



Oil And Natural Gas Corporation Limited  
Western Onshore Basin

Health, Safety and Environment Section

Regional Stores Complex, Makarpura Road, Vadodara-390009

Phone : 0265-2603333 Fax : 0265-2638855

ऑयल एण्ड नेचुरल गैस कारपोरेशन लिमिटेड

पश्चिमी अभितट दोनी

स्वास्थ्य, संस्था एवं पर्यावरण अनुभाग

क्षेत्रीय भंडार परिसर, मकरपुरा रोड, वडोदरा - ३९० ००९

दूरभाष : ०२६५-२६०३३३३ फेक्स : ०२६५ - २६३८८५५

NO. BDA/BASIN/HSE/COMPLIANCE/BLOCK-II

DATE: 27.01.2016

The Chief Conservator of Forests (Central),  
MOEF, Regional Office,  
Link Road No.3, E-5 Arera Colony,  
BHOPAL-462016

**Sub: Six monthly Compliance Report of Environmental Clearance for Exploratory Drilling of Wells of Siswa ML(SSAF) of ONGC, WOB, Baroda**

**Ref.: EC letters No. J-11011/102/2012-IA II(I) dated 22.08.2013**

Dear Sir,

This has reference to above mentioned Environmental Clearances issued by MOEF, please find herewith six monthly compliance report as on 01.01.2016 for exploratory drilling of wells in SISWA ML Block.

Any other information/ documents desired shall be furnished most gladly.

Thanking you,

Yours faithfully,

(M. K. Garg)

Chief Engineer (P)  
HSE, WOB, Baroda

Encl.: As Above

NOO Copy to:

1. GM- Block Manager-II, WOB, Baroda
2. EA to ED-Basin Manager for information pl.

**COMPLIANCE OF CONDITIONS LAID DOWN IN ENVIRONMENTAL CLEARANCE OF Siswa ML block  
(COMPLIANCE REPORT)**

**Environmental Clearance No. J-11011/102/2012-IA II(I) dated 22.08.2013**

**Well Nos.: SSAF**

**Drilling Status: Drilled (Abandoned)**

Sl.No.	Conditions	Compliance status as on 31.12.2015
1	This EC is only for Exploratory Drilling. In case Development drilling is to be done in future, prior clearance must be obtained from the Ministry.	SSAF is an exploratory well. In case of Development drilling is to be done in future, prior clearance shall be obtained from the Ministry.
2	Ambient air quality should 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 16th November, 2009 for PM10 PM2.5 SO2 Nox CO, methane & Non-methane HC etc.	Complied and analysis report of Ambient Air Quality enclosed in Annexure-1
3	Mercury should also be analyzed in air, water and drill cuttings twice during drilling period.	Complied
4	Approach road should be made pucca to minimise generation of suspended dust.	Complied
5	The company should make the arrangement for control of noise from the drilling activity. Acoustic enclosure should be provided to DG Sets and proper stake height should be provided as per CPCB guidelines.	Acoustic enclosures were installed in DG sets: The stack height meets the regulatory requirements.
6	Total water requirement should not exceed 20 M3/day and prior permission should be obtained from the concerned agency.	Water based drilling mud was used and the Water is supplied from the nearest ONGC source by road tankers.
7	The Company should construct the garland drain allaround the drilling site to prevent run off any oil containing waste it to the nearby water bodies. Separate drainage system should be created for oil contaminated and non-oil contaminated. Effluent should be properly treated and treated waste water should confirmed to CPCB standard.	Complied

8	<p>Drilling waste water 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 design approved by the CPCB and obtain Authorization from the SPCB. Copy of authorization or membership of TSDF should be submitted to Ministry's Regional Office at Bhopal.</p>	<p>Complied, Drill cuttings, drilling fluids and washing are collected in HDPE lined waste pits to avoid percolation into Soil. The liquid is allowed for solar evaporation and the solid component is covered with a layer of local excavated soil.</p>
9	<p>Good sanitation facility should be provided at the drilling sites. Domestic sewage should be disposed of through septic tank/soak pit.</p>	<p>Sanitation facility are provided to the personals at the drill site and a seprate septic tank/soak pit is constructed to collect the domestic sewage.</p>
10	<p>Oil spillage prevention schme should be prepared. In case of oil spillage/contamination, action plan should be prepared to clean the site by adopting proven technology. The recyclabale waste(oily sludge) and spent oil should be disposed of to the authorized recycler.</p>	<p>Taken care of in DMP. Spent oil was sent to recyclers as per norms.</p>
11	<p>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.</p>	<p>Drill cuttings were solar dried and covered with top soil as per said notification.</p>
12	<p>The company should take necessary measures to prevent fire hazards,containing oil spill and soil remediation as needed.Possibility of using ground flare should be</p>	<p>Complied. Fire protection equipments and Oil spill contingency plan is kept in place.</p>
13	<p>The company shall develop a contingency plan for H2S release including all necessary aspects from evacuation to resumption of normal operations. The workers should be provided with personal H2S detectors in locations of high risk of exposure along with self containing breathing apparatus.</p>	<p>Not applicable</p>
14	<p>On completion of drilling, the company have to plug the drill wells safely and obtain certificate from the environment safety angle from the concerned authority.</p>	<p>After completion of drilling the well has abandoned and plugged safely.</p>
15	<p>Blow Out Preventor(BOP) system should be installed to prevent well blowouts during drilling operations.BOPmeasures during should focus on maintaining well bore hydrostatic pressure by proper pre-swell planning and drilling fluid logging etc.</p>	<p>Complied. Blowout preventer is installed and Primary well control is achieved through proper well planning.</p>

16	Emergency response plan(ERP) should be based on the guidelines prepared by OISD, DGMS and Government of India	ERP and DMP as per OISD, DGMS and GOI is prepared and was enforced at the time of drilling.
17	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 to 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.	the well has been abandoned and the restoration of drill site will be done to original condition as per guidelines.
18	Abandoned well inventory and remediation plan shall be submitted with in six month from the date of issue of letter.	Complied
19	Occupational health surveillance of the workers shall be carried out as per the prevailing Acts and Rules.	PME of workers were done as per company guidelines.
20	In case 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.	In case of Commercial availability of Hydrocarbon, fresh environmental clearance will be obtained from MoEF.
21	Restoration of the project site should be carried out satisfactorily and report should be sent to Ministry's Regional Office at Bhopal.	will be complied
22	Oil content in the drill cuttings should be monitored by some Authorised agency and report should be sent to the Ministry's Regional Office at Bhopal.	Done, reports enclosed in Annexure-II
23	Under Enterprise Social Commitment (ESC),sufficient budgetary provision should be made for health improvement,education,water and electricity supply etc. in and around the project.	Complied
24	An audit should be done to ensure that the Environment Management Plan is implemented in totality and report should be submitted to Ministry's Regional Office	Will be complied
25	A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.	Will be complied
26	All the commitment made regarding issues raised during the public hearing/consultation meeting held on 12th February,2013 for Mehsana Distric and 22nd February,2013 for ptan District shall be satisfactorily implemented. Issues raised regarding pollution from existing well need to be addressed.	Complied

27	All personnel including those of contractors should be trained and made fully aware of the hazards, risks and controls in place.	Safety briefings are conducted at the drillsite regularly; all personnel are well trained at ONGC's Institute of Drilling Technology to undergo training like IDAC Rig pass courses, Well control Programme, etc..
28	Company should have own Environment Management Cell having qualified persons with proper background.	the company has dedicated environmental management cell (Basin HSE Cell) duly manned with qualified and experienced persons.
29	Company should prepare operating manual in respect of all activities. It should cover all safety & environment related issues and system. Measures to be taken for protection. One set of environment manual should be made available at the drilling site/project site. Awareness should be created at each level of the management. All the schedules and results of environment monitoring should be available at the project site office.	The company has Standard Operating Procedures (SOP) are in place for all onshore operations. In additions, the persons are trained at ONGC's Institute of Petroleum safety HSE, Goa and other places. SOP are available at drill site. All results of environmental monitoring will be available at the project site offic/uploaded company's public domain.
<b>B</b>	<b>GENERAL CONDITIONS</b>	
i	The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board (GPCB) State Government and any other statutory authority.	Complied, concern Consent to Establishment - CTE (NOC) has been obtained from GPCB.
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, afresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Agreed & Will be complied.
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.	Complied

iv	<p>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).</p>	<p>Complied, Reports enclosed in Annexure-III</p>
v	<p>A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitoring functions.</p>	<p>Alredy established at WON basin ONGC Baroda.</p>
vi	<p>Acopy of clearance letter shall be sent by the proponent to concerned Panchayat,ZilaParishad/Municipal Corporation,Urban Local Body and the localNGO,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.</p>	<p>Complied</p>
vii	<p>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;PM10,SO2,NOx,HC(Methane &amp; 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.</p>	<p>complied and analysis report enclosed in Annexure-I</p>
viii	<p>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 MOE, the respective Zonal Office of CPCB and GPCB.The Regional Office of the this Ministry/CPCB/GPCB shall monitor the stipulated conditions.Environment Clearance and six monthly compliance status reports shall be posted on the website of the company.</p>	<p>Complied</p>

ix	<p>The environment 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 along with the status of compliance of environment conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.</p>	<p>Will be complied.</p>
x	<p>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 State Pollution Control Board (GPCB) 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 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.</p>	<p>Complied</p>
xi	<p>The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.</p>	<p>Will be Complied</p>

*(Signature)*  
 15/01/15  
**L.M. ONKAR PRASAD**  
 B.E. - 1985  
 GGM Block Manager - 4

*(Signature)*  
 15/01/15  
 Project Supervisor / Project Manager  
 (GCM) / Project Manager  
 Project Supervisor / Project Manager  
 (GCM) / Project Manager



# PARAMOUNT LIMITED

(Formerly Paramount Pollution Control Limited)

CIN : U74120GJ1976PLC002956 EM No. : 24-019-22-01899

Regd. & Head Office : Paramount Complex, Natubhai Circle, Race Course, Vadodara - 390 007 (India)  
Ph. : 91-265-2397111 (7 lines) · Fax : 91-265-2398251 · E-mail : sales@paramountlimited.com · Web : www.paramountlimited.com

## ANALYSIS REPORT OF STACK

Name of Industries : M/S ONGC, Cambay – RIG CW # IX ( SSAF )

- Date of sampling : 15/06/2015
- Time of sampling : 14:30 hrs.
- Location of sample : D.G. Set Engine -355 KVA
- Instrument used : Envirotech Stack Kit Model APM 620

Sr. No.	Particulars	Unit	Result	Permissible limit
1.	Temperature	°C	60	-
2.	Velocity	m/sec	4.25	-
3.	PM	mg/Nm <sup>3</sup>	81.0	150
4.	SO <sub>2</sub>	PPM	18.25	100
5.	NO <sub>x</sub>	PPM	13.65	50
6.	Hydro carbon	mg/Nm <sup>3</sup>	4.10	15
7.	Carbon Monoxide	mg/Nm <sup>3</sup>	12.50	150

\*Analysis Method: Reference – Indian standard  
SPM – IS: 5182 Part IV  
SO<sub>2</sub> – IS: 5182 Part II , NO<sub>2</sub> – IS : 5182 Part VI

  
K.J. Patel  
Paramount Limited

Research · Technology · Engineering · Procurement · Construction · Operation & Maintenance

Regional Offices :

B-1/26/1 Safdarjang Enclave, New Delhi - 110 029 Ph. : 91-11-26186525, 26186369

213, Champaklal Industrial Estate, 105, Sion (East), Mumbai - 400 022 Ph. : 91-22-24073108 / 24078105

6, "Venkata Vijayam" Appt., No. 9/11, South Road, West CIT Nagar, Chennai - 600 035 Ph. : 91-44-24350272, 24350273







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## ANALYSIS REPORT OF STACK

Name of Industries : M/S ONGC, Cambay – RIG CW # IX ( SSAF )

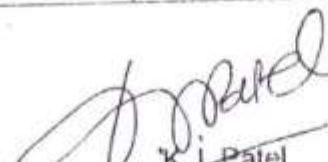
- Date of sampling : 15/06/2015
- Time of sampling : 15:00 hrs.
- Location of sample : Carrier Engine -01
- Instrument used : Envirotech Stack Kit Model APM 620

Sr. No.	Particulars	Unit	Result	Permissible limit
1.	Temperature	°C	65	-
2.	Velocity	m/sec	4.45	-
3.	PM	mg/Nm <sup>3</sup>	72.0	150
4.	SO <sub>2</sub>	PPM	18.45	100
5.	NO <sub>x</sub>	PPM	16.25	50
6.	Hydro carbon	mg/Nm <sup>3</sup>	4.62	15
7.	Carbon Monoxide	mg/Nm <sup>3</sup>	18.2	150

\*Analysis Method: Reference – Indian standard

SPM – IS: 5182 Part IV

SO<sub>2</sub> – IS: 5182 Part II , NO<sub>2</sub> – IS : 5182 Part VI

  
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6, "Venkata Vijayam" Appt. No. 9/11, South Road, West CIT Nagar, Chennai - 600 035 Ph. : 91-44-24350272, 24350273





**ENVIRONMENTAL MONITORING REPORT**

Report No: M/2015/07/ONGC/01

**LABORATORY REPORT- Effluent**

Doc No: ECS/AR/WW	Issue No :01	Issue Date : 19/4/2014
	Revision no 00:	Revision Date:

**Sample Details**


1.	Name of Client : M/S Oil And Natural Gas Corporation Limited. (CW-IX Rig)		
2.	Client Address : Oil And Natural Gas Corporation Ltd, ( Drilling Service), Cambay Sub Asset,P.O Kansari,Khambhat-388630.		
3.	Sample Id : ONGC/July/2015/WW/01	10.	Client Representative: Location Manager
4.	Sampling Date : 29.07.2015	11.	Sampling Location : Waste Pit (SSAF SISWA)
5.	Sampling Time : 2:00 PM	12.	Sampling Duration : --
6.	Analysis Commenced on : 07.08.2015	13.	Sample Collected By : Sanjay Patel
7.	Analysis Completed on : 12.08.2015	14.	Sampling Procedure : IS Method
8.	Reporting Date: 19.08.2015	15.	Sample Category: Grab
9.	ETP/STP Status : -	16.	Test Requirement : Effluent Water Analysis

**TEST RESULTS**

Sr No.	Parameters	Unit	Results	Method Used
1	pH	-	7.24	APHA(4500-3)22 Edition
2	Temperature	°C	38	APHA (2550-B)22 Edition
3	Suspended Solids	mg/l	171	APHA (2450 D) 22 Edition
4	Oil & Grease	mg/l	10	APHA (5520 B )22 Edition
5	Phenolic Compound	mg/l	0.6	APHA (5530 D) 22Edition
6	Cyanides	mg/l	ND	APHA (4500CN E)22Edition
7	Flourides	mg/l	0.5	APHA(4500 F D ) 22Edition
8	Sulphides	mg/l	0.07	APHA(4500 S F) 22 Edition
9	Zinc	mg/l	ND	Guideline by GPCB
10	Total Chromium	mg/l	ND	APHA(3500 Cr)22 Edition
11	H. Chromium	mg/l	ND	APHA(3500 Cr)22 Edition
12	Copper	mg/l	ND	APHA (3500 Cu A)22 Edition
13	% Sodium	%	ND	APHA Method

**CONTD.**

14	BOD	mg/l	59	APHA (5211 B)22 Edition
15	COD	mg/l	277	APHA (5220 B)22 Edition
16	Chlorides	mg/l	683	APHA (4500 Cl B)22 Edition
17	Sulphates	mg/l	36.3	APHA (4500E)22 Edition
18	Ammonical Nitrogen	mg/l	27.2	APHA (4500E)22 Edition
19	Total Dissolved Solids (TDS)	mg/l	1700	APHA (2540 C) 22 Edition
20	Mercury	mg/l	ND	APHA Method
21	Nickel	mg/l	ND	APHA (3500 Ni)22 Edition
22	Lead	mg/l	ND	APHA (3500 Pb )22 Edition

Remark :	
Authorised by :	
Name : ISHANI PATEL.	Designation: Lab Incharge
	

**Note :**

1. Reports may be reproduced if required ,only with the written approval of the laboratory.
2. Re analysis of sample will be done if requested within 7 days from the date of reporting of sample if they are not consumed during analysis.



306-307, 3<sup>rd</sup> FLOOR, DWARKESH COMPLEX, SUN PHARMA ROAD,  
ATLADARA, VADODARA - 20.  
TELEFAX: 0265 2356752, MOBILE 94260 74416, 9427506362



**ENVIRONMENTAL MONITORING REPORT**

Report No M/2015/07/ONGC/01

**LABORATORY REPORT- Soil Analysis**

Doc No: ECS/AR/WW	Issue No :01	Issue Date :19/4/2014
	Revision no 00:	Revision Date:

**Sample Details**

1.	Name of Client : M/S Oil And Natural Gas Corporation Limited (CW-IX Rig)		
2.	Client Address : Oil And Natural Gas Corporation Ltd, ( Drilling Service) Cambay Sub Asset,P.O Kansari,Khambhat-388630.		
3.	Sample Id : ONGC/July/2015/SW/01	10.	Client Representative: Location Manager
4.	Sampling Date : 29.07.2015	11.	Sampling Location : Nr. by Shale Shaker (SSAF SISWA)
5.	Sampling Time : 2:00 PM	12.	Sampling Duration : --
6.	Analysis Commenced on : 07.08.2015	13.	Sample Collected By : Sanjay Patel
7.	Analysis Completed on : 12.08.2015	14.	Sampling Procedure : IS Method
8.	Reporting Date: 19.08.2015	15.	Sample Category: Grab
9.	Test Requirement : Solid Waste Analysis		


**TEST RESULTS**

Sr No.	Parameters	Unit	Solid Waste	Method Used
1	pH	-	7.05	APHA(4500-3)22 Edition
2	Suspended Solids	mg/l	77	APHA (2450 D) 22 Edition
3	Oil & Grease	mg/l	12	APHA (5520 B )22 Edition
4	Phenolic Compound	mg/l	0.03	APHA (5530 D) 22Edition
5	Cyanides	mg/l	ND	APHA (4500CN E)22Edition
6	Flourides	mg/l	0.04	APHA(4500 F D ) 22Edition
7	Sulphides	mg/l	ND	APHA(4500 S F) 22 Edition
8	Zinc	mg/l	ND	Guideline by GPCB
9	Total Chromium	mg/l	ND	APHA(3500 Cr)22 Edition
10	H. Chromium	mg/l	ND	APHA(3500 Cr)22 Edition
11	Copper	mg/l	ND	APHA (3500 Cu A)22 Edition
12	% Sodium	%	ND	APHA Method



**CONTD.**

13	BOD	mg/l	20	APHA (5211 B)22 Edition
14	COD	mg/l	72	APHA (5220 B)22 Edition
15	Chlorides	mg/l	186	APHA (4500 Cl B)22 Edition
16	Sulphates	mg/l	23.8	APHA (4500E)22 Edition
17	Total Dissolved Solids (TDS)	mg/l	370	APHA (2540 C) 22 Edition
18	Mercury	mg/l	ND	APHA Method
19	Nickel	mg/l	ND	APHA (3500 Ni)22 Edition
20	Lead	mg/l	ND	APHA-(3500 Pb B) 22 <sup>nd</sup> Edition

<b>Remark :</b>	
<b>Authorised by :</b>	
<b>Name : ISHANI PATEL</b>	<b>Designation: Lab Incharge</b>
	

Note: Analysis Performed on 5% Leachate Solution Preparation of Solid Waste

**Note :**

1. Reports may be reproduced if required ,only with the written approval of the laboratory.
2. Re analysis of sample will be done if requested within 7 days from the date of reporting of sample if they are not consumed during analysis.



306-307, 3<sup>rd</sup> FLOOR, DWARKESH COMPLEX, SUN PHARMA ROAD,  
ATLADARA, VADODARA – 20.  
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**ENVIRONMENTAL MONITORING REPORT**

Report No: M/2015/07/ONGC/02

LABORATORY REPORT- Drinking Water		
Doc No:ECS/AR/DW	Issue No :01	Issue Date :19.4.2014
	Revision no 00:	Revision R1

Sample Details	
1.	Name of Client : M/S OIL AND NATURAL GAS CORPORATION LIMITED. (CW-IX RIG)
2.	Client Address : OIL AND NATURAL GAS CORPORATION LTD, ( Drilling Service) CAMBAY SUB ASSET,P.O KANSARLKHAMBHAT-388630.
3.	Sample Id : ONGC/July/2015/DW01
4.	Sampling Date :29.07.2015
5.	Sampling Time : 2:00 PM
6.	Analysis Commenced on :07.08.2015
7.	Analysis Completed on :12.08.2015
8.	Reporting Date: 19.08.2015
9.	Test Requirement : Drinking Water Analysis
10.	Client Representative: Location Manager
11.	Sampling Location : (SSAF SISWA)
12.	Sampling Duration : --
13.	Sample Collected By : Sanjay Patel
14.	Sampling Procedure : IS Method
15.	Sample Category: Grab

**TEST RESULTS**

Sr No.	Parameters	Unit	Results	ISO 10500 Norms		Method Used
				DESIRABLE	PERMISSIBLE	
1	pH	-	7.48	6.5-8.5	No Relaxation	APHA-(4500 H <sup>+</sup> 3) 22 <sup>nd</sup> Edition
2	TDS	mg/L	47	500	2000	APHA-(2540C) 22 <sup>nd</sup> Edition
3	Turbidity	NTU	N.D	5	10	APHA-(2130 B) 22 <sup>nd</sup> Edition
4	Color	Pt/co	Colorless	5	10	APHA-(2120 C) 22 <sup>nd</sup> Edition
5	Total Hardness as CaCO <sub>3</sub>	mg/L	ND	300	600	APHA-(2340 C) 22 <sup>nd</sup> Edition
6	Calcium Hardness	mg/L	ND	75	200	APHA-(2340 C) 22 <sup>nd</sup> Edition
7	Magnesium Hardness	mg/L	ND	-	-	APHA-(2340 C) 22 <sup>nd</sup> Edition
8	Iron	mg/L	0.1	0.3	1.0	APHA-(3500Fe B) 22 <sup>nd</sup> Edition
9	Chloride	mg/L	16.9	250	1000	APHA-(3500Fe B) 22 <sup>nd</sup> Edition
10	Flouride	mg/L	0.006	1.9	1.5	APHA-(4500 F D) 22 <sup>nd</sup> Edition
11	Residual Chlorine	mg/L	N.D	0.2	-	APHA-(4500 Cl E) 22 <sup>nd</sup> Edition
12	Sulphates	mg/L	0.6	200	400	APHA-(4500 SO <sub>4</sub> <sup>2-</sup> E) 22 <sup>nd</sup> Edition
13	Mangeneae	mg/L	N.D	0.1	0.3	APHA-(3500- Mn B) 22 <sup>nd</sup> Edition
14	Nitrate	mg/L	N.D	45	100	-
15	Copper	mg/L	N.D	0.05	1.5	APHA-(3500-Cu C) 22 <sup>nd</sup> Edition
16	Selenium	mg/L	N.D	0.01	No Relaxation	APHA-(3500-Se C) 22 <sup>nd</sup> Edition
17	Cadmium	mg/L	N.D	0.01	No Relaxation	APHA-(3500 CD) 22 <sup>nd</sup> Edition
18	Chromium	mg/L	N.D	0.05	No Relaxation	APHA-(3500Cr B) 22 <sup>nd</sup> Edition
19	Lead	mg/L	N.D	0.05	No Relaxation	APHA-(3500 Pb B) 22 <sup>nd</sup> Edition

306-307, 3<sup>rd</sup> FLOOR, DWARKESH COMPLEX, SUN PHARMA ROAD,  
 ATLADARA, VADODARA – 20.  
 TELEFAX: 0265 2356752, MOBILE 94260 74416, 9427506362



20	Zinc	mg/L	N.D	5	No Relaxation	APHA-(3500 Zn B) 22 <sup>nd</sup> Edition
21	Mercury	mg/L	N.D	0.001	No Relaxation	APHA-(3500 Hg) 22 <sup>nd</sup> Edition
22	Arsenic	mg/L	N.D	0.01	0.002	APHA-(3500 As B) 22 <sup>nd</sup> Edition
23	Phenolic Compounds	mg/L	N.D	0.001	No Relaxation	APHA-(5530 D) 22 <sup>nd</sup> Edition
24	Cyanide	mg/L	N.D	-	-	APHA-(4500 CN) 22 <sup>nd</sup> Edition
25	Mineral Oil	mg/l	ND	0.01	0.03	
26	Pesticides	-	Absent	Absent	-	APHA 22 <sup>nd</sup> Edition

Remark :

Authorised by :

Name : ISHANI PATEL

Designation: Lab Incharge

**Note**

1. Reports may be reproduced if required, only with the written approval of the laboratory.
2. Re analysis of sample will be done if requested within 7 days from the date of reporting of sample if they are not consumed during analysis.



## NOISE SURVEY REPORT OF C/W-IX RIG.

LOCATION : SSAF

Date: 21/07/2015

TIME : 11:00 pm hrs.

OPERATION : Rin / etc mud

S.N.	EQUIPMENT / PLACE	READING IN dB	LIMIT IN dB	REMARKS
1	Engine House	112	70	Use ear plug
2	Carrier	100	70	
3	Mud Pump	40	70	
4	Shale Shaker	40	70	
5	Derrick floor	50	70	
6	Out side Bunk house	46	70	
7	Inside Bunk house	40	70	
8	Front side fencing of D/site	40	70	
9	Back side fencing of D/site	40	70	
10	Right side fencing of D/site	40	70	
11	Left side fencing of D/site	40	70	

Noise survey carried out by :

Name T.M. Remy ATCE

Signature Remy



## NOISE SURVEY REPORT OF C/W-IX RIG.

LOCATION : SSAF Date: 03/07/2015

TIME : 9:45 AM hrs.

OPERATION : Drilling / wiper trip / plout

S.N.	EQUIPMENT / PLACE	READING IN dB	LIMIT IN dB	REMARKS
1	Engine House	111	75	Use ear muffs
2	Carrier	92	75	
3	Mud Pump	104	75	
4	Shale Shaker	45	75	
5	Derrick floor	50	75	
6	Out side Bunk house	40	75	
7	Inside Bunk house	40	75	
8	Front side fencing of D/site	40	75	
9	Back side fencing of D/site	40	75	
10	Right side fencing of D/site	40	75	
11	Left side fencing of D/site	40	75	

Noise survey carried out by :

Name : N.M. Reethu

Signature : 

## NOISE SURVEY REPORT OF C/W-IX RIG.

LOCATION : SSAF

Date 19/06/2015

TIME : 8:30 AM

OPERATION : Drilling

S.N.	EQUIPMENT / PLACE	READING IN dB	LIMIT IN dB	REMARKS
1	Engine House	112	75	} Use ear muff
2	Carrier	93	75	
3	Mud Pump	105	75	
4	Shale Shaker	46	75	
5	Demick floor	50	75	
6	Out side Bunk house	81	75	
7	Inside Bunk house	40	75	
8	Front side fencing of D/site	39	75	
9	Back side fencing of D/site	45	75	
10	Right side fencing of D/site	40	75	
11	Left side fencing of D/site	40	75	

Noise survey carried out by :

Name : Y.M. Remy AT(E)

Signature : Remy