.
9.	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent 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	The environmental statement for the financial year ending 31/3/2014 (2013-14) in Form-V would be submitted to the Gujarat Pollution Control Board as well as same would be uploaded along with the status of compliance of environmental conditions in the IOC website. The same is attached as <b>Annexure-7</b> .



10.	conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail. 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 GPCB and may also be seen atwWebsite of the Ministry of Environment and Forests at http:/envfor.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 Regional office.	Complied. Information regarding EC accorded for the project was published in news papers in English as well as Vernacular languages. Newspapers clips are attached as <b>Annexure-8</b> .
11.	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 commencing the land development work.	Petroleum exploration License (PEL) granted for the project on 22.09.2009 for the period of four years. The copy of the same is attached as <b>Annexure-9</b> .

Remarks: 1. Environmental Clearance granted for drilling activities of five wells in NELP-VII Block-CB-ONN-2005/2 is attached as Annexure-10.

2. Consent to Establish (CTE) granted by Gujarat Pollution Control Board (GPCB) for the project is attached as Annexure-11.



Annexure 1 Monthly Ambient Air Quality data

PREVE	ATON PALS						
	5		AMBIENT AIR SA	AMPLE ANALYS	IS REPORT	Corpora	tion P.
Refere	nce No.		DCPL/IOCL/ARAM/13/1			4	
Client	Name & Address.		Indian Oil Corporation I Indian Oil Bhavan, 7 <sup>th</sup> Flo Yusuf Sarai, New Delhi-	Ltd. oor,Shree Aurol	pindo Marg,		
Туре о	f Sample:		AAQ Monitoring for PM		SO2, NOx, CO, F	IC, Pb, Hg,	
Packing, and Marking :		Filter Paper packed in plastic envelopes and Gaseous Solution in Bottles, Charcoal tubes, Bladders. Sample ID - 19A/L1					
Sampling Procedure:		IS: 5182 (P-14) 2000 and CPCB Guidelines					
Client's	Client's Reference:		Client's order: IOC/E&P/CB02/12-13/EC/WO/35 dated 26/3/2013				
	Sample Location & position (GL or height from Ground level)		L1 : Project Site				
Monito	Monitoring Equipment Details		Respirable Dust Sampler- APM 430-411 & Fine Particulate Sampler Envirotech APM 550				
Date of	Sampling:		27.11.13	Period of Sa		24 HRS.	
Represe	entatives Present		Lab: Mr. Nayan			Client: Mr. Santan	u Samanta
Sr.	TEST		Results for locatio	ons			
No	11.51	UNIT	L1		TEST MI	ETHOD	Permissible limits
1.	PM(10)	µg/m³	106.0		IS:5182 (P-	-23) 2006	100.0
2.	PM <sub>(2.5)</sub>	μg/m <sup>3</sup>	23.0				
3.	SO <sub>2</sub>	μg/m <sup>3</sup>	4.53		Gravimetric method IS: 5182 (P-2) 2001		60.0
4.	NOx	μg/m <sup>3</sup>	14.03	IS		5 R-1998 Amd-1	80.0
5.	СО	mg/m <sup>3</sup>	0.444				80.0
6.	НС	µg/m <sup>3</sup>	ND		GC Method GC Method		4.0
7.	Lead	µg/m <sup>3</sup>	ND		IS- 5182( P-		160.0
8.	Mercury	μg/m <sup>3</sup>	ND		AAS me		1.0

ND: Not Detected , Place: Surat

For Detox Corporation Pvt. Ltd.,

Date: 17.01.14

Note:

(1) The results pertain to tested items only.

(2) This report shall not be reproduced except in full and authenticity of this report must be validated with office copy at Detox Corporation Pvt. Ltd

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Rev./ Date 02/04-04-2009

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#### Regd. Office : 3rd Floor, K.G.Chambers, Udhna Darwaja Ring Road, Surat - 395 002. Phone: 91 - 261 - 2351248, 2346181, Fax: 2354068 E-Mail : info@detoxcorp.com, www.detoxcorp.com

Tech. Manager/ Autho. Signatory



			AMBIENT AIR SAM	MPLE ANALYSIS REPOR	<u> </u>	1011 11.1	
Refere	ence No.		DCPL/IOCL/ARAM/13/2	20A/L2	······································		
Client Name & Address.		Indian Oil Corporation	Ltd.				
			Indian Oil Bhavan, 7 <sup>th</sup> Fl	oor,Shree Aurobindo N	lare.		
			Yusuf Sarai, New Delhi-	- 110 016			
Туре о	f Sample:		AAQ Monitoring for PN	M(2.5), PM(10), SO2, NO	Dx, CO, HC, Pb, Hg,		
Packin	g, and Marking :		Filter Paper packed in p Bladders. Sample ID-20	plastic envelopes and G	aseous Solution in Bottles, C	harcoal tubes,	
Sampli	ng Procedure:		IS: 5182 (P-14) 2000 an			·····	
Client'	s Reference:	· · · · · · · · · · · · · · · · · · ·					
		, <u> </u>	Client's order: IOC/E&F	P/CB02/12-13/EC/WO/	35 dated 26/3/2013		
Sample Location & position (GL or height from Ground level)		L2 - Kalri village					
Monitoring Equipment Details		Respirable Dust Sampler- APM 430-411 &					
			Fine Particulate Sampler Envirotech APM 550				
Date of	Sampling:		27.11.13 Period of Sampling 24 HRS.				
Repres	entatives Present		Lab: Mr. Nayan Cli		Client: Mr. Santar	u Samanta	
Sr.		1	Results for locatio	ins		1	
No	TEST	UNIT	L2		TEST METHOD		
1.	PM(10)	µg/m <sup>3</sup>	46.0	15	IS:5182 (P-23) 2006		
2.	PM <sub>(2.5)</sub>	μg/m <sup>3</sup>	16.0		Gravimetric method		
3.	SO <sub>2</sub>	ug/m <sup>3</sup>	2.49		IS: 5182 (P-2) 2001		
4.	NO <sub>x</sub>	μg/m <sup>3</sup>	27.05		IS: 5182 (P-6) 1975 R-1998 Amd-1		
5.	СО	mg/m <sup>3</sup>	0.495		GC Method		
6.	HC	μg/m <sup>3</sup>	ND				
7.	Lead	μg/m <sup>3</sup>	ND		GC Method		
8.	Mercury	μg/m <sup>3</sup>	ND		5182( P- 22) 2004	1.0	
		με/π	INU		AAS method		

## ND: Not Detected ,

Place: Surat

### For Detox Corporation Pvt. Ltd.,

Date: 17.01.14

#### Note:

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			AMBIENT	AIR SAMPLE ANA	LYSIS REPORT		
Referen	nce No.		DCPL/IOCL/ARAM	1/13/21A/L3			
Client N	ame & Address.		Indian Oil Corpor	ation Ltd.			
			Indian Oil Bhavan		urobindo Marg,		
			Yusuf Sarai, New				
Type of	Sample:		AAQ Monitoring	for PM(2.5), PM(	10), SO2, NOx, CC	), HC, Pb, Hg,	
	;, and Marking :		Filter Paper packe Bladders. Sample	d in plastic envel ID – 21A/L3	opes and Gaseou	s Solution in Bottles, Char	coal tubes,
Samplir	ng Procedure:		IS: 5182 (P-14) 20	00 and CPCB Gui	delines		
Client's	Reference:		Client's order: 10	С/Е&Р/СВ02/12-:	13/EC/WO/35 da	ted 26/3/2013	
Sample	Location & posit	ion	L3- Edala Village				
	eight from Grou						
Monito	ring Equipment D	Details	Respirable Dust Sampler- APM 430-411 &				
1	_		Fine Particulate Sampler Envirotech APM 550				
Date of	Sampling:		27.11.13 Period of Sampling 24 HRS.				
Represe	entatives Present	:	Lab: Mr. Nayan Client: Mr. Santanu		Samanta		
Sr.	TEST	116117	Results for locations			T	Permissible
No	1651	UNIT		L3	TI	EST METHOD	limits
1.	PM(10)	μg/m <sup>3</sup>	4	1.0	IS:5	182 (P-23) 2006	100.0
2.	PM <sub>(2.5)</sub>	μg/m <sup>3</sup>	1	5.0	Grav	Gravimetric method	
3.	50 <sub>2</sub>	μg/m <sup>3</sup>	2	2.56		182 (P-2) 2001	60.0 
4.	NOx	μg/m <sup>3</sup>	18.76		IS: 5182 (P-6) 1975 R-1998 Amd-1		80.0
5.	CO	mg/m <sup>3</sup>	0.479		GC Method		4.0
6.	HC	µg/m³	1	ND		GC Method	160.0
7.	Lead	μg/m <sup>3</sup>	1	ND		182( P- 22) 2004	1.0
8.	Mercury	μg/m <sup>3</sup>	1	ND		AS method	1.0

ND: Not Detected ,

Place: Surat

Date: 17.01.14

#### For Detox Corporation Pvt. Ltd.,

Tech. Manager/ Autho. Signatory

Note:

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Annexure 2 Mercury analysis reports for air and drill cuttings





			AIVIDIEINTA	IN SAMPLE AWALTS	<u>S REPORT</u>			
Referen	ce No.		DCPL/IOCL/ARAM/13/A19-20A/L1 , L2					
Client Name & Address.			Indian Oil Corporation Ltd.					
			Indian Oil Bhavan,7 <sup>t</sup>	<sup>h</sup> Floor,Shree Aurobi	ndo Marg,			
			Yusuf Sarai, New De	lhi 110 016				
Type of	Sample:		AAQ Monitoring for	PM(2.5), PM(10), S	D2, NOx, CO, H	HC, Pb, Hg,		
Packing	, and Marking :				and Gaseous S	Solution in Bottles, Charcoal to	ubes, Bladders.	
Sec. 1	Cardina de la		Sample ID - A19-20A					
Samplin	g Procedure:		IS: 5182 (P-14) 2000	and CPCB Guideline	es			
Client's	Reference:		Client's order: IOC/	E&P/CB02/12-13/EC	/WO/35 date	d 26/3/2013		
Sample	Location & position	on	L1 : Project Site L2 -	Kalri village				
(GL or height from Ground level)								
Monitoring Equipment Details			Respirable Dust Sampler- APM 430-411 &					
•			Fine Particulate Sampler Envirotech APM 550					
Date of	Sampling:		27.11.13	Period of S	Period of Sampling 24 HRS.			
Represe	entatives Present:		Lab: Mr. Nayan			Client: Mr. Santanu Sama	nta	
Sr.			Results for locations					
No	TEST	UNIT	L1	L2		TEST METHOD	limits	
1.	PM(10)	µg/m <sup>3</sup>	106.0	46.0		S:5182 (P-23) 2006	100.0	
2.	PM <sub>(2.5)</sub>	μg/m <sup>3</sup>	23.0	16.0	(	Gravimetric method	60.0	
3.	SO <sub>2</sub>	μg/m <sup>3</sup>	4.53	2.49	IS: 5182 (P-2) 2001		80.0	
4.	NO <sub>x</sub>	μg/m <sup>3</sup>	14.03	27.05	IS: 5182 (P-6) 1975 R-1998 Amd-1		80.0	
5.	СО	mg/m <sup>3</sup>	0.444	0.495	GC Method		4.0	
6.	HC	µg/m³	ND	ND		GC Method		
7.	Lead	μg/m <sup>3</sup>	ND	ND	l:	S- 5182( P- 22) 2004	1.0	
8.	Mercury	μg/m <sup>3</sup>	ND	ND		AAS method	-	

ND: Not Detected , Place: Surat

For Detox Corporation Pvt. Ltd.,

Tech. Manager/ Autho. Signatory

Date: 13.12.13

Note:

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	Water Analysis Report					
1.	Reference No.	DCPL/ IOCL/ ARWM/13/W29-11A/L1				
2.	Client :Name & Address	Indian Oil Corporation Ltd. Indian Oil Bhavan,7 <sup>th</sup> Floor,Shree Aurobindo Marg Yusuf Sarai, New Delhi 110 016				
3.	Client's Reference :	Client's order: IOC/E&P/CB02/12-13/EC/WO/35 dated 26/3/2013				
4.	Packing & Markings :	Collected in plastic carboys. sample ID (W29-11A/WL1)				
5.	Type of Sample:	Ground Water				
6.	Place of sampling	L1: Bore well at Kalri Village				
7.	Sample collected by:	Mr. Nayan				
8.	Date of sampling :	27.11.13				
9.	Test method :	IS – 3025 / Standard Methods APHA & AWWA				

Sr. No.	Parameters	Unit	L1
1.	рН	pH Unit	7.31
2.	Color	Pt. Co. Scale	< 1.0
3.	Odor	-	Odorless
4.	Turbidity	NTU	00
5.	Total Dissolved Solids	mg/lit	2400.0
6.	Total Hardness	mg/lit	656.0
7.	Calcium Hardness	mg/lit	400.0
8.	Magnesium Hardness	mg/lit	256.0
9.	Chloride	mg/lit	1275.0
10.	Iron	mg/lit	ND
11.	Aluminum	mg/lit	ND
12.	Nitrate	mg/lit	ND
13.	Ammonical nitrogen	mg/lit	ND
14.	Fluoride	mg/lit	0.62
15.	Sulphate	mg/lit	122.0
16.	Sulphide	mg/lit	0.53
17.	Alkalinity	mg/lit	160.0
18.	Residual Free Chorine	mg/lit	ND
19.	Hexa Chromium	mg/lit	ND
20.	Manganese	mg/lit	0.05
21.	Copper	mg/lit	0.05
22.	Zinc	mg/lit	ND
23.	Phenol	mg/lit	ND
24.	Lead	mg/lit	ND
25.	Nickel	mg/lit	0.11
26.	Cyanide	mg/lit	ND
27.	Boron	mg/lit	ND
28.	Arsenic	mg/lit	ND
29.	Mercury	mg/lit	ND
30.	Cadmium	mg/lit	ND

ND: Not Detected Place: Surat

#### Date: 13.12.13

Note:

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dT/OP/WAR/09

02/04-04-2009

For Detox Corporation Pvt. Ltd

Tech. Manager/Autho. Signatory

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Ring Road, Surat - 395 002. Phone : 91 - 261 - 2351248, 2346181, Fax : 2354068 E-Mail : info@detoxcorp.com, www.detoxcorp.com

PREVEN	NONF	Dotox
	<del>×</del>	Soil Analysis Report
1.	Reference No.	DCPL/IOCL/ARSM/13/W29-11A/L1 Corporation Pvt. L
2.	Client :Name & Address	Indian Oil Corporation Ltd. Indian Oil Bhavan,7 <sup>th</sup> Floor,Shree Aurobindo Marg Yusuf Sarai, New Delhi 110 016
3.	Packing & Markings:	Collected in plastic bags. Sample ID - W29-11A/SoL1
4.	Type of Sample: Grab / Composite	Grab
5.	Source of Sample Collection:	Soil Sample
6.	Client's Reference	Client's order: IOC/E&P/CB02/12-13/EC/WO/35 dated 26/3/2013
• 7.	Sample collected by	Mr. Nayan Lad
8.	Time of sampling	1400 hrs
9.	Date of sampling	27.11.13
10.	Place of sampling : Locations:	L1- Project Site
Denul		

**Results:** 

No.	Parameters	Units	L1 ,
1.	рН	pH Unit	7.42
2.	Electrical conductivity	μS/cm	200.0
3.	Bulk Density	g/cm <sup>3</sup>	0.56
4.	Water Holding Capacity	%	47.5
	Grain Size Distribution:		
	Gravel	%	3.0
5.	Coarse Sand	%	22.0
	Medium Sand	%	33.0
	Fine Sand	%	34.0
	Silt & Clay	%	8.0
6.	Texture	- 4	Sandy
7.	Color	-	Yellowish Brown
8.	Sulphate	mg/kg	40.0
9.	Nitrate	mg/kg	78.0
10.	Nitrogen	%	0.03
11.	Phosphorus	mg/kg	7.320
12.	Sodium	mg/kg	46.0
13.	Potassium	mg/kg	9.04
14.	SAR	-	1.55
15.	Calcium	mg/kg	288.0
16.	Organic matter	%	0.26

**Place: Surat** 

Date: 13.12.13

Note:

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For Detox Corporation Pvt. Ltd

Tech. Manager Autho. Signatory





		Solid Analysis Report
1.	Reference No.	DCPL/ IOCL/ ARSM/13/W29-11A/L1
2.	Client :Name & Address	Indian Oil Corporation Ltd. Indian Oil Bhavan,7 <sup>th</sup> Floor, Shree Aurobindo Marg Yusuf Sarai, New Delhi 110 016
3.	Client's Reference	Client's order: IOC/E&P/CB02/12-13/EC/WO/35 dated 26/3/2013
4.	Packing & Markings :	Collected in plastic & glass containers. Sample ID - W29- 11A/SL1
5.	Type of Sample:	Drill Mud
6.	Place of sampling	L1 : IOCL - Drill Mud
7.	Sample collected by:	Nayan
8.	Date of sampling :	28.11.13
9.	Test method :	IS – 3025 / Standard Methods APHA & AWWA

#### **Results:**

Sr.	Demonstrate	Unit	Results
No.	Parameters	Unit –	L1
1.	рН	pH Unit	7.10
2.	Total Chromium	ppm	8.74
3.	Hexavalent Chromium	ppm	0.462
4.	Nickel	ppm	21.99
5.	Copper	ppm	13.79
6.	Lead	ppm	0.46
7.	Cadmium	ppm	0.67
8.	Mercury	ppm	1.29
9.	Arsenic	ppm	ND
10.	Oil and Grease	ppm	ND

ND: Not Detected Place: Surat

For Detox Corporation Pvt. Ltd

Date: 13.12.13

Tech, Manager/Autho. Sign

#### Note:

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PREVE	ATON PALS							
	5		AMBIENT AIR SA	AMPLE ANALYS	IS REPORT	Corpora	tion P.	
Refere	nce No.		DCPL/IOCL/ARAM/13/1			4		
Client	Name & Address.		Indian Oil Corporation I Indian Oil Bhavan, 7 <sup>th</sup> Flo Yusuf Sarai, New Delhi-	Ltd. oor,Shree Aurol	pindo Marg,			
Туре о	f Sample:		AAQ Monitoring for PM		SO2, NOx, CO, F	IC, Pb, Hg,		
	g, and Marking :		Filter Paper packed in pl Bladders. Sample ID - 19	Filter Paper packed in plastic envelopes and Gaseous Solution in Bottles, Charcoal tubes, Bladders. Sample ID - 19A/L1				
Sampli	ng Procedure:		IS: 5182 (P-14) 2000 and CPCB Guidelines					
Client's	Reference:		Client's order: IOC/E&P/CB02/12-13/EC/WO/35 dated 26/3/2013					
	Location & posit		L1 : Project Site					
Monito	ring Equipment D	etails	Respirable Dust Sampler Fine Particulate Sampler					
Date of	Sampling:		27.11.13	Period of Sa		24 HRS.		
Represe	entatives Present		Lab: Mr. Nayan			Client: Mr. Santan	u Samanta	
Sr.	TEST		Results for locatio	ons				
No	11.51	UNIT	L1		TEST MI	ETHOD	Permissible limits	
1.	PM(10)	µg/m³	106.0		IS:5182 (P-	-23) 2006	100.0	
2.	PM <sub>(2.5)</sub>	µg/m <sup>3</sup>	23.0		Gravimetri			
3.	SO <sub>2</sub>	μg/m <sup>3</sup>	4.53		IS: 5182 (P		60.0	
4.	NOx	μg/m <sup>3</sup>	14.03	IS		5 R-1998 Amd-1	80.0	
5.	СО	mg/m <sup>3</sup>	0.444		GC Me		80.0	
6.	НС	µg/m <sup>3</sup>	ND		GC Me		4.0	
7.	Lead	µg/m <sup>3</sup>	ND		IS- 5182( P-		160.0	
8.	Mercury	μg/m <sup>3</sup>	ND		AAS me		1.0	

ND: Not Detected , Place: Surat

For Detox Corporation Pvt. Ltd.,

Date: 17.01.14

Note:

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Doc. No dT/OP/ASR/05

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Tech. Manager/ Autho. Signatory



			AMBIENT AIR SAM	MPLE ANALYSIS REPOR	<u> </u>	1011 11.1	
Refere	ence No.		DCPL/IOCL/ARAM/13/2	20A/L2	······································		
Client Name & Address.			Indian Oil Corporation Ltd.				
			Indian Oil Bhavan, 7 <sup>th</sup> Fl	oor,Shree Aurobindo N	lare.		
			Yusuf Sarai, New Delhi-	- 110 016			
Туре о	f Sample:		AAQ Monitoring for PM(2.5), PM(10), SO2, NOx, CO, HC, Pb, Hg,				
Packin	g, and Marking :		Filter Paper packed in p Bladders. Sample ID-20	plastic envelopes and G	aseous Solution in Bottles, C	harcoal tubes,	
Sampli	ng Procedure:		IS: 5182 (P-14) 2000 an			·····	
Client'	s Reference:	· · · · · · · · · · · · · · · · · · ·					
		, <u> </u>	Client's order: TOC/E&F	ient's order: IOC/E&P/CB02/12-13/EC/WO/35 dated 26/3/2013			
	e Location & posit height from Grour		L2 - Kalri village				
Monito	oring Equipment D	etails	Respirable Dust Sample	r- APM 430-411 &	M 420 411 8		
			Fine Particulate Sampler Envirotech APM 550				
Date of	Sampling:		27.11.13	Period of Sampling			
Repres	entatives Present		Lab: Mr. Nayan	<u>_</u>	Client: Mr. Santar	u Samanta	
Sr.		1	Results for locatio	ins		1	
No	TEST	UNIT	L2		TEST METHOD	Permissible limits	
1.	PM(10)	µg/m <sup>3</sup>	46.0	15	:5182 (P-23) 2006	100.0	
2.	PM <sub>(2.5)</sub>	μg/m <sup>3</sup>	16.0		avimetric method		
3.	SO <sub>2</sub>	ug/m <sup>3</sup>	2.49		: 5182 (P-2) 2001	60.0	
4.	NO <sub>x</sub>	μg/m <sup>3</sup>	27.05		P-6) 1975 R-1998 Amd-1	80.0	
5.	СО	mg/m <sup>3</sup>	0.495		GC Method	80.0	
6.	HC	μg/m <sup>3</sup>	ND		GC Method	4.0	
7.	Lead	μg/m <sup>3</sup>	ND			160.0	
8.	Mercury	μg/m <sup>3</sup>	ND		5182( P- 22) 2004	1.0	
		με/π	INU		AAS method	-	

## ND: Not Detected ,

Place: Surat

### For Detox Corporation Pvt. Ltd.,

Date: 17.01.14

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			AMBIENT	AIR SAMPLE ANA	LYSIS REPORT			
Referen	nce No.		DCPL/IOCL/ARAM	1/13/21A/L3				
Client N	ame & Address.		Indian Oil Corpor	ation Ltd.				
			Indian Oil Bhavan,7 <sup>th</sup> Floor,Shree Aurobindo Marg,					
			Yusuf Sarai, New					
Type of	Sample:		AAQ Monitoring	for PM(2.5), PM(	10), SO2, NOx, CC	), HC, Pb, Hg,		
	;, and Marking :		Filter Paper packed in plastic envelopes and Gaseous Solution in Bottles, Charcoal tubes, Bladders. Sample ID – 21A/L3					
Samplir	ng Procedure:		IS: 5182 (P-14) 20	00 and CPCB Gui	delines			
Client's	Reference:		Client's order: 10	С/Е&Р/СВ02/12-:	13/EC/WO/35 da	ted 26/3/2013		
Sample	Location & posit	ion	L3- Edala Village					
	eight from Grou							
Monito	ring Equipment D	Details	Respirable Dust Sampler- APM 430-411 &					
1	_		Fine Particulate Sampler Envirotech APM 550					
Date of	Sampling:		27.11.13		of Sampling	24 HRS.		
Represe	entatives Present	:	Lab: Mr. Nayan	- <u>-</u>		Client: Mr. Santanu	Samanta	
Sr.	TEST	116117	Results fo	or locations		T	Permissible	
No	1651	UNIT		L3	TI	EST METHOD	limits	
1.	PM(10)	μg/m <sup>3</sup>	4	1.0	IS:5	182 (P-23) 2006	100.0	
2.	PM <sub>(2.5)</sub>	μg/m <sup>3</sup>	1	5.0	Grav	imetric method	60.0	
3.	50 <sub>2</sub>	μg/m <sup>3</sup>	2	.56		182 (P-2) 2001	80.0	
4.	NOx	μg/m <sup>3</sup>	18	3.76		6) 1975 R-1998 Amd-1	80.0	
5.	CO	mg/m <sup>3</sup>	0.	479	GC Method		4.0	
6.	HC	µg/m³	1	ND	-	GC Method	160.0	
7.	Lead	μg/m <sup>3</sup>	1	ND		182( P- 22) 2004	1.0	
8.	Mercury	μg/m <sup>3</sup>	1	ND		AS method	1.0	

ND: Not Detected ,

Place: Surat

Date: 17.01.14

#### For Detox Corporation Pvt. Ltd.,

Tech. Manager/ Autho. Signatory

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Annexure 3 Blow out Preventer system



## **Blow Out Preventer Configuration**

		Flow Nipple
		Annular BOP 2M
		Double Ram BOP, 2M ( pipe top and blind bottom)
		Drilling Spool, 21.1/4" 2M top & bottom flange x 2 side
BOP 21.1/4" stack		outlets
(17.1/2" Hole)	:	Spacer Spool 21.1/4" 2M x 21.1/4" 2M
		Spacer Spool 21.1/4" 2M x 21.1/4" 2M (Optional )
		DSA (21.1/4" 2M x 20.3/4" 3M)
		20"Casing Head Housing (20.3/4" 3M), -To land
		13.3/8"Csg)
		Annular BOP, 5,000 psi (bottom flange 13.5/8" 10M)
		Double Ram BOP 10,000 psi (pipe ram top and blind ram
		bottom)
		Single Ram BOP 10,000 psi
BOP 13.5/8" stack	:	Drilling Spool 13.5/8" 10M x 13.5/8" 10M
(12.1/4" hole)		DSA 13.5/8" 10M x 13.5/8" 5M
		Spacer Spool 13.5/8" 5M x 13.5/8" 5M
		1 <sup>st</sup> Casing Head Spool 13.5/8" 5M x 20.3/4" 3M (To Land
		9.5/8" Csg.)
		20" Casing Head Housing (From previous stage)
		Annular BOP, 5M (bottom flange 13.5/8" 10M)
		Double Ram BOP 10M (pipe ram top and blind ram
		bottom)
		Single Ram BOP 10M
BOP 13.5/8" stack		Drilling Spool 13.5/8" 10M x 13.5/8" 10M
(8.1/2" hole)	:	DSA 11" 5M x 13.5/8" 10M 2 <sup>nd</sup> Casing Head Spool 13.5/8" 5M x11"5M(To Land 7"
		casing.) 1 <sup>st</sup> Csg Head Spool 13.5/8" 5M x 20.3/4" 3M (From
		Previous)
		Casing Head Housing (20.3/4" 3M) (From previous stage)
		Tubing Head Spool, 11" 5M x 11" 5M with Tbg Hanger &
		cap
		2 <sup>nd</sup> Casing Head Spool 13.5/8" 5M x11"5M
For Well Cap for Re-entry arrangement		1 <sup>st</sup> Csg Head Spool 13.5/8" 5M x 20.3/4" 3M
		Casing Head Housing (20.3/4" 3M)



Annexure 4 Environment Policy



## Safety, Health & Environment Policy

Indian Oil Corporation is committed to conduct business with strong environment conscience ensuring sustainable development, safe workplaces and enrichment of quality of life of Employees, Customers and the Community. We, at IndianOil, believe that good S, H&E performance is an integral part of efficient and profitable business management. We shall:

- Establish and maintain good standards for safety of the people, the processes and the assets.
- Comply with all Rules and Regulations on Safety, Occupational Health and Environmental Protection.
- Plan, design, operate and maintain all facilities, processes and procedures to secure sustained Safety, Health and Environmental Protection.
- Remain trained, equipped and ready for effective and prompt response to accidents and emergencies.
- Welcome audit of our S, H&E conduct by external body, so that stakeholder confidence is safeguarded.
- Adopt and promote industry best practices to avert accidents and improve our S, H&E performance.
- Remain committed to be a leader in Safety, Occupational Health and Environment Protection through continuing improvement.
- Make efforts to preserve ecological balance and heritage.



Annexure 5 Noise Level monitoring report



Ref. No. Name of the party Address

Sample collected on Sample Source Noise level Meter No Calibration date Calibrated By





- : DCPL/IOCL/ARNM/13/N8-32A/L1, L2
- : Indian Oil Corporation Ltd.
- : Indian Oil Bhavan,7th Floor,Shree Aurobindo Marg,. Yusuf Sarai, New Delhi- - 110 016
- : 27.11.13
- : Noise Sample
- : Sound Level Meter (I 221575)
- : 19-06-13 Calibration Validity: 18-06-14
- : National Center for Quality Calibration, Ahmedabad.

#### Inside plant Area.

No.	Location	Noise Level dB(A)	Permissible Limit <sup>#</sup> in dB(A) Leq
1.	Project Site	62.7	75
2.	Kalri village	59.6	55

# Ambient Air Quality Standards in respect of Noise

**Place: Surat** 

#### For Detox Corporation Pvt. Ltd.,

Tech. Manager/Autho. Signatory

Date: 13.12.13

#### Note:

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Doc. No

Dt/OP/NAR/11

Rev./Date. 00/015-04-2007

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Annexure 6 Certificate of Accreditation रजिस्ट्री सं॰ डी॰ एल॰-33004/99

REGD. NO. D. L.-33004/99

HRA and Rouge Rouge

असाधारण EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii) PART II—Section 3—Sub-section (ii) प्राधिकार से प्रकाशित PUBLISHED BY AUTHORITY

सं. 1409] No. 1409] नई दिल्ली, मंगलवार, जुलाई 13, 2010/आषाढ़ 22, 1932 NEW DELHI, TUESDAY, JULY 13, 2010/ASADHA 22, 1932

पर्यावरण और वन मंत्रालय

अधिसुचना

नई दिल्ली, 13 जुलाई, 2010

का.आ. 1662(अ).—केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 10 के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 12 की उप-धारा (1) के खण्ड (ख) और धारा 13 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, नीचे दी गई सारणी के स्तंभ (2) में विनिर्दिष्ट प्रयोगशालाओं को उक्त अधिनियम और उसके अधीन बनाए गए नियमों के अधीन ऐसी प्रयोगशालाओं को सौंपे गए कृत्यों के क्रियान्वित करने के लिए पर्यावरणीय प्रयोगशालाओं के रूप में और स्तंभ (3) में विनिर्दिष्ट व्यक्तियों को, उक्त अधिनियम की धारा 11 के अधीन सशक्त अधिकारियों को पूर्वोक्त सारणी के स्तंभ (4) में विनिर्दिष्ट अवधि के लिए भेजे गए वायु, जल, मृदा या अन्य पदार्थों के नमूनों का विश्लेषण करने के प्रयोजनों के लिए सरकारी विश्लेषक के रूप में मान्यता प्रदान करती है और उस प्रयोजन के लिए भारत सरकार के पर्यावरण और वन मंत्रालय की अधिसूचना सं. का.आ. 1174(अ), तारीख 18 जुलाई, 2007 में निम्नलिखित और संशोधन करती है, अर्थात् :--

उक्त अधिसूचना से संलग्न सारणी में :—(i) क्रम संख्यांक 12 और 21 और उससे संबंधित प्रविष्टियों के स्थान पर निम्नलिखित क्रम संख्यांक और प्रविष्टियां रखी जाएंगी, अर्थात् :—

	1	HITCH	
क्रम सं.	प्रयोगशाला का नाम	सरकारी विश्लेषणकर्ता का नाम	से लागू और तक विधिमान्य
(1)	(2)	(3)	(4)
"12	मैसर्स होराईजन सर्विस (इन्वायरमैंटल एंड सेफ्टी), 39, श्यामसुन्दर सोसायटी, नियर महात्रे ब्रिज, पुणे–411033 (महाराष्ट्र)	<ul> <li>(1) श्री कुणाल मनोहर नरगोलकर</li> <li>(2) डॉ अर्चना वय्कोले</li> <li>(3) श्री अमित आनंद पाटकी</li> </ul>	13-7-2010 से 12-7-2015
21	मैसर्स चौकसी लैबोरेट्रीज लि. 6/3, मनोरमागंज, इंदौर – 452001 (मध्य प्रदेश)	<ul><li>(1) श्री सुनील चौकसी</li><li>(2) श्री केविश व्यास</li><li>(3) श्रीमति शैला देशपांडे</li></ul>	13-7-2010 से 12-7-2015 "

मारणी

2678 GI/2010

(1)

THE GAZETTE OF INDIA : EXTRAORDINARY

 (ii) क्रम संख्या 81 और उससे संबंधित प्रविष्टियों के पश्चात् निम्नलिखित क्रम संख्या और प्रविष्टियां अन्तःयपित की जाएंगी अर्थात :---

क्रम सं.	प्रयोगशाला का नाम	सरकारी विश्लेषणकर्ता का नाम	से लागू और तर विधिमान्य
(1)	(2)	(3)	(4)
"82	मैसर्स एनर्जी एंड रिसोर्सिज इंसटीच्यूट, 6 सी, दरबारी सेठ ब्लॉक इंडिया हैबिटेट सेंटर कॉम्प्लेक्स, लोदी रोड, नई दिल्ली–110003	<ul><li>(1) श्री अंशुमान</li><li>(2) श्री आर. सुरेश</li><li>(3) श्री वेद प्रकाश शर्मा</li></ul>	13-7-2010 से 12-7-2015
83	मैसर्स हरियाणा टेस्ट हाउस एंड कंसल्टेंसी सर्विसेज, 50-सी, सेक्टर 25, भाग-II, हुड्डा पानीपत-132104 (हरियाणा)	<ul><li>(1) श्री एम. एल. दुआ</li><li>(2) श्री टी. एल. मेहता</li><li>(3) सुश्री दीपा सरदाना</li></ul>	13-7-2010 से 12-7-2015
84	मैसर्स डीटाक्स कॉर्पोरेशन प्राइवेट लिमिटेड, तीसरी मंजिल, के. जी. चेम्बर्स, गुजरात समाचार प्रेस के सामने, रिंग रोड, सूरत–395002 (गुजरात)	<ul><li>(1) श्री अमित रोनोसे</li><li>(2) श्री जितेन्द्र खसकिया</li><li>(3) डॉ. भावना मेहरा</li></ul>	13-7-2010 से 12-7-2015
85.	मैसर्स थापर सेन्टर फॉर इन्डस्ट्रीअल रिसर्ज डेवेलप्मेंट (टीसीआईआरडी) थापर टेक्नालोजी कैम्पस, पोस्ट बाक्स नं. 68, भद्सोन रोड पटियाला-147001 (पंजाब)	<i>c</i> ,	13-7-2010; 12-7-2015'

[फा. सं. क्यू-15018/7/203-सीपीडब्ल्यू]

रजनीश दुरं संयुक्त सचिव

टिप्पण :--मूल अधिसूचना भारत के राजपत्र, असाधारण में संख्यांक का.आ. 1174(अ), तारीख 18 जुलाई, 2007 द्वारा प्रकशित की गई थी और अधिसूचना सं. का.आ. 1539(अ), तारीख 13 सितम्बर, 2007, का.आ. 1811(अ), तारीख 24 ज़क्तूबर, 2007, का.आ. 55(अ), तारीख 9 जनवरी, 2008, का.आ. 428(अ), तारीख 4 मार्च, 2008, का.आ. 865(अ), तारीख11 राग्रैल, 2008, का.आ. 1894(अ), तारीख 31 जुलाई, 2008, का.आ. 2728(अ), तारीख 25 नवम्बर, 2008, का.आ. 1356(इ), तारीख 27 मई, 2009, का.आ. 1802(अ), तारीख 22 जुलाई, 2009 और का.आ. 2399(अ), तारीख 18 सितम्बर, 2009 और ता.आ. 3122(अ), तारीख 7 दिसम्बर, 2009 और का.आ. 3123(अ), तारीख 7 दिसम्बर, 2009 और का.आ. 142(अ), तारीख 21 बनवरी, 2010 और का.आ. 619(अ), तारीख 19 मार्च, 2010 द्वारा उसमें पश्चात्वर्ती संशोधन किए गए।

#### MINISTRY OF ENVIRONMENT AND FORESTS

#### NOTIFICATION

#### New Delhi, the 13th July, 2010

S.O. 1662(E).—In exercise of the powers conferred by clause (b) of sub-section (1) of Section 12 and Section 13 of the Environment (Protection) Act, 1986 (29 of 1986) read with rule 10 of the Environment (Protection) Rules, 1986, the Central Government hereby recognizes the laboratories specified in column (2) of the Table given below as environmental laboratories to carry out the functions entrusted to such laboratories under the said Act and rules made thereunder, and the persons specified in column (3) as Government Analysts for the purposes of analysis of samples of air, water, soil or other substances sent for analysis by the Central Government or the officer empowered under Section 11 of the said Act, for a period specified in column (4) of the Table aforesaid, and for that purpose makes the following furtheramendments in the notification of the Government of India in the Ministry of Environment and Forests, number S.O. 1174 (E), dated the 18th July, 2007, namely :—

In the Table appended to the said notification :--

(i) for serial numbers 12 and 21 the entries relating thereto, the following serial numbers and entries shall be inserted, namely :---

2

#### [भाग II-खण्ड 3(ii)]

#### भारत का राजपत्र : असाधारण

#### TABLE

Sl. No.	Name of the Laboratory	Name of the Government Analyst	Recognition with effect from and valid up to
(1)	(2)	(3)	(4)
"1?	M/s. Horizon Services (Environmental and Safety), 39, Shyamsunder Society Near Mhatre Bridge, Pune-411033 (Maharashtra)	<ol> <li>(1) Shri Kunal Manohar Nargolkar</li> <li>(2) Dr. Archana Waykole</li> <li>(3) Shri Amit Anand Patki</li> </ol>	13-7-2010 to 12-7-2015
21	M/s. Choksi Laboratories Ltd., 6/3, Manoramaganj, Indore-452001 (Madhya Pradesh)	<ol> <li>Shri Sunil Choksi</li> <li>Shri Kavish Vyas</li> <li>Mrs. Shaila Deshpande</li> </ol>	13-7-2010 to 12-7-2015"

(ii) after serial number 81 and the entries relating thereto, the following serial number and entries shall be inserted, namely :---

Sl. No.	Name of the Laboratory	Name of the Government Analyst	Recognition with effect from and valid up to
(1)	(2)	(3)	(4)
"82	M/s. The Energy and Resources Institute, 6C, Darbari Seth Block, India Habitat Centre Complex, Lodhi Road, New Delhi-110003	<ol> <li>Mr. Anshuman</li> <li>Mr. R. Suresh</li> <li>Mr. Ved Prakash Sharma</li> </ol>	13-7-2010 to 12-7-2015
83	M/s. Haryana Test House and Consultancy Services, 50-C, Sector-25 Part-II HUDA, Panipat-132104 (Haryana)	<ol> <li>(1) Shri M.L. Dua</li> <li>(2) Shri T.L. Mehta</li> <li>(3) Ms. Deepa Sardana</li> </ol>	13-7-2010 to 12-7-2015
84	M/s. Detox Corporation Pvt. Ltd., 3rd Floor, K.G. Chambers, Opp. Gujarat Samachar Press, Ring Road, Surat-395002 (Gujarat)	<ol> <li>Mr. Amit Renose</li> <li>Mr. Jitendra Khasakia</li> <li>Dr. Bhavna Mehra</li> </ol>	13-7-2010 to 12-7-2015
85	M/s. Thapar Centre for Industrial Research & Development (TCIRD) Thapar Technology Campus Post Box No. 68, Bhadson Road Patiala-147001 (Punjab)	<ol> <li>Dr. Akepati Sivaram Reddy</li> <li>Shri J. Nagendra Babu</li> <li>Shri Mukesh Agarwal</li> </ol>	13-7-2010 to 12-7-2015"

#### [F.No.Q.15018/7/2003-CPW]

#### RAJNEESH DUBE, Jt. Secy.

Note :— The principal notification was published in the Gazette of India, Extraordinary *vide* number S.O. 1174(E), dated the 18th July, 2007 and subsequently amended *vide* Notification numbers S.O. 1539(E), dated the 13th September, 2007, S.O. 1811(E), dated the 24th October, 2007, S.O. 55 (E), dated 9th January, 2008, S.O. 428(E), dated the 4th March, 2008, S.O. 865(E), dated the 11th April, 2008, S.O. 1894(E) dated the 31st July, 2008, S.O. 2728(E), dated the 25th November, 2008, S.O. 1356(E), dated the 27th May, 2009, S:O.1802 (E), dated 22nd July, 2009 and S.O. 2399(E), dated the 18th September, 2009 and S.O. 3122(E), dated the 7th December, 2009, S.O. 142(E), dated the 21st January, 2010, S.O. 619(E), 19th March, 2010.

Printed by the Manager, Government of India Press, Ring Road, Mayapuri, New Delhi-110064 and Published by the Controller of Publications, Delhi-110054.

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Annexure 7 Environmental Statement

## **ENVIRONMENTAL STATEMENT REPORT for Year 2013 – 2014**

### INDIAN OIL CORPORATION LIMITED

## PART – A

i	Name & address of the owner / Occupier of the industry operation or process	:	MR. HRIDESH BAINDAIL DY. GENERAL MANAGER (E&P) 7 <sup>TH</sup> FLOOR, INDIAN OIL BHAVAN NO. 1, SRI AUROBINDO MARG YUSUF SARAI, NEW DELHI-110016
ii	Date of the last environmental Audit Report submitted	:	
iii	Production Capacity	:	
iv	Year of Establishment	:	1964
v	Last Environment Statement Submitted	:	For FY 2012-13
vi	Industry Category	:	
vii	Primary STC Code	:	13
vii	Secondary SIC Code	:	131

## PART – B

## WATER AND RAW MATERIAL CONSUMPTION

(i) Water Consumption, 18 m<sup>3</sup> / day

Cooling : NIL Domestic : 3 KL/DAY Process : (Mud preparation): 15 KLD

	Water consumption per unit of product output		
Name of Products	During the previous financial	During the current financial	
	year	year	
	(1)	(2)	
Oil and gas exploration project	Nil	15 KLD was used for mud preparation during drilling activity	

## (ii) Raw material consumption

Name of raw material	Name of Products	Consumption of raw material per Day
consume		
No raw material required	Oil and Gas exploration	Nil
	project	

## PART – C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

Quality of Pollutants	Concentration of	Percentage of variation
discharged (mass/day)	pollutants in	from prescribed
	discharges (mass/day)	standards with reasons
	Waste water generated due to mud preparation and other washing activity was treated in ETP. The same being negligible quantity will be store in HDPE lined pond and evaporated naturally.	
DOM : 3 KL/DAY	DISPOSED OFF THROU	GH SEPTIC TANK/ SOAK
PM, SOx, NOx	PM < 150 Mg/NM <sup>3</sup> SOx <100 PPM NOx < 50 PPM	WITHIN LIMIT
-	discharged (mass/day)  DOM : 3 KL/DAY	discharged (mass/day)       pollutants in discharges (mass/day)          Waste water generated of other washing activity we same being negligible que HDPE lined pond and ev         DOM : 3 KL/DAY       DISPOSED OFF THROUGH PIT SYSTEM         PM, SOx, NOx       PM < 150 Mg/NM <sup>3</sup> SOx <100 PPM

## PART – D

## HAZARDOUS WASTES

Hazardous Wastes	Total Quantity (kg)	
	During the previous financial year (April 2012 – March 2013)	During the current financial year (April 2013 – March 2014)
(a) From process <ul> <li>Drilling cuttings</li> </ul>	Nil	200 MT/Well
(b) From pollution control facility ETP SLUDGE	Nil	Nil

## PART – E SOLID WASTES

Solid Wastes	Total Quantity (kg)		
	During the previous financial	During the current financial	
	year	year	
	(April 2012 – March 2013)	(April 2013 – March 2014)	
(a) From process	Nil		
(b) From pollution control			
facility			
(c) (1) Quantity recycled or			
re-utilized within the unit			
(2) Sold			
(3) Disposed (Sent to land			
filling site)			

### PART – F

Please specify the characteristics (in terms of concentration & quantum) of hazardous as well as solid wastes & indicate disposal practice adopted for both these categories of wastes.

#### ETP SLUDGE : NIL Drill cutting: 200 MT/Well

#### Drill Cutting: Was disposed as per GPCB Norms.

## PART – G

Impact of the pollution control measures taken on conservation of natural resources & consequently on the cost of production.

### AIR

WATER INDUSTRIAL: Waste water generated due to mud preparation and other washing activity was treated in ETP. The same being negligible quantity was store in HDPE lined pond and evaporated naturally.

DOMESTIC : DISPOSED OFF THROUGH SEPTIC TANK / SOAK PIT SYSTEM

SOLID / ETP SLUDGE: NIL

HAZARDOUS WASTE Drill Cuttings: Was disposed as per GPCB Norms.

### PART - H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

#### NOT APPLICABLE

## PART-I

Any other particulars for improving the quality of the environment.

Date: 17/7/2014

(Signature of a person carrying out an industryoperation or process)

Chamidan

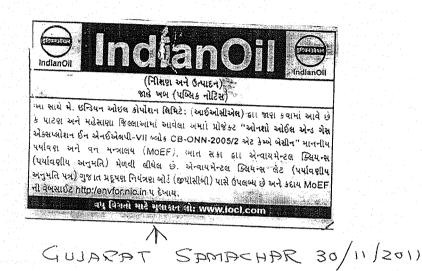
Name : Hridesh Baindail

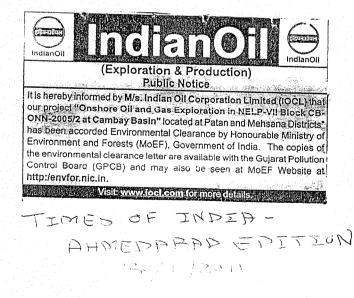
Designation : Dy. General Manager (E&P)

Address : 7<sup>th</sup> Floor, Indian Oil Bhavan No. 1, Sri Aurobindi Marg Yusuf Sarai New Delhi – 110 016

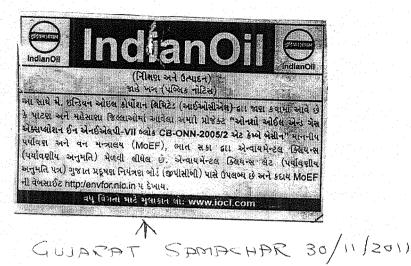


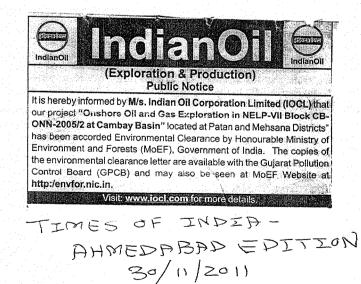
Annexure 8 Newspapers clips for EC copy

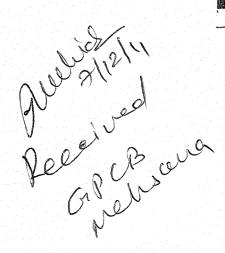




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Annexure 9 Petroleum exploration License Grant of Petroleum Exploration Licence for the Block CB-ONN-2005/2 (NELP-VII), area measuring 77.68 Sq.Km, in Mehsana Dist.

# Government of Gujarat, Energy & Petrochemicals Department, No. PEL-10-2009-101-E, Sachivalaya, Gandhinagar. Dated the **2** 2 SEP 2009

# Read: (1) IOCL Letter No:E&P/CO/51 dated 05.01.09,

## (2) Ministry of Petroleum and Natural Gas letter No. 0-19018/12/2008-ONG.I dated 01.12.2008

## <u>ORDER:</u>

In exercise of the powers conferred by Rule 5(1) (ii) of the Petroleum and Natural Gas Rules, 1959, the Government of Gujarat is pleased to Grant a Petroleum Exploration License to the IOCL for a period of 4 years (Four years) to prospect for petroleum with effect from the date of issue of the order in the area admeasuring 77.68 Sq.Km. for the Block CB-ONN-2005/2 (NELP-VII) in Mehsana Dist. (enclosed PEL map and list latitude-longitude).

The grant of the licence is subject to the terms and conditions mentioned below:

(a) If any minerals are found during the exploration work, the IOCL should bring them to the notice of State Government with full particulars available with them.

(b) The IOCL has deposited security deposit prescribed in Rule 13 of the Petroleum & Natural Gas Rules, 1959. The IOCL has also paid the necessary amounts as an application fee and preliminary expenses as detailed below :

Sr. No.	Nature of payment	Challan No. & Date	Amount Rs.	Head of Account
1	2	3	4	5
1.	.Security Deposit, Deposited in S.B.I., Gandhinagar. i	Dated 08-01- 2009	Rs.1,00,000/-	(B) Deposit not bearing interest. Major Head-8443-Civil Deposits. Sub Head-103- Security Deposit. Minor Head-(1) Deposits from IOCL under P&NG Rules, 1959.
2.	Application fee & preliminary expenses Deposited in S.B.I., Gandhinagar.	08-01-2009	Rs.29,050/-	0853, Mines & Minerals, (e) Mineral Concession fee and royalty. Receipts under Petroleum & Natural gas Rules, 1959.

(c) The IOCL shall immediately on demand submit to the State Government and the Director of Petroleum confidentially a full report of the Geological data of all the minerals found during the exploration of oil and/or gas and shall submit without fail every six months, the results of all operation boring and exploration to the State Government and Central Government. 5555

(d) The IOCL shall take preventive measures against the hazard of fire under ground and/or on the surface and shall keep such equipment, supplies and means to extinguish the fire at all times and shall pay such compensation to the third party and/or Government as may be determined in case damage due to fire.

## OTHER TERMS AND CONDITIONS

- (1) The license shall be in respect of Crude Oil and Natural Gas.
- (2) The grant of license shall be valid for a period of 4 (Four) years.
- (3) This license shall be subject to the provision of Oil field (Regulations and Development) Act, 1948, (53 of 1948) and the Petroleum & Natural Gas Rules, 1959 made thereunder as amended from time to time.
- (4) Immediately on demand or upon determination or relinquishment of any area covered by this lease, the lessee shall furnish to the Central Government / DGH, through the State Government confidentiality, the complete records of data as specified in Rule 19 (c) of the P&NG Rules, 1959. The lessee shall submit to Central Government, without fail, every six months the results of all operations, boring and test production.
- (5) If any minerals other than petroleum are found during the exploration activities, Licensee shall bring that to the notice of the Central Government with full particulars thereof.
- (6) All army Cantonments, stations, depots, establishments, field firing ranges and ordnance factories within the exploration block are excluded from exploration, survey and digging activities.
- (7) For development of new roads and tracts related to exploration activities in the border belt, prior sanction of Ministry of Defence shall be obtained.
- (8) For work in close proximity of Army cantonments/Stations, depots, ranges, ordnance factories and visits to these installations, if any, specific permission of Army authorities shall be taken.
- (9) Necessary approval from the Competent Authority should be obtained for the Reserve Forest Area (if any) falling in the licensed area.
  - "However, the Licensee may carryout surveys for oil exploration in the Reserved Forest Area falling in such leased area without obtaining prior clearance of the Ministry of Environment and Forests, Government of India under the Forest (Conversation) Act, 1980 so long as the surveys do not
  - involve cutting of trees. The Licensee shall, however, in no circumstance carry out such surveys in specially protected areas like wildlife sanctuary, national park and preservation or sample plots demarcated by the Forest Department (Re. Letter No.11-28/86-FRY (CONS) dated 8-5-1986, Department of Environment & forest & Wildlife, Government of India).
- (10) If international companies or foreigners are entrusted with the task, the Licensee may get security vetting of these companies through the appropriate Government agencies with help of this Ministry. The lessee shall also seek prior clearance from the Ministry of Home Affairs and Ministry of Defense with the full particulars of the foreigner employees under intimation to this Ministry.
- (11) The exploration activities shall not interfere with the safety/security of any civil VA/VP covered in this area.
- (12) The Licensee shall issue identity card to each of the employees. The system of checking identity cards of personnel will have to be strictly enforced.

- 5 -

- (13) Security to its employees both at the project sites and en-route in insurgency-effected areas will be the responsibility of the Licensee.
- (14) Licensee shall allow Government, authorities to enter and inspect area for security check-up, if necessary.
- (15) Licensee shall not employ any foreign national surreptitiously in the area along the border.
- (16) No ground / aerial survey of the Defense VAs/VPs is permitted. Aerial survey, if any would be governed by the provisions of Ministry of Defense letter No. 18(8)/82-D (GS 111) dated January 31, 1989.
- (17) Air Force area falling within the zones embarked for delineation should be avoided.
- (18) For works in close vicinity of Indian Air Force units / installations and visit to these installations, if any, specific permission of Air Headquarters, should be obtained.
- (19) Any work within 500m of the perimeter of Air Force Station should be intimated to Air Force authority at least 10 days before commencement of the activities.
- (20) No obstruction shall be erected higher than 15 mtrs. Within 5 kms. radius of Air Force Air Fields and construction of any high mast / towers shall be carried out in consultation with the Air Force Authority.
- (21) Planned use of explosives on or below the surface shall be intimated to Air Force Authority atleast 48 hours in advance.
- (22) No drilling work or installation of pipeline shall be carried out in and around village lake or residential area.
- (23) All approach roads and natural drainage should be kept clear, open & intact.
- (24) No work shall be carried out as to damage public interest in any form.
- (25) No existing infrastructure (Private & Public), underground utility and human beings to be harmed.
- (26) Licensee shall execute a separate lease deed in respect of such other covenants, terms and conditions as per the prescribed format.
- (27) Infringement of any one or more of the conditions enumerated above shall automatically render this PEL null and void abintio.

By order and in the name of the Governor of Gujarat,

forw

(K.H. Chorera) Under Secretary to Government, Energy and Petrochemicals Department.

Τo,

-

- The District Collector, Dist.Mehsana
- The Director of Petroleum, Gandhinagar.
- The Accountant General, Ahmedabad.
- The Accountant General, Rajkot.
- Shri B.K. Dutta, Under Secretary to the GOI, Ministry of Petroleum & Natural Gas, Shastri Bhavan, New Delhi.
- Shri V.S. Okhde, Executive Director (E&P), Indian Oil Corporation Ltd., Indian Oil Bhavan, No. 1, Sri Aurobindo Marg, Yusuf Sarai, New Delhi-110016
  - The Select file.

- 6 -

		Latitude		Longitude			
Points	Degree	Minutes	Seconds	Degree	Minutes	Seconds	
<u>A</u>	23	44	26.6	72	3	50.6	
<u> </u>	23	44	36.42	72	8	53.76	
С	23	43	33	72	9	35	
D	23	43	24.73	72	9	13.91	
W	23	42	43.94	72	7	34.4	
<u> </u>	23	43	29.91	72	7	12.85	
Y	23	43	14.05	72	5	57.31	
Z	23	42	16.42	72	6	26.184	
F	23	41	38.3	72	4	54.21	
Α	23	44	26.6	72	3	50.6	

# Co-ordinates of CB-ONN-2005/2 Part A Granted

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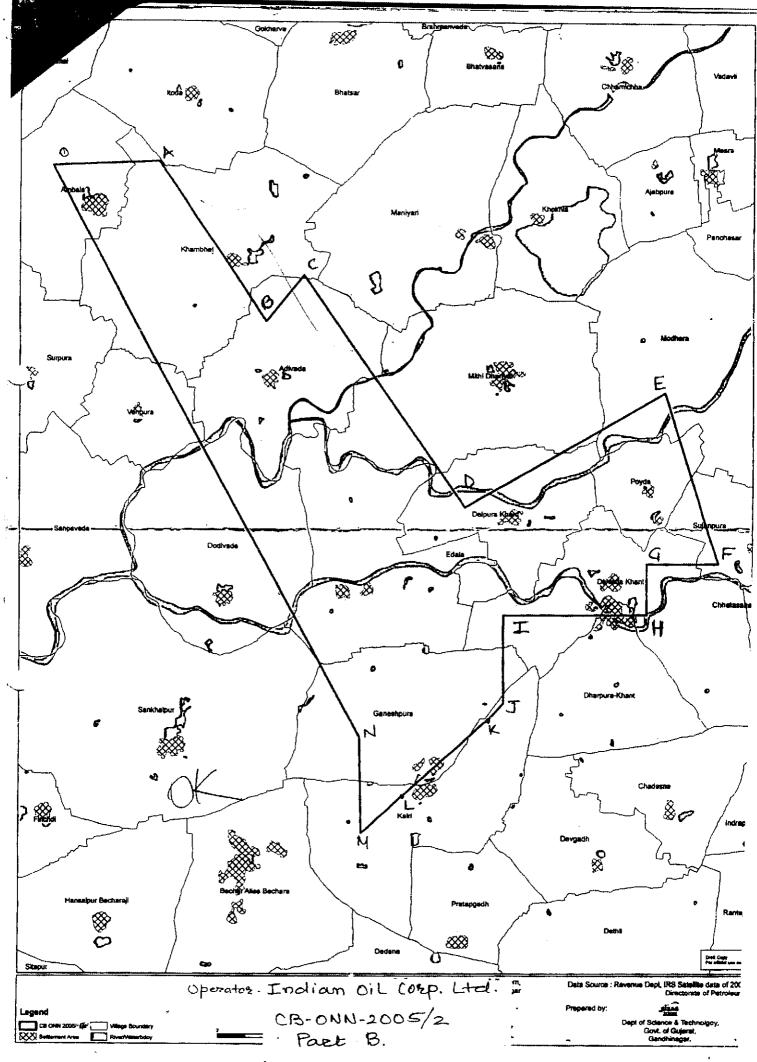
# Co-ordinates of CB-ONN-2005/2 Part A Excluded

	Latitude		Longitude			
Points	Degree	Minutes	Seconds	Degree	Minutes	Seconds
W	23	42	43.94	72	7	34.4
<u> </u>	23	43	29.91	72	7	12.85
Y	23	43	14.05	72	5	57.31
Z	23	42	16.42	72	6	26.184
E	23	42	30	72	7	0
W	23	42	43.94	72	7	34.4

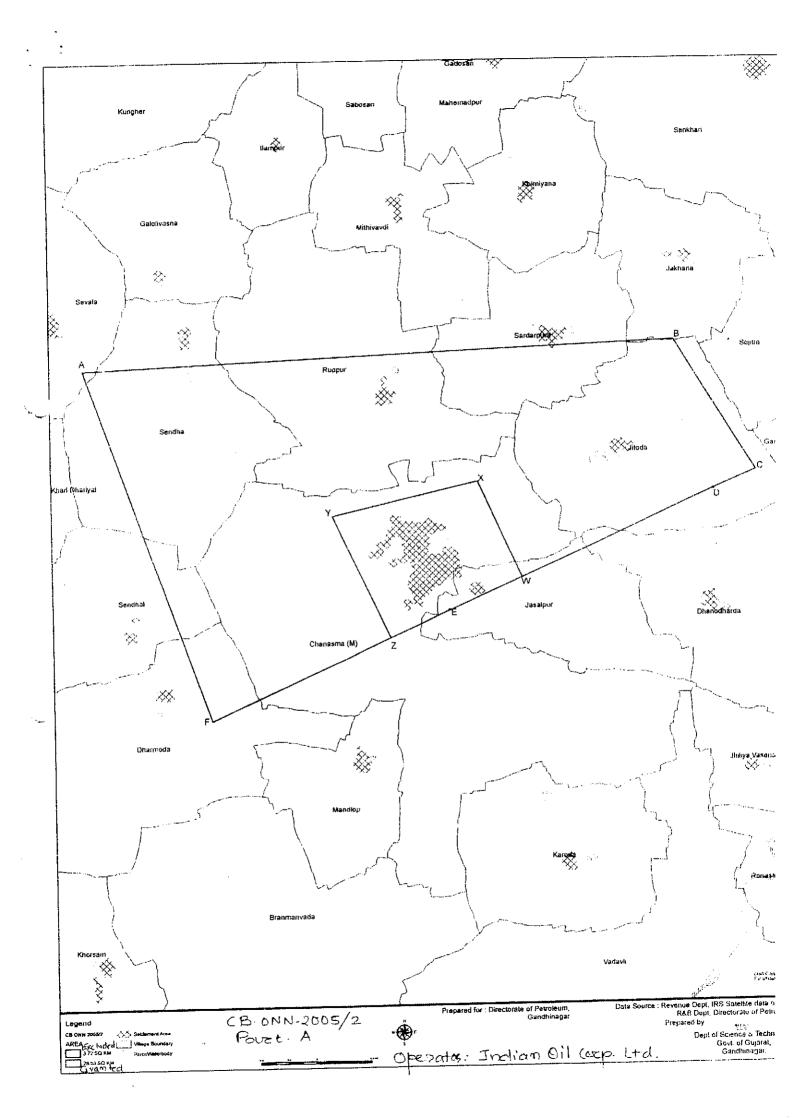
# Co-ordinates of CB-ONN-2005/2 Part B Granted

·····	Latitude			Longitude		
Points	Degree	Minutes	Seconds	Degree	Minutes	Seconds
A	23	37	2.5	72	1	45
B	23	35	26	72	2	54.36
С	23	35	53.65	72	3	18.73
D	23	33	34.63	72	5	2.34
E	23	34	42.92	72	7	12.3
F	23	33	0	72	7	47.2
G	23	33	0	72	7	0
Н	23	32	30	72	7	0
<u> </u>	23	32	30	72	5	27
J	23	31	38	72	5	27
<u> </u>	23	31	31	72	5	20
L	23	30	40.3	72	4	19.1
M	23	30	20	72	3	55
<u>N</u>	23	31	18	72	3	54
0	23	37	0	72	0	34
A	23	37	2.5	72	1	45

Total Area Granted for PEL 77.68 Sq Kms.



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Annexure 10 Environmental Clearance copy

F. No. J-11011/255/2010- IA II (I) Government of India Ministry of Environment and Forests (I.A. Division)

> Paryavaran Bhawan M(EW) - A.S. jar CGO Complex, Lodhi Road

KW 23/8/2011

E-mail : pb.rastogi@nic.in Telefax : 011: 2436 7668 Dated 16<sup>th</sup> August, 2011

Shri Hridesh Baindail, Chief Manager (E&P) M/s Indian Oil Corporation Limited 7th Floor, Indian Oil Bhavan Sri Aurobindo Marg, Yusuf Sarai New Delhi- 110 016

E-mail : baindailH@indianoil.co.in; Fax: 91-11-126512611

Subject: Drilling Activities (5 Wells) for On-Shore Oil and Gas Exploration in NELP-VII Block-CB-ONN-2005/2 at Cambay Basin, Mehsana & Patan, Gujarat by M/s Indian Oil Corporation Ltd. - Environmental Clearance reg. Ref. :

Your letter no. E&P/CO/162 dated 24th March, 2011.

Sir,

To.

Kindly refer your letter dated 24<sup>th</sup> March, 2011 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report alongwith Public Hearing Report regarding above mentioned project.

2.0 The Ministry of Environment & Forests has examined your application. It is noted that proposal is for drilling activities (5 wells) for on-shore oil and gas exploration in NELP-VII Block-CB-ONN-2005/2 at Cambay Basin, Mehsana & Patan, Gujarat by M/s Indian Oil Corporation Ltd. Production Sharing Contract (PSC) is signed between GOI and IOCL on 22<sup>nd</sup> December, 2008 and Petroleum Exploration License (PEL) in September, 2009 is also issued by the Government of Gujarat. Project will involve drilling of 4 exploration wells at 3,400 m depth in Phase-I and 1 exploration well at 3,400 m depth in Phase-II within licensed area of 77.68 sq. km. (i.e. 28.68 Km<sup>2</sup> Patan District & Mahesana District 49.00 Sq. Km). 120 mx100 m lease area will be required for each well. No land will be acquired for temporary drilling activities during exploratory phase. No forest land, wild life, coastal areas are involved. No Reserve forests exist within the entire block boundary. No eco-sensitive areas are located in the block. Wetland at village Maniary (3.9 km, S) is located within 10 kms. Total project cost for 5 wells is Rs. 170.00 Crores. Following are the coordinates of the block of Cambay Basin (CB-ONN-2005/2):

PART-A		1. A.A	PART-B	
LATITUDE	LONGITUDE	POINT	LATITUDE	LONGITUDE
23 <sup>°</sup> 44'26.6"	72 <sup>0</sup> 03'50,6"	Α	23°37'2.50"	72 <sup>°</sup> 01'45.00"
23 <sup>0</sup> 44'36.42"	72 <sup>0</sup> 08'53.76"	В	23 <sup>0</sup> 35'26.0"	72 <sup>°</sup> .2'54.36"
23°43'33.00"	72 <sup>0</sup> 09'35.00"	С	23 <sup>0</sup> 35'53.65"	72 <sup>0</sup> 03'18.73"
23 <sup>°</sup> 43'24.73"	72 <sup>0</sup> 09'13.91"	<b>D</b>	23 <sup>0</sup> 33'34.63"	72 <sup>0</sup> 05'02.34"
23 <sup>0</sup> 42'43.94"	72 <sup>0</sup> 07'34.4"	E	23 <sup>0</sup> 34'42.92"	72 <sup>0</sup> 07'12.30"
23 <sup>0</sup> 43'29.91"	72 <sup>0</sup> 07'12.85"	F	23 <sup>0</sup> 33'00.00"	72 <sup>0</sup> 07'47.20"
23°43'14.05"	72 <sup>0</sup> 05'57.31"	G	23 <sup>0</sup> 33'00.00"	72 <sup>0</sup> 07'00.00"
23 <sup>°</sup> 42'16.42"	72 <sup>0</sup> 06'26.18"	H	23 <sup>0</sup> 32'30.00"	72°07,'00.00"
	LATITUDE 23°44'26.6" 23°44'36.42" 23°43'33.00" 23°43'24.73" 23°43'24.73" 23°43'29.91" 23°43'14.05"	LATITUDE         LONGITUDE           23°44'26.6"         72°03'50.6"           23°44'36.42"         72°08'53.76"           23°43'33.00"         72°09'35.00"           23°43'24.73"         72°09'13.91"           23°42'43.94"         72°07'34.4"           23°43'29.91"         72°07'12.85"           23°43'14.05"         72°05'57.31"	LATITUDE         LONGITUDE         POINT           23°44'26.6"         72°03'50.6"         A           23°44'36.42"         72°08'53.76"         B           23°43'33.00"         72°09'35.00"         C           23°43'24.73"         72°09'35.00"         C           23°42'43.94"         72°09'13.91"         D           23°43'29.91"         72°07'34.4"         E           23°43'14.05"         72°05'57.31"         G	LATITUDELONGITUDEPOINTLATITUDE23°44'26.6"72°03'50.6"A23°37'2.50"23°44'36.42"72°08'53.76"B23°35'26.0"23°43'33.00"72°09'35.00"C23°35'53.65"23°43'24.73"72°09'13.91"D23°33'34.63"23°42'43.94"72°07'34.4"E23°34'42.92"23°43'29.91"72°07'12.85"F23°33'00.00"23°43'14.05"72°05'57.31"G23°33'00.00"

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23 <sup>0</sup> 41''38.30"	72°04'54.21"	<u> </u>	23°32'30.00"	72 <sup>0</sup> 05'27.00"
23 41 30.30	12 04 34.21		23°31'38.00"	72°05'27.00"
		К	23 <sup>0</sup> 31'31.00"	72 <sup>0</sup> 05'20.00"

3.0 Air emissions from D.G. sets will be controlled by providing adequate stack height. Gas production during testing will be flared. Water requirement from the Narmada Canal/Ponds/ ground water source will be 40 m<sup>3</sup>/day/well. The wastewater generated will be collected in the waste water storage pits and will be recycled and reused. Water Based Drilling Mud will be used for drilling of wells. Drill cuttings and Drilling mud (800 MT each well) will be stored in HDPE lined pit. Drill cuttings will be treated and disposed as per CPCB guidelines. Domestic sewage will be treated in modular sewage treatment plant (STP). Waste/used oil will be sold to authorized recyclers / re-processors.

4.0 The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 12<sup>th</sup> & 24<sup>th</sup> meetings held during 15<sup>th</sup>-16<sup>th</sup> July, 2010 and 22<sup>nd</sup> – 23<sup>rd</sup> June, 2011 respectively.

5.0 All the projects related to offshore and onshore Oil and Gas exploration, development and production are listed in para 1(b) of schedule of EIA Notification, 2006 covered under category 'A' and appraised at centre level.

6.0 Public hearing was held on 29<sup>th</sup> January, 2011.

7.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14<sup>th</sup> September, 2006 subject to strict compliance of the following specific and general conditions:

### A. SPECIFIC CONDITIONS :

i.

Gas produced during testing shall be flared with appropriate flaring booms.

- ii. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MOEF/CPCB guidelines.
- iii. Ambient air quality shall be monitored near the closest human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 for PM<sub>10</sub>, PM<sub>25</sub>, SO<sub>2</sub>, NO<sub>X</sub>, CO, CH<sub>4</sub>, HC, Non-methane HC etc.
- iv. Mercury shall also be analyzed in air, water and drill cuttings twice during drilling period.
- v. Approach road shall be made pucca to minimize generation of suspended dust.
- vi. The company shall make the arrangement for control of noise from the drilling activity. Acoustic enclosure shall be provided to DG sets and proper stack height shall be provided as per CPCB guidelines.
- vii. Total water requirement shall not exceed 40 m<sup>3</sup>/day and prior permission shall be obtained from the concerned agency.
- viii. The company shall construct the garland drain all around the drilling site to prevent runoff of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil contaminated and non-oil contaminated. Effluent shall be properly treated and treated wastewater shall conform to CPCB standards.

- ix. Drilling wastewater including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for on-shore disposal. The membership of common TSDF shall be obtained for the disposal of drill cuttings and hazardous waste. Otherwise, secured land fill shall be created at the site as per the design approved by the CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bhopal.
  - Good sanitation facility should be provided at the drilling site. As proposed, domestic sewage shall be disposed off through modular STP.

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- xi. Oil spillage scheme shall be prepared. In case of oil spillage/contamination, action plan shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the authorized recyclers.
- xii. The company shall comply with the guidelines for disposal of solid waste, drill cutting and drilling fluids for onshore drilling operation notified vide GSR.546(E) dated 30<sup>th</sup> August, 2005.
- xiii. The Company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare shall be explored. At the place of ground flaring, the overhead flaring stack with knockout drums shall be installed to minimize gaseous emissions during operation.
- xiv. The company shall develop a contingency plan for  $H_2S$  release including all necessary aspects from evacuation to resumption of normal operations. The workers shall be provided with personal  $H_2S$  detectors in locations of high risk of exposure along with self containing breathing apparatus.
- xv. The Company shall carry out long term subsidence study by collecting base line data before initiating drilling operation till the project lasts. The data so collected shall be submitted six monthly to the Ministry and its Regional Office at Bhopal.
- xvi. Blow Out Preventor (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling shall focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.
- xvii. Emergency Response Plan (ERP) shall be based on the guidelines prepared by OISD, DGMS and Govt. of India.
- xviii. The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored the area in original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations.
- xix. Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.
- xx. In case the commercial viability of the project is established, the Company shall prepare a detailed plan for development of oil and gas fields and obtain fresh environmental clearance from the Ministry.

- xxi. Restoration of the project site after completion of drilling shall be carried out satisfactorily and report shall be sent to the Ministry's Regional Office at Bhopal.
- xxii. Oil content in the drill cuttings shall be monitored by some Authorized agency and report shall be sent to the Ministry's Regional Office at Bhopal.
- xxiii. Company shall ensure good housekeeping at the drilling site.
- xxiv. Company shall prepare project specific environmental manual and a copy shall be made available at the drilling site for the compliance.
- xxv. Company shall adopt Corporate Environment Policy as per the Ministry's O.M. No. J-11013/41/2006-IA.II(I) dated 26<sup>th</sup> April, 2011 and implemented.

### B. GENERAL CONDITIONS:

i.

- The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority.
- ii. No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment & 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.
- iii. The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 as amended subsequently. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained, wherever applicable.
- iv. 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 levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- v. A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.
- vi. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- vii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the GPCB. The criteria pollutant levels namely; PM<sub>10</sub>, SO<sub>2</sub>, NOx, HC (Methane & Non-methane), VOCs (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

- viji. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the GPCB. The Regional Office of this Ministry / CPCB / GPCB shall monitor the stipulated conditions.
- ix. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent 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 alongwith the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.
- The Project Proponent shall inform the public that the project has been accorded Х. environmental clearance by the Ministry and copies of the clearance letter are available with the GPCB and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.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 Regional office.
- xi. 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 commencing the land development work.

The Ministry may revoke or suspend the clearance, if implementation of any of the 8.0 above conditions is not satisfactory.

The Ministry reserves the right to stipulate additional conditions if found necessary. 9.0 The Company in a time bound manner shall implement these conditions.

The above conditions shall be enforced, inter-alia under the provisions of the Water 10.0 (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules

(Dr. P. B. Rastogi) Director

Copy to:

- 1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalava, 8th Floor, Gandhi Nagar - 382 010, Gujarat.
- 2. The Chief Conservator of Forests (Western Zone), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
- 3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
- 4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
- 5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
- 6. Adviser, IA II(I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.

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7. Guard File/Monitoring File/Record File.

(Dr. P. B. Rastogi)

Director



Annexure 11 Consent To Establish copy



## GUJARAT POLLUTION CONTROL BOARD

Paryavaran Bhavan

Sector-10-A, Gandhinagar-382 010. Phone : (079) 23226295 Fax : (079) 23232156 Website : www.gpcb. gov. in

"Consent to Establish"(NOC)

CTE NO. 46340

13/4/2012

NO: GPCB/ID .36739 /CCA//MH- 536/ 109640

TO.

M/s, INDIAN OIL CORPORATION | TD On shore oil and gas exploration.

- CB-ONN-2005/2, CB-ONN-2005/2 (PART-B)-384 210.
- TA.BECHARAJI.

DIST. MEHSANA

SUB: Consent to Establish (NOC) under Section 25 of Water Act 1974 and Section 21 of Air Act 1981

REF: Your application No. 52534 dated. 21/12/11

Sir.

Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants Consent to Establish (NOC) for DRILLING OF EXPLORATORY WELL situated at location (1) at WELL NO. IOCB-03, , Adiwada-Khambhel Road, Vill. Khambhel, Ta. Becharali, Dist. Mehsana and location (2) at WELL NO. IOCB-4, Kairi-Delpura Road, VIII. Kairi, Ta Becharaji, Dist. Mehsana . The Validity period of the order will be Five years i.e. up to 20/12/2016.

#### SPECIFIC CONDITIONS :-

- 1. Unit shall comply all conditions mentioned in environmental clearance issued by MOEF vide its letter F.NO. J - 11011 /255/2010 IA U (I), dated 16/08/2011 .
- 2. In case of spillage / leakage of Oil, Bjoremediation shall be carried out
- 3. In case of any spillages / leakages on land site, restoration job shall be carried out immediately.
- Frequent inspection and monitoring of oil carrying spipeline shall be carried out to final out any leakage.
- In case of any leakages / spillages, Environment damage study shall be carried out.

#### CONDITIONS UNDER WATER ACT 1974:

- 1. The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 17, 000 lits/day.
- 2. The quantity of the industrial effluent discharged from the manufacturing process and other ancillary operations shall be Nil as the entire generated effluent shall be collected in HDPE lined & impervious pit for solar evaporation.
- The quantity of the domestic waste water (sewage) shall not exceed 1,500 lits/day.
- Sewage shall be disposed of through septic tank/soak pit system.

The Har-Clean Gujarat Green Gujarat

dppcctegrant 3/15/2012

#### CONDITIONS UNDER AIR ACT 1981:

The following shall be used as fuel in D.G.Set.

Sr. No.	Fuel	Quantity	
1	DIESEL	6.0	9
		KL/DAY	

- 6. The applicant shall install & operate air pollution control system in order to achieve norms prescribed below.
- 7. The flue gas emission through stack shall contain to the following standards:

Sr. No.	Stack attached to	Stack Height in str	Peramotors	Permissible limit
1	D. G. Set (500 KVA)	11	Particulate matter	150 mg/NM <sup>3</sup> 100 ppm
	(2 NOS.)	Sec. 12	NO,	50 ppm

- There shall be no process emission from the manufacturing process and other ancillary emission.
- Stack monitoring facilities like port hold, platform/ladder etc., shall be provided with stacks/ vents chinney in order to facilitate sampling of gases being emitted into the atmosphere.
- Ambient air quality within the premises of the industry shall conform to the following standards :-

PARAMETERS	PERMISSIBLE LIMIT				
	Annos	24 Hrs Average			
Particulate Matter-10 (PM 10)	60 Microgram/M <sup>3</sup>	100 Microgram/M <sup>3</sup>			
Particulate Matter- 2.5 (PM 25)	40 Misrogram/M <sup>3</sup>	60 Microgram/M <sup>3</sup>			
SO <sub>2</sub>	50 Microgram/M <sup>3</sup>	80 Microgram/M <sup>3</sup>			
NOx	40 Microgram/M <sup>e</sup>	80 Microgram/M <sup>3</sup>			
Hydrocarbon		160 Microgram/M <sup>3</sup>			

 All measures for the control of environmental pollution shall be provided before commencing production.

#### CONDITIONS UNDER HAZARDOUS WASTE :

- The unit shall comply the MoEF guideline GSR 549(E) dated 30/8/2005 for disposal of drill cutting waste and other solid waste generated during drilling / cutting activity
- 12.1 Applicant shall have to comply with provisions of Hazardous Waste (Management, Handling & Trans boundary movement) Rule;2008.
  - 12.2 The applicant shall obtain membership of common TSDF site for disposal of Hazardous. Waste as categorized in Hazardous Waste (Management, Handling & trans boundary movement) Rule 2008.

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- 12.3 The applicant shall obtain membership of common Hazardous. Waste incinerator for I of incinerable waste.
- 12.4 The applicant shall provide temporary storage facilities for each type of Hazardous. Waste as per Hazardous Waste (Management, Handling & Trans boundary movement) Rule-2008.

#### GENERAL CONDITION :

- Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 10 meters width is developed.
- 14. The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of water cess to the Board under the Water Cess Act 1977.
- In case of change of ownership/management the harre and address of the new owners/ partners/ directors/proprietor should immediately be intimated to the Board.
- 16. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the proposed industrial plant. The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water Act 1974, the Air Act-1981 and the Environment (Protection) Act-1986.
- The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:

Between 6 A.M. and 10 P.M.: 75 dB(A) Between 10 P.M. and 6 A.M.: 70 dB(A)

- 18 Applicant is required to comply with the manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.
- If it is established by any competent authority that the damage is caused due to their industrial activities to any person, or his pipperty in that case they are obliged to pay the compensation as determined by the competent authority.
- The applicant shall not carried out any activities or projects listed in schedule of the new EIA Notification dated 14/09/06 requiring prior Environment Clearance.

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For and on behalf of GUJARAT POLLUTION CONTROL BOARD

> (T.B.SHAH) ENVIRONMENTAL ENGINEER

> > dopecteorant 3/15/2012

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### **GUJARAT POLLUTION CONTROL BOARD**

PARYAVARAN BHAVAN

Sector 10-A, Gandhinagar 382010

Phone : (079) 23226295 Fax : (079) 23232156 website : www.gpcb.gov.in

"Consent to Establish"(CTE)

CTE NO. 46673

NO: GPCB/CCA/PTN-74/ID 36745/ 111620

3+ 815/2012

TO, M/S I.O.C. LTD EXPLORATORY WELL, NEAR CHANSMA VILLAGE- 384220, TAL: CHANASMA DIST-PATAN

> SUB: Consent to Establish (CTE) under Section 25 of Water Act 1974 and Section 21 of Air Act 1981 REF: Your application No.52536 dated. 21/12/2011

Sir,

Without prejudice to the powers of this Board under the Water (Prevention and Controio for Pollution) Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants Consent to Establish (NOC) for DRILING OF EXPLORATORY WELL situated at location-1) IOC-CB-05-02-C,SARDARPURA/GASTADANA, TA:CHANASMA, DIS: PATAN 2) IOC-CB-05-02-D,RUPPURA/SEDHAL, TA: CHANASMA DIS:PATAN for the manufacturing of the following items. The Validity period of the order will be Five years it.e. up to20/12/2016

#### SPECIFIC CONDITION:

- 1. You shall obtained amendment from the MOEF regarding the Latitude & Longitude of both the wells.
- Unit shall comply all the conditions mentioned the environmental clearance issued by MOEF vide its letter F.No.J-11011/255/2010 IA II (I) dated 16/8/2011.
- 3. In case of any spilage/leakage of Oil, Bjoremadiation shall be carried out.
- 4. In case of any spilage/leakage on land site, restoration job shall be carried out immediately.
- 5. Frequent inspection and monitoring of oil carrying pipeline shall be carried out to final out any leakage.
- 6. In case of any leakages/spilages, Environment damage study shall be carried out.

#### CONDITIONS UNDER WATER ACT 1974:

- The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 6200 Lit/day.
- The quantity of the industrial effluent discharged from the manufacturing process and other ancillary
  operations shall be Nill as the entire generated effluent shall be collected in HDPE lined & impervious pit for
  solar evaporation.
- 3. The quantity of the domestic waste water (sewage) shall not exceed 1500 lit/day.
- 4. Sewage shall be disposed of through septic tank/soak pit system.

#### CONDITIONS UNDER AIR ACT 1981:

5. The following shall be used as fuel in Hot Air Generator & Dg set.

Sr.No.	Fuel	Quantity	
1	Diesel	6.0 KL/Day	

 The applicant shall install & operate air pollution control system in order to achieve norms prescribed below.

## <sup>8</sup>Clean Gujarat Green Gujarat

ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation



### **GUJARAT POLLUTION CONTROL BOARD**

PARYAVARAN BHAVAN

Sector 10-A, Gandhinagar 382010

Phone : (079) 23226295 Fax : (079) 23232156

7. The flue gas emission through stack shall conform to the following standards www.gpcb.gov.in

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control	Parameter	Permissible Limit
			Measures	1	
1.	D.G.Set stand by (500 KVA) (2 Nos)	11		Particulate Matter	150 mg/NM <sup>3</sup>
				SO <sub>2</sub>	100 ppm
				NOx	50 ppm

- 8. There shall be no process emission from the manufacturing process and other ancillary operation.
- Stack monitoring facilities like port hole, platform/ladder etc., shall be provided with stacks/vents chimney in order to facilitate sampling of gases being emitted into the atmosphere.
- 10. Ambient air quality within the premises of the industry shall conform to the following standards:-

PARAMETERS	PERMISSIBLE LIMIT			
	Annual			24 Hrs Average
Particulate Matter-10 (PM 10)		60	Microgram/M <sup>3</sup>	100 Microgram/M <sup>3</sup>
Particulate Matter- 2.5 (PM 2.5 )		40	Microgram/M <sup>3</sup>	60 Microgram/M <sup>3</sup>
SO <sub>2</sub>		50	Microgram/M <sup>3</sup>	80 Microgram/M <sup>3</sup>
NO <sub>x</sub>		40	Microgram/M <sup>3</sup>	80 Microgram/M <sup>3</sup>

 All measures for the control of environmental pollution shall be provided before commencing production.

#### CONDITIONS UNDER HAZARDOUS WASTE :

- The unit shall comply the MOEF guideline GSR 549(E) dated 30/8/2005 for disposal of drill cutting waste and other solid waste generated during drilling/cutting activity.
- 12.1 Applicant shall have to comply with provisions of Hazardous waste (Management, Handling & Trans boundary movement)Rule-2008.
- 12.2 The applicant shall obtain membership of common TSDF site for disposal of Hazardous, waste as categorized in Hazardous waste (Management, Handling & Trans boundary movement)Rule-2008.
- 12.3 The applicant shall obtain membership of common Hazardous waste incinerator for I of incinerable waste.
- 12.4 The applicant shall provide temporary storage facilities for each type of Hazardous waste as per Hazardous waste (Management, Handling & Trans boundary movement)Rule-2008.

#### **GENERAL CONDITION:**

- Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 10 meters width is developed.
- 14. The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of water cess to the Board under the Water Cess Act- 1977.
- In case of change of ownership/management the name and address of the new owners/partners /directors/proprietor should immediately be intimated to the Board.
- 16. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the

### Clean Gujarat Green Gujarat

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#### GUJARAT POLLUTION CONTROL BOARD PARYAVABAN BHAVAN

PARTAVARAN BHAVAN

Sector 10-A, Gandhinagar 382010

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proposed industrial glant. The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986.

 The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:

Between 6 A.M. and 10 P.M.: 75 dB(A)

Between 10 P.M. and 6 A.M.: 70 dB(A)

- Applicant is required to comply with the manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.
- If it is established by any competent authority that the damage is caused due to their industrial activities to any person or his property. In that case they are obliged to pay the competent authority.
- The applicant shall not carry out any activities or projects listed in schedule of the new EIA Notification dated 14/09/06 requiring prior Environment Clearance.

For and on behalf of GUJARAT POLLUTION CONTROL BOARD

ENVIRONMENTAL ENGINEER

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