

रिफाइनरीज प्रभाग

Refineries Division

इंडियन ऑयल कॉपोरेशन लिमिटेड पानीपत रिफाइनरी एवं पेट्रोकेमिकल कॉन्पलेक्स पानीपत, हरियाणा - 132140

Indian Oil Corporation Limited Panipat Refinery & Petrochemical Complex

Panipat, Haryana - 132140

येवसाइट : www.iocl.com; ई-मेल : panipatrefinery@indisnoil.in

पुरभाष: 0180-2524001; फंक्स: 0180-2578833

Date: 17.01.2022

Ref No: PR/HSE/2021/EC Compliance

To, The Additional Director(S), Ministry of Environment, Forest & Climate Change, Govt. of India, Regional Office (NR), Bays No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh- 160047

Sub: Six Monthly Environmental Clearances (Jul'2021 to Dec'2021) Compliance Report- Panipat Refinery Complex.

Dear Sir,

Enclosed please find herewith the Six Monthly Environmental Clearances (ECs) Compliance Report- Panipat Refinery Complex for the period of July'2021 to December'2021 of the MoEFCC stipulations w.r.t. following EC letters;

- 1. EC Letter No. J-11011/27/91-IA II(I) dated 16.07.1992 for setting up of a grass root refinery at Karnal district by Indian Oil Corporation Limited.
- 2. EC Letter No. J.11011/60/2000-IA.II dated 09.04.2001 for Expansion of Panipat Refinery (PREP) from 6 MMTPA to 12
- 3. EC Letter No. J.11011/52/2000-IA.II dated 30.04.2001 for Integrated Paraxylene and Purified Terphthalic Acid Projects at Panipat by M/s IOCL.
- 4. EC Letter No. J.11011/9/2001-IA II (I) dated 06.12.2001 for MS Quality Up-gradation Project at Panipat Refinery by IOCL.
- 5. EC Letter No. J.11011/52/2000-IA II (I) dated 20.01.2003 for Modification in Plant layout of Paraxylene and Purified Terephthalic Acid (PX/PTA) Project within Panipat Refinery Complex and Integrated with Panipat Refinery (PR) and Panipat Refinery Expansion Project (PREP).
- 6. EC Letter No. J.11011/7/2004-IA II (I) dated 09.08.2004 for expansion of Panipat Refinery (From 12 MMTPA to 15 MMTPA) and Setting up of Indalin+ unit at Panipat Refinery Complex of IOCL, Panipat Refinery Haryana.
- 7. EC Letter No. J.11011/177/2016-IA II (I) dated 26th March, 2018 for BS-VI Fuel Quality up-gradation and expansion of PX/PTA plant at Panipat Refinery & Petrochemical Complex (PRPC), Panipat (Haryana) by M/s Indian Oil Corporation
- 8. EC Letter No. IA-J-11011/43/2018-IA- II (I) dated 13.11.2019 for installation of 100 KLPD Ligno-Cellulosic 2G Ethanol Plant at Baholi, Block Madlauda, Panipat Refinery road, District Panipat (Haryana) By M/S Indian Oil Corporation Limited.
- 9. EC Letter No. J-11011/78/2018-IA- II (I) dated 25.11.2019 for setting up 128 KL per day Ethanol Production Plant by M/s Indian Oil Corporation Ltd. (IOCL) In Panipat Refinery & Petrochemical Complex at Panipat, Haryana.
- 10. 10. EC Letter No. J-11011/177/2016-IA-II(I) dated 03.12.2021 for Panipat Refinery Capacity Expansion from Existing 15 MMTPA to 25 MMTPA within the Existing Refinery Complex by M/s Indian Oil Corporation Ltd. (IOCL), Panipat Refinery & Petrochemical Complex at Panipat, Haryana

Thanking you,

Yours faithfully,

(P V Ramakrishna)

General Manager (HSE)

Panipat Refinery and Petrochemical Complex

Copy to:

The Regional Officer, HSPCB, Panipat

Chairman, HSPCB, Panchkula

पंजीकृत कार्यालय :जी9-, अली यावर जंग मार्ग, बांद्रा (पूर्व), मुंबई 400051, महाराष्ट्र (आब्दा) Regd. Office: G-9, Ali Yavur Jung Murg, Bundra (East), Mumbai-400051, Mahimaintai (1914) 20 **बिक्ल कॉम्प्लेक्स (उन्हें औ** सी एस) Panipat Refinery & Petrochemical Complex (I O C t)

पानीपत, Panipat-132140

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SN	EC General & Specific Conditions / Environmental Monitoring Reports	Compliance Status
1.	EC Letter No. 1-11011/27/91-TA TI(T) dated 16.07.1992 for setting up of a grass root refinery at Karnal district by Indian Oil Corporation Limited.	Attached as Annexure 1
2.	EC Letter No. J.11011/60/2000-IA.II dated 09.04.2001 for Expansion of Panipat Refinery (PREP) from 6 MMTPA to 12 MMTPA.	Attached as Annexure 2
3.	EC Letter No. J.11011/52/2000-IA.II dated 30.04.2001 for Integrated Para xylene and Purified Terphthalic Acid Projects at Panipat by M/s IOCL.	Attached as Annexure 3
4.	EC Letter No. J.11011/9/2001-IA II (I) dated 06.12.2001 for MS Quality Upgradation Project at Panipat Refinery by IOCL.	Attached as Annexure 4
5.	EC Letter No. J.11011/52/2000-IA II (I) dated 20.01.2003 for Modification in Plant layout of Para xylene and Purified Terephthalic Acid (PX/PTA) Project within Panipat Refinery Complex and Integrated with Panipat Refinery (PR) and Panipat Refinery Expansion Project (PREP).	Attached as Annexure 5
6.	EC Letter No. J.11011/7/2004-IA II (I) dated 09.08.2004 for expansion of Panipat Refinery (From 12 MMTPA to 15 MMTPA) and Setting up of Indalin+ unit at Panipat Refinery Complex of IOCL, Panipat Refinery Haryana.	Attached as Annexure 6
7.	EC Letter No. J.11011/177/2016-IA II (I) dated 26 th March, 2018 for BS-VI Fuel Quality up-gradation and expansion of PX/PTA plant at Panipat Refinery & Petrochemical Complex (PRPC), Panipat (Haryana) by M/s Indian Oil Corporation Limited.	Attached as Annexure 7
8.	EC Letter No. IA-J-11011/43/2018-IA- II (I) dated 13.11.2019 for installation of 100 KLPD Ligno-Cellulosic 2G Ethanol Plant at Baholi, Block Madlauda, Panipat Refinery road, District Panipat (Haryana) By M/S Indian Oil Corporation Limited.	Attached as Annexure 8
9.	EC Letter No. J-11011/78/2018-IA- II (I) dated 25.11.2019 for setting up 128 KL per day Ethanol Production Plant by M/s Indian Oil Corporation Ltd. (IOCL) In Panipat Refinery & Petrochemical Complex at Panipat, Haryana.	Attached as Annexure 9
10.	EC Letter No. J-11011/177/2016-IA-II(I) dated 03.12.2021 for Panipat Refinery Capacity Expansion from Existing 15 MMTPA to 25 MMTPA within the Existing Refinery Complex by M/s Indian Oil Corporation Ltd. (IOCL), Panipat Refinery & Petrochemical Complex at Panipat, Haryana.	Attached as Annexure 10
11.	Six Monthly Ambient Air Quality and Stack Monitoring Data.	Attached as Annexure 11
12.	Six Monthly Treated Effluent Quality Data (ETP and STP).	Attached as Annexure 12
13.	Six Monthly Fugitive Emission Data.	Attached as Annexure 13
14.	Noise Survey Data.	Attached as Annexure 14

COMPLIANCE TO ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEFCC FOR SETTING UP OF A GRASSROOT REFINERY AT KARNAL, DISTRICT BY INDIAN OIL CORPORATION LIMITED - EC Letter no. J-11011/27/91-IA.II(I) dated 16.07.1992

SN	Stipulation	Compliance
1.	The project authority must strictly adhere to the stipulations laid down by the State Pollution Control Board and State Government.	Being Complied
2,	Any expansion of the plant, either with the existing product mix or new products can be taken up only with the prior approval of this ministry.	Being Complied
3.	Sulphur recovery unit with more than 90% Sulfur Recovery should be installed and commissioned before the project is completed, and measure for its continuous operation must be taken. Technoeconomic feasibility study for additional standby sulphur recovery system may be initiated after the installation of first unit.	Being Complied Panipat Refinery has 5 nos. Sulphur Recovery Units (SRUs) as detailed below and 4 (99.9% recovery efficiency) out of 5 units arc in operation: • 1 no. SRUs: 99% efficiency ,1X115 MT/day capacity • 4 no. SRUs: 99.9% efficiency ,4X225 MT/day capacity
4.	Low Sulfur fuel (Sulphur content not exceeding 1%) should be used in the boilers/furnaces.	Being Complied
5.	Low NO_x burners should be used to avoid excessive formation of NO_x .	Being Complied Low NO, burners have been installed in the process heaters, Boilers, furnaces etc.
6.	Total emission of SO2 from the refinery should not exceed 1 Ton/hr.	Being Complied SO ₂ emission from the Refinery is well within the limit.
7.	The gaseous emissions (SO ₂ , NO _x etc.) from various process units should conform to the standards prescribed by the concerned authorities, from time to time. At no time the emission levels should go beyond the stipulated standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be put out of operation immediately and should not be restarted until the control measure are rectified to achieve the desired efficiency.	Being Complied
8.	Adequate number (a minimum of 7) of air quality monitoring stations should be set up in the downwind direction as well as where maximum ground level concentration is anticipated. Stack emission should be monitored by setting up of an automatic continuous stack monitoring unit. The data on stack emission should be submitted to the State Pollution Control Board once in three months and to this Ministry once in six months along with the statistical analysis. The air quality monitoring station should be selected on the basis of modeling exercise to represent the short-term ground level concentrations.	Being Complied Total 9 nos. of CAAQMS (2 nos. in Panipat city, 1 no. in Refinery township, 5 nos. in Refinery & 1 in Polishing Pond area) are in operation. These were set up in consultation with HSPCB. Also, one mobile van for ambient air quality monitoring is in place. For all stacks: SO ₂ , NO ₃ , CO & PM analyzers are available and connected to CPCB/HSPCB server. Data on stack emission are submitted to HSPCB/MoEFCC as per frequency mentioned.
9.	Fugitive emissions of hydrocarbons from storage tanks etc. should be minimized by adopting necessary measures.	Being Complied
10.	Fugitive emission should be regularly monitored and record maintained.	Being Complied Fugitive emission monitoring for Hydrocarbon and Benzene is done quarterly through approved agency.

100	Stipulation	Compliance	
SN 11.	There should be no change in the stack design without the approval of the State Pollution Control Board. Alternate pollution control system and proper design in the stack should be provided to take care of excess emissions due to failure in any system of the plant.	Being Complied.	
12.	The height of stacks attached to AVU, FCCU and IPS etc. should not be less than 100 m.	Implemented.	
13.	Total fresh water consumption (Industrial as well as township) should not exceed 8 MGD. Ground Water should not be tapped for this purpose.	8 MGD water allocated for 6 MMTPA Refinery. However further EC granted to Refinery expansion from 6 to 13 MMTPA (J.11011/7/2004-IA-II (I) dated 09.08.2004) Fresh water allocation increased to 30 cusec.	
14.	The project authorities must recycle wastewater to the maximum extent possible (at least 25% to 30% to start with). The treated effluent coming out of the plant must meet MINAS.	Being Complied ETP-I and II Treated effluent meeting Refinery MINAS parameter is "Recycled and Reused" as feed to RO plant and make up water to Cooling Tower.	
15.	Adequate number of effluent quality (oil & Grease, COD, BOD, suspended Solids, Phenols, Sulphides, pH and Flow) monitoring stations must be set up in consultation with State Pollution Control Board.	Effluent quality is being monitored at various stages Effluent Treatment Plant. Also final Treated Effluent Quality parameters (pH, BOD, COD & TSS) are connected	
16.	Maximum recovery of oil from the sludge should be done and residual oily sludge should be incinerated.	The raw oily sludge generated from the Refinery is subjected to Oil recovery / Melting Pit treatment for recovery of oil. The recovered oil is recycled back with crude oil for processing. The residual sludge is disposed-off through confined Bio-remediation. Part of the sludge is processed in Coker unit. There are 4 nos. lined pits available for storing residual oily sludge.	
17.	The project authorities must prepare a scheme for solid and hazardous waste disposal. The plan for disposal duly approved from the State Pollution Control Board should be submitted to this Ministry within one year and adequate space should be provided for it within the plant premises.	Being Complied A common hazardous waste disposal site is developed in the state by Haryana Environmental Management Society (HEMS) in consultation with Haryana State Pollution Control Board. Panipat Refinery is the member of this society.	
18.	A green belt of at least 500 m width and adequate density should be developed and maintained. Selection of the species should be done in consultation with the State Forest Department. A detailed green belt development plan taking into account attenuation factors, soil characteristics etc. should be prepared and submitted to this Ministry within six months.	Complied Greenbelt of 500 m width have been developed maintained after consultation with State For Department.	
19.	A detailed risk analysis study based on Maximum Credible Accident (MCA) analysis should be done and submitted to this Ministry once the process design/technology and layout is finalized. Based on this, a Disaster Management Plan has to be prepared and after approval by the concerned Nodal Agency, should be submitted to this ministry within six months. The impact zone under no circumstances should cross the plant premises.	A Comprehensive Risk Analysis is conducted. Report has been submitted. On-site Disaster Management Plan based on this Risk Analysis is also prepared which is accredited from approved Third Party Inspection agency of PNGRB.	
20.	A 'no development zone' of minimum 5km radius in between the refinery and the Panipat town should	Action by State Government.	

	culation	Compliance Letter sent from PR to DC, Panipat dated 16.05.2020						
SN	Stipulation be provided. Where only restricted growth on nonpolluting industries may be allowed (Action –	requesting enforcement of this se						
	State Govt.)							
21.	written order of the competent authority.	Complied						
22.	northern side of the retinery i.e. in the op-	a allod						
23.	A detailed Rehabilitation Plan for the affected people should be prepared and submitted to this	Complied						
24.	Contractor's labourers must leave place after the construction work is over to avoid creation of slum in the adjoining areas of the refinery and township.	Complied						
25.	A comprehensive EIA must be prepared and submitted to this Ministry by September, 1993 covering regional implications and 'no development	Complied		n-aducts	through P	ioeline an	d Rail.	
26.	reasibility of using 20 tonner trucks may be studied assessed wherever road transport is being envisaged and report submitted to this Ministry within three	Bulk Movement of Products through Pipeline and Rail.						
27.	Necessary approval may be obtained from the Regulatory Authority as per Section 5(2) and 5(3) of the Hazardous Wastes (Management and Handling) Rules, 1989 of the Environment (Protection) Act, 1986	Being Complied						
28.	The State Govt, should prepare a Master Plan for the region to avoid haphazard growth of industries and human sattlements in the area.	Action by State Government.						
29.	The project authority must set up laboratory facilities for collection and analysis of samples under the supervision of competent technical personnel, who will directly report to the Chief Executive.	Complied						
30.	A separate Environment Management Cell with suitably qualified people to carry out various functions should be set up under the control of Sr. Executive, who will report directly to the Head of the organization.	Complied						
31.	The funds earmarked for the environmental	Year-wise expenditure.						
	other purposes and year wise expenditure should be reported to this Ministry.	FY:20	18-19	FY:20	19-20	FY:20	20-21	
	reported to this Ministry.	1.63200		(Rupees	In laks)			
		Recurr	Non- recurri ng	Recurr	Non- recurri	Recurr ing	Non- recurri ng	
		394.2	1728.6	551.8	3060.3	1229.8	3465.0	

Compliance status with respect to the EC conditions stipulated in the letter for Panipat Refinery Expansion Projects (PREP) from 6 MMTPA to 12 MMTPA – EC letter no. J.11011/60/2000-IA.II dated 09.04.2001:

S N	Cond	litions stipulated in the EC letter	Status
1.		company should strictly adhere to the stipulations made by &F vide O.M. No. J.11011/76/96-IAII dated 5 th March,1997	Being Complied
2.	a)	The total SO ₂ emission from the entire Refinery complex should not exceed 1000 kg/hr even after proposed expansion.	Being Complied
	b)	The gaseous emissions (SO ₂ , NO ₈ , HC, CO) and particulate matters, from various process units should conform to the standards prescribed under Environmental (Protection) Rules, 1986 or norms stipulated by SPCB whichever is most stringent.	Being Complied
	c)	At no time, the emission level should go beyond the stipulated standards.	Being Complied
	d)	In the event of failure of pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	Being Complied
3.	1000000000	hur recovery units with more than 99% efficiency shall be ided.	Being Complied Four SRUs with 99.9% recovery have been installed & are operational.
4.	a)	Adequate ambient air quality monitoring stations SO ₂ , NO _x , HC should be set up in the Refinery area in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind.	Being Complied 9 nos. of CAAQMS (5 nos. in Refinery, 2 nos. in Panipat city, 1 no. each in Refinery Township, and Polishing Pond area) are in operation. These were set up in consultation with HSPCB. Also mobile van for ambient air quality monitoring is in place.
	b)	The monitoring network must be decided based on making exercise to represent short term GLCs.	Complied
	c)	In addition, a mobile van with adequate facilities to monitor ambient air quality outside the Refinery premises should be provided.	Complied Mobile van with adequate facilities for ambient air quality monitoring is already available & is in operation.
	d)	Continuous on-line stack monitoring equipment should be installed for measurement of SO ₂ , NOx, CO & PM.	For all stacks: SO ₂ , NO ₄ , CO & PM analyzers are available and connected to CPCB / HSPCB server.
5.	a)	Fugitive emission of HC from product storage tank yard, crude oil tanks etc, must be regularly monitored.	Being Complied Fugitive emission monitoring for Hydrocarbon and Benzene is done quarterly through approved agency.
	b)	Sensors for detecting HC leakages should also be provided at strategic locations.	Hydrocarbon leak detectors installed at strategic locations.

6.	a)	As per the commitment given, there will be no discharge of treated effluent into Thirana drain.	Treated effluent from ETP-1 & ETP-2 is reused as feed to RO plant and as make up to Cooling
			Tower. Treated Effluent from PTA-ETP (ETP-3) meeting Petrochemical MINAS is discharged into THIRANA DRAIN as per permission granted by statutory bodies (MoEFCC & HSPCB).
	b)	The liquid effluent generated from the Refinery should be treated comprehensively to conform to the load based standards and concentration limits prescribed under EPA rules.	Liquid effluent generated from Refinery & PX- PTA Petrochemical Complex is being treated in Waste Water Treatment Plant(s) which are meeting applicable Refinery & Petrochemical MINAS standards. Treated effluent from ETP-1 & ETP-2 is reused as feed to RO plant and as make up to Cooling Tower.
			Treated Effluent from PTA-ETP (ETP-3) meeting Petrochemical MINAS is discharged into THIRANA DRAIN as per permission granted statutory bodies (MoEFCC & HSPCB).
	c)	The entire treated wastewater should be recycled for reuse in the plant operation and green belt development so as to maintain zero discharge.	ETP-1 & ETP-2 treated effluent is recycled and reused as feed to RO plant and as make up to Cooling Tower. Treated Effluent from PTA-ETP (ETP-3) meeting Petrochemical MINAS is discharged into THIRANA DRAIN as per permission granted by statutory bodies (MoEFCC & HSPCB).
7.	a)	Guard ponds of sufficient holding capacity should be provided to contain the effluent during process disturbance and or ETP failure.	Complied.
	b)	The concerned units must be shut down in case of effluent quality exceeding the prescribed limits.	Being Complied with.
8.	a)	The company should adopt mounded storage for LPG.	Complied.
	b)	The recommendations made in the Rapid Risk Assessment Report must be incorporated while firming up the plant layout and equipment design.	Mounded storage is used for LPG storage. Complied. The recommendations of the Rapid Risk Assessment for the study have been incorporated in the plant layout and equipment design.
	c)	The company must prepare a comprehensive risk assessment/analysis of the Refinery and associated facilities once the engineering design and layout is frozen.	Complied.
	d)	Based on this, on-site and off-site emergency preparedness plan must be prepared.	Complied. Onsite and Offsite Emergency Preparedness plans already prepared for Panipat Refinery.
	e)	Approval from the nodal agency must be obtained before commissioning the project.	Complied.
		drawl of water from the Munak Head-works should not	Being Complied.
	military triplations	ed 30 cusecs even after the proposed expansion.	
-		itions stipulated in the EC letter	Status
_		project authorities must strictly adhere to the stipulations	Being complied

	made by the Haryana State Pollution Control Board and the State Government.	
2.	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forest.	Being complied
3.	In case of deviations or alterations in the project proposed from those submitted to this Ministry for Clearance, a fresh reference should be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Being complied
4.	Data on ambient air quality, stack emission as well as fugitive emissions of HC must be regularly monitored and submitted to CPCB once in 3 months and to Ministry's Regional Office once in 6 months.	Being complied. Mentioned reports are being sent to MOEF&CC once in 6 months. Stack analyzers are online connected with CPCB/HSPCB server.
5.	Influent and effluent quality monitoring stations should be set up in consultation with the State Pollution Control Board. Regular monitoring should be carried out for the MINAS parameters.	Influent and Effluent quality is being monitored at various stages of Effluent Treatment Plants also Final Treated Effluent Quality parameters (pH, BOD, COD & TSS) also connected online to CPCB/HSPCB server.
6.	The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended, on 3 rd October, 1994. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire & Safety Inspectorate etc. must be obtained.	Being complied.
7.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management & Handling) Rules, 1989. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.	Being complied.
8.	Occupational health surveillance program should be undertaken as regular exercise for all the employees, especially for those engaged in handling hazardous substances.	Being complied.
9.	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (Day time) and 70 dBA (night time)	Being complied. The Refinery has provided silencers on compressor discharge, acoustic leggings on turbo generators & ejectors and acoustic chambers at the burners. The ambient noise level meets the standards.
10.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA and risk analysis report.	Complied.
11.	The project proponent should have a scheme upliftment in the nearby villages with reference to contribution in road construction, education of children, festivals, health centers, sanitation facilities, drinking water supply, community awareness and employment to local people whenever possible both for technical and non technical jobs.	Being complied Social upliftment and community development has been properly taken care as per IOCL's Corporate Social Responsibility Policy through following CSR activities. Promoting Sanitation Environment Sustainability/ Renewable Energy Sources Rural Development/ Promoting Preventive Healthcare/ Promotion of Sports Promoting Education

		Enhancement of Vocational Skills Fmpowering Women Welfare of Underprivileged
12.	A separate environmental management cell equipped with full fledged laboratory facilities must be set up to carry out the environmental management and monitored functions.	Being Complied Separate Environment Management Cell is in place.
13.	The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.	Being Implemented.
14.	The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's Regional Office at Chandigarh / State Pollution Control Board / Central Pollution Control Board. A six monthly compliance status report should be submitted to monitoring agencies.	Being Complied. Six monthly compliance reports along with monitoring data are being submitted regularly.
15.	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locally concerned informing that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry and Forests at http://www.envfor.nic.in. the advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Ministry's Regional Office.	Complied
16.	The project authorities should inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Complied

Integrated Paraxylene and Purified Terphthalic Acid Projects at Panipat by M/s IOCL – Environmental Clearance MOEF, N. Delhi letter no. J.11011/52/2000-IA.II dated 30.04.2001

SN	Conditions stipulated in the EC letter	Status		
1	a) The gaseous emission (SO ₂ , NO ₃ and HC, Benzene) from the various process units should conform to the standards prescribed under environment (Protection) Rules, 1986 or norms stipulated by the SPCB whichever is more stringent.	Being Complied. Emission from the stack is being monitored online and from approved lab on Bi-monthly basis. 48 stacks are connected online to CPCB/HSPCB server with parameters such as SO2, NOx, CO & PM.		
	b) At no time, the emission level should go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit should not be restarted until; the control measures are rectified to achieve the desired efficiency.	Being Complied.		
2	a) Adequate ambient air quality monitoring stations (SPM, SO ₂ , NO ₂ , HC and Benzene) should be set up in the petrochemical complex in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs	Being Complied. Out of 9, AAQMS two Ambient Air Monitoring stations set up in PX-PTA plant area. The location of these is finalized after consultation with HSPCB.		
	b) Continuous on-line stack monitoring equipment should be installed for measurement of SO_2 and NO_x .	PX-PTA stacks are connected online to CPCB/SPCB server with parameters such as SO2, NOx, CO & PM.		
3	 a) Fugitive emission of HC from product storage tank yard, crude oil tanks etc. must be regularly monitored. 	Being Complied. Fugitive emission monitoring for Hydrocarbon and Benzene is done quarterly through approved agency.		
	 Sensors for detecting HC leakage should also be provided at strategic locations. 	Being Complied. Hydrocarbon leak detectors installed at strategic locations.		
4	 a) Liquid effluent generated from the petrochemical complex should be treated comprehensively to conform to the load based standards and concentration limits prescribed under EPA rules (MINAS standards). 	For Treating liquid effluent generated from Petrochemical complex separate ETP has been installed. PTA-ETP treated effluent meets the petrochemical MINAS. PTA ETP envisages Aerobic and Anaerobic Biological systems for treatment and the final effluent will meet Petrochemical MINAS.		
	 b) The BOD of the treated effluent should not exceed 30 mg/l at any point of time. 	BOD is being maintained below 30 mg /l.		
	c) The Company must undertake maximum recycling/ reusing of the treated effluent for process purposes in addition to green belt development and also adopt adequate water conservation measures.	Process Licensor M/s INVISTA has confirmed that "Recycle & Reuse" of PTA treated effluent is not feasible. However, Technical feasibility study for "Recycle & Reuse" of PTA treated effluent is being taker up with leading technology providers in the field of water treatment.		

	d) As per the commitment given the total quantity of treated effluent discharged into Thirana drain should not exceed 255 m ³ /hr.	The discharge of PTA-ETP treated effluent into Thirana Drain is being restricted well below 255 m3/hr.
	e) The effluent quality at the discharge point must also be monitored periodically by an independent agency authorized by CPCB and report of the independent agency should be submitted to Ministry's Regional office at Chandigarh/CPCB/HSPCB.	Effluent Quality of PTA ETP is monitored monthly by an authorized independent agency and report is being submitted to HSPCB (Monthly) and to MoEF&CC (Six-Monthly).
	f) The Company shall fully abide by the Hon'ble Supreme Court orders on regulation of industrial discharge to River Yamuna and it's canals / drains.	Being Complied.
5	a) Guard ponds of sufficient holding capacity should be provided to contain the effluent during process disturbances and or ETP failure.	Guard ponds of sufficient holding capacity are provided.
	b) The concerned units must be shut down in cases of effluent quality exceeding the prescribed limits.	Being Complied.
SN	General Conditions Conditions stipulated in the EC letter	Status/Action plan
1	The project authority must adhere to the stipulations made by Haryana State Pollution Control Board and State Government.	Being Complied
2	No expansion or modification of the plant should be carried out without prior approval of Ministry.	Noted
3	Data on ambient air quality and stack emissions as well as fugitive emissions of HC and Benzene from product storage tanks yard, naphtha tanks etc. must be regularly monitored and submitted to CPCB/SPCB once in 3- months and to Ministry (Regional Office, Chandigarh) one in 6-months.	Being complied. Mentioned reports are being sent to MOEF&CC once in 6 months and to HSPCB on bi-monthly basis. Stack analyzers are online connected with CPCB/HSPCB server.
4	The effluent quality before and after treatment should be regularly monitored. The frequency of monitoring and number of influent and effluent quality monitoring stations should be set up in consultation with the State PCB. The monitored data should be submitted to CPCB/ SPCB once in 3-months and to Ministry (Regional Office, Chandigarh) once in 6-months.	Being Complied Influent and Effluent quality is being monitored at various stages of Effluent Treatment Plants also Final Treated Effluent Quality parameters (pH, BOD, COD &TSS) also connected online to CPCB/HSPCB server. Mentioned reports are being sent to MOEF&CC once in 6 months and to HSPCB on monthly basis
5	Handling, manufacturing, storage and transportation of hazardous chemicals should be carried out in accordance with the Manufacture, Storage & Import of Hazardous chemicals Rules, 1989, as amended in 1991. Permissions from State and Central nodal agencies in this regard must be obtained.	Being Complied
6	Hazardous wastes, if any, must be handled and disposed as per Hazardous waste (Management and Handling) Rules, 1989. Authorization from State Pollution Control Board in this regard must be obtained.	Being complied Authorization for Hazardous Waste has been obtained from HSPCB which is valid up to 30.09.2024.

7	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase so as to avoid felling of trees and pollution of water and the surroundings.	Complied.					
8	The overall noise levels in and around the plant area should be kept well within the standards (85dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz 75 dBA (day time) and 70 dBA (night time).	Being complied. Silencers are provided on compressor dischal acoustic leggings on turbo generators & eject and acoustic chambers at the burners. The ambient noise level meets the standards.				ejector	
9	Occupational Health Surveillance of the workers should be done on regular basis and records maintained.	Complie	ed				
10	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP and risk analysis report.	Complie	ed				
11	The project proponent should have a scheme for social upliftment in the surrounding villages with reference to contribution in road construction ,education of children festivals, health centers, sanitation facilities, drinking water supply, community awareness and employment to local people especially the displaced people whenever and wherever possible both for technical and non-technical jobs.	Being complied Social upliftment and community developments been properly taken care as per IO Corporate Social Responsibility Policy through following CSR activities. Promoting Sanitation Environment Sustainability/ Renewable Energy Sources Rural Development/ Promoting Preventive Healthcare/ Promotion of Sports Promoting Education Enhancement of Vocational Skills Empowering Women Welfare of Underprivileged				r IOCL's through	
12	A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions should be set up under the control of senior executive.	Being Complied Separate environment management cell is in place.				s in	
13	The company must obtain ISO-14000 certification within a time frame of 5 years or so after the commissioning.	ISO-14000 certification has been obtained. Complied			1.		
14	The funds earmarked for the environmental protection measures should not be diverted for any other purpose and year-wise expenditure should be	Being Implemented. Year-wise expenditure:					
	submitted to this Ministry (Regional Office,	FY:20	18-19	The contract of the National	19-20		20-21
	Chandigarh/CPCB/SPCB)	Danie	Men	200	In laks)		Nev
		Recu	Non- recur ring	Recu rring	Non- recur ring	Recu	Non- recur ring
		394.2	1728. 6	551.8	3060. 3	1229. 8	3465 .0

15	Six monthly status reports on the project vis-à-vis environmental measures should be submitted to this Ministry (Regional Office, Chandigarh/ CPCB/SPCB.	Being Complied. Six monthly compliance reports along with monitoring data are being submitted regularly.
16	The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's Regional Office at Chandigarh/ State Pollution Control Board/ Central Pollution Control Board. A six monthly compliance status report should be submitted to monitoring agencies.	Will be adhered to.
17	The project proponent should advertise in at least two local newspaper widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearances by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry and Forests at http://www.envfor.nic.in	Complied
18	The Project Authorities should inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Complied

COMPLIANCE TO ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEF FOR MS QUALITY UPGRADATION PROJECT AT PANIPAT REFINERY BY IOCL,— J-11011/9/2001-IA. II (I) DATED 06.12.2001

SN	EC Conditions	Compliance Status
1.	The company shall ensure strictly implementations / Compliance of the terms and conditions mentioned vide Ministry's letter no. J.11011/60/2000-IA II dated 9 th April, 2001.	Being Complied (Stipulations are being strictly adhered for 6 MMTPA EC condition).
2.	The company shall also ensure that total SO ₂ emission from the Panipat Refinery (Including expansion and MS Quality Improvement Project) will not exceed 1000 kg/hr.	Being Complied SO ₂ emission from the Panipat Refinery (including expansion and MS Quality Improvement Project) is well within the limit.
3.	The company shall comply with all recommendations made by Haryana SPCB vide consent order dated 24.01.2001.	Complied.
4.	The company shall comply with all recommendations made by EMP and risk Analysis reports	Complied.
5.	The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's Regional Office at Chandigarh / State Pollution Control Board / Central Pollution Control Board. A six monthly compliance status report should be submitted to monitoring agencies.	Six monthly compliance reports along with monitoring data are being submitted regularly.
6,	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locally concerned informing that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry and Forests at http://envfor.nic.in the advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Ministry's Regional Office.	Complied.
7.	The project authorities should inform the Regional Office as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	

Modification in Plant Layout of Paraxylne and Purified Terephthalic Acid (PX/PTA) Project within Panipat Refinery Complex and Integrated with Panipat Refinery (PR) and Panipat Refinery Expansion Project (PREP) by M/s IOCL — Reg. Environmental Clearance — J.11011/52/2000-IA II (I) dated 20.01.2003

SN	EC Conditions	Compliance Status	
1	The company shall ensure strict implementation / compliance to the stipulations made by MOEF vide OM no. J-11011/50/2000-IA-II dated 9 th April, 2001 for expansion of Panipat Refinery from 6 MMTPA to 12 MMTPA and J-11011/52/2000-IA-II dated 30 th April, 2001 for integrated Paraxylene and Purified Terephthalic acid project at Panipat by M/s IOCL.	Being Complied.	
2	Total SO ₂ emission after integration of PX-PTA project with PR/PREP shall not exceed 1275 kg/hr (i.e. 1000kg/hr. for PREP and 275 kg/hr from the proposed PX/PTA/CPP Project.)	SO ₂ emission is well within the limit.	
3	As per the commitment given, the total quantity of treated effluent shall not exceed 255m3/hr from the proposed integration project.	Total quantity of treated effluent discharged into Thirana Drain is maintained well below 255m ³ /hr.	
4	The company shall develop green belt in an area of 75 acres as per the original plan in the PX-PTA project area.	Complied.	
5	The project authorities shall also comply with all the environmental protection measures and safeguards recommended in the EIA /EMP and risk analysis report submitted while seeking environmental clearance for the PREP and PX/PTA and PX/PTA/ PR project.		
6	As per the recommendations made in the Risk assessment study for the composite facility i.e. PX/PTA/PREP and associated facilities carried out by M/s KLG-TNO Safety Technology Ltd., the various elements of safety management system should be reviewed and updated keeping in view the new facilities added to the Refinery Complex. These include: Process and facilities information and documentation; Process Hazard Analysis; Operation Procedures; Inspection and Maintenance and Onsite Emergency Management Plan.	System (5MS) has been reviewed and updated keeping in view the new facilities added. On-site Disaster Management Plan based on this Risk Analysis is also prepared which is accredited from PNGRB approved Third Party Inspection agency.	
7	The project authorities must adhere to the stipulations made by the HSPCB for the PREP, PX/PTA projects and NOC granted for the installation of Captive Power Plant.		

P-15
COMPLIANCE TO ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEF FOR EXPANSION OF PANIPAT REFINERY (FROM 12 MMTPA TO 15 MMTPA) AND SETTING UP OF INDALIN* UNIT AT PANIPAT REFINERY COMPLEX OF IOCL, PANIPAT REFINERY HARYANA J-11011/7/2004-IA. II (I) dated 09.08.2004

SN	EC Conditions	Compliance Status
1.	The company shall ensure strict implementation / compliance to the stipulations made by MOEF vide OM no. J-11001/60/2000-IA-II dated 9 th April, 2001 for expansion of Panipat Refinery from 6 MMTPA to 12 MMTPA	Being Complied
2.	The gaseous emissions (SO ₂ , NO _x and HC, Benzene) from the various process units should conform to the standards prescribed under Environment (Protection) Rules, 1986 or norms stipulated by the SPCB whichever is more stringent. At no time, the emission level should go beyond the stipulated standards. In the event of failure pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	Being Complied. Emission from the stack is being monitored online and from approved lab on bi-monthly basis. All stacks are connected online to CPCB / HSPCB server for parameters such as SO ₂ , NO ₃ , CO & PM. Gaseous emission from various process units meets the prescribed standards.
3.	Adequate ambient air quality monitoring stations, (SPM, SO ₂ , NO ₄ and HC, Benzene) should be set up in the refinery complex in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind. The monitoring network must be decided based on modeling exercise to represent short term GLCs. Continuous on-line stack monitoring equipment should be installed for measurement of SO ₂ and NO ₃ . Data on VOC should be monitored and submitted to the SPCB / Ministry.	9 nos. CAAQMS (5 nos. in Refinery, 2 nos. In Panipat city, 1 no. each in Refinery township and Polishing Pond area are in operation. These were set up in consultation with HSPCB. Also mobile van for ambient air quality monitoring is in place. For all stacks: SO ₂ , CO, PM & NO ₈ analyzers are available and connected with CPCB server. Fugitive emission monitoring for Hydrocarbon and benzene is done quarterly through approved agency. All reports are submitted to HSPCB regularly.
4.	Fugitive emission of HC from product storage tank yard, crude oil tanks etc. must be regularly monitored. Sensors for detecting HC leakage should also be provided at strategic locations.	Fugitive emission monitoring for Hydrocarbon and Benzene for product storage tanks and crude oil storage tanks is done through approved agency on quarterly basis. Hydrocarbon detectors have been provided at strategic locations.
5.	The company shall also ensure that the total SO2 emissions from the Panipat Refinery after expansion shall not exceed i.e. 1000 kg/hr. The company shall install an additional Sulphur Recovery Unit (225 MT/day capacity) with 99.9% efficiency and the entire gas generated should be amine treated to reduce the SO2 emissions level from the Refinery.	The total SO2 emission of Panipat Refinery not exceeding the mentioned limit i.e. 1000 kg/hr. Panipat Refinery has 5 nos. Sulphur Recovery Units (SRUs) as detailed below and 4 (99.9 % recovery efficiency) out of 5 units are in operation: 1 no. SRU: 99% efficiency ,1X115 MT/day capacity 4 no. SRUs: 99.9% efficiency ,4X225 MT/day capacity

6.	As per the commitment given, there should be zero effluent discharge due to the proposed expansion. The company should ensure that there will be no discharge of treated effluent into Thirana Drain and	Refinery operation into Thirana drain.
	discharge of treated effluent into Thirana Drain and	
	the treated effluent from the refinery is not discharged along with the treated effluent from PX-PTA plant.	MINAS. These treated effluents are re-used as a feed to RO plant and makeup to Cooling Towers. PTA-ETP treated effluent meeting Petrochemical
	The entire treated waste water should be recycled for reuse in the plant operation and greenbelt development so as to maintain zero discharge. Further, the liquid effluent generated from the Refinery should be treated comprehensively to conform to the load based standards and concentration limits prescribed under Environment (Protection) Act, 1986 Rules.	MINAS is discharged into Thirana Drain as per Consent-To-Operate /approvals from MOEFCC, HSPCB & Irrigation Department.
7.	The IOCL shall ensure installation of continuous flow measurement devices so that only the permitted quantity of treated effluent from PX-PTA plant (255 m³/hr.) is discharged. Further, IOCL shall make all efforts to recycle and reuse the treated effluent from PX-PTA plant after commencing of the unit.	Flow meters were installed at the time of setting up PTA-ETP. At no point of time discharge of treated effluent is exceeding the prescribed limit of 255 m³/hr. Process Licensor M/s INVISTA has confirmed that "Recycle and Reuse" of PTA treated effluent is not feasible. However technical feasibility studies for Recycle and Reuse of PTA treated effluent is being taken up with leading technology providers in the field of Water Treatment.
8.	Additional water requirement shall not exceed 400 m ³ /hr. The total quantity of effluent generation should not exceed 1280 m ³ /hr. as indicated in the Environment Management Plan. The treated effluent should be reused/ recycled to achieve zero discharge.	The total allowable withdrawal of fresh water as per previous EC was 3000 m³/hr (as per EC of 6-12 MMTPA expansion). Adding the additional quantity of 400 m³/hr., the overall total allowable water quantity is 3400 m3/hr. Presently, fresh water consumption of the Refinery is well below the above mentioned limits. Total quantity of effluent generation remains <1100 m³/hr.
		ETP-1 & ETP-2 treated effluent meets MINAS. These treated effluents from Refinery operation are completely re-used as a feed to RO plant and as a makeup to Cooling Towers. PTA-ETP treated effluent meeting Petrochemical MINAS is discharged into Thirana Drain as per approvals/ Consent to Operate from MOEFCC, HSPCB, and Irrigation Department.
	Green belt of adequate width and density should be provided to mitigate the effects of fugitive emissions all around the plant. The bio-sludge from the ETP should be used as manure in the green belt development. Company shall develop greenbelt in consultation with DFO as per CPCB guidelines.	Greenbelts with adequate width & density were already provided. These greenbelts were developed in consultation with the District Forest Deptt. Bio-sludge from ETP is being used as manure

SN		Compliance Status
	(0.9 MMTPA) to organized industries having consent from the concerned State Pollution Control Board Further, the Pet-coke from the Delayed Coker Unit should be conveyed to storage area by pipe conveyer system. The company should ensure to prevent seepage in Pet-coke stockpile / storage area to prevent soil and ground water pollution.	division called Marketing Division which sells the same to consented/registered industries. Pet-coke is conveyed to storage area by pipe conveyer system.
11		The raw oily sludge generated from the Refinery is subjected to Oil recovery/Melting Pit treatment for recovery of oil. The recovered oil is recycled back with crude oil for processing. The residual sludge is disposed off through confined Bio remediation. Part of the sludge is processed in Coker unit.
12	The company should adopt mounded storage for LPG. The project authorities shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP and risk analysis report.	The Mounded Bullets are in operation
13	Occupational Health Surveillance of the workers should done on a regular basis and records maintained as per the Factories Act	
Ger	neral conditions	
1	The project authorities must strictly adhere to the stipulations made by the Haryana State Pollution Control Board and the State Government	Complied
2	No further expansion or modernization in the plant should be carried out without prior approval of the Ministry of Environment & Forests	Noted.
3	At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.	Being Complied Emission from the stack is being monitored online and from approved lab on bi-monthly basis. All stacks are connected online to CPCB/HSPCB server with parameters such as SO ₂ , NO ₂ , CO & PM.
4	The overall noise levels in and around plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz 75 dBA (day time) and 70 dBA (night	The Refinery has provided silencers on compressor discharge acoustic leggings on turbo generators & ejectors and acoustic chambers at the burners. The ambient noise level meets the standards.
5	time) The project authorities must strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the project.	Complied
	The project authorities must strictly comply with the rules and regulations with regard to handling and	Complied.

SN	EC Conditions	Compliance Status
	disposal of hazardous wastes in accordance with the Hazardous Waste (Management & Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections / treatment / storage / disposal of hazardous waste.	
7.	The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	Being Implemented.
8.	The stipulated conditions will be monitored by the Regional of this Ministry at Chandigarh / Central Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly.	Six monthly compliance report on EC conditions is regularly sent along with various monitoring reports.
9.	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at http://www/envfor.nic.in This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional Office.	Complied.
10	O. The project authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	

ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEFCC FOR BS-VI FUEL QUALITY UP-GRADATION AND EXPANSION OF PX/PTA PLANT AT PANIPAT REFINERY & PETROCHEMICAL COMPLEX (PRPC), PANIPAT (HARYANA) BY M/SINDIAN OIL CORPORATION LIMITED - ENVIRONMENTAL CLEARANCE - REG.

(Ref. No. J-11011/177/2016-IA II (I) dated 26.03.2018)

SI. No.	EC Conditions	Compliance Status	
(i)	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	ed Panipat Refinery & PX-PTA Petrochemical Complete, received from HSPCB on 05.05.2020.	
(ii)	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.	operations into Thirana drain. ETP-1 & ETP-2 treated effluent meets Refinery MINAS These treated effluents are re-used as a feed to RC plant and makeup to Cooling Towers. PTA-ETP treated effluent meeting Petrochemica MINAS is discharged into Thirana Drain as pe Consent-To-Operate/approvals from MOEFCC, HSPCE & Irrigation Department.	
(iii)	In case of PX/PTA expansion project, there shall not be any increase in effluent discharge and the treated effluent of 255 cum/hr shall continue to be discharged to the existing Thirana Drain.	There will be no increase in treated effluent discharge into Thirana Drain post PX-PTA capacity expansion	
(iv)	Necessary authorization required under the Hazardous and Other Wastes Management Rules, 2016 shall be obtained and the previous contained in the Rules shall be strictly adhered to.	d Management Rules, 2016 received from HSPCB on y 16.06.2020.	
(v)	Total SO ₂ emissions from the Refinery (including BS-VI Upgradation project) shall not exceed 1100 kg/hr whereas, for the PX/PTA plant after expansion, total SO ₂ emissions shall not exceed 375 kg/hr. Accordingly, total SO ₂ emissions from the Refinery Complex shall be limited to 1475 hg/hr.	 gradation project) is within 1100 kg/hr. SO₂ emissions from the PX-PTA petrochemical project 	
(vi)	National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21 st July, 2010 and amended from time to time shall be followed.	Being complied.	
(vii)	To control source and the fugitive emissions, suitable pollution control devices shall be installed with different stacks (attached to DHDT, HGU, Prime G) to meet the prescribed norms and /or the NAAQS. The gaseous emissions shall be dispersed through stacks of adequate height as per CPCB / SPCB guidelines.	complied. Post commissioning of the PX-PTA capacity e expansion project, same shall be ensured. e	
(viii)	Total fresh water requirement shall not exceed 354 m3/hr (8500 KLD) to be met from Munak Regulator. Necessary permission in this regard shall be obtained from the concerned regulatory authority.	Complied	
(ix)	Process effluent/any waste water shall not be allowed to mix with storm water. Storm water drain shall be passed	Being complied	

SI. No.	EC Conditions	Compliance Status
140.	through guard pond.	
(x)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.	Complied
(xi)	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF. The ash from boiler shall be sold to brick manufacturers/cement industry.	Being mixed fuel (Liquid +Gas) firing in the Boiler, there will be no ash generation.
(xii)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	Being complied
(xiii)	Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure to workers to fly ash & dust should be avoided.	Not Applicable
(xiv)	The company shall undertake waste minimization measures as below: (a) Metering and control of quantities of active ingredients to minimize waste. (b) Reuse of by-products from the process as raw material or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapour recovery system. (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.	Complied
(xv)	The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.	Complied
(xvi)	At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	Complied
(xvii)	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	Complied
(xviii)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	Complied
(xix)	Continuous online (24X7) monitoring system for stack emission shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server.	Complied
	For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow	Complied

SI. No.	EC Conditions	Compliance Status
	meters in the channel/drain carrying effluent within the premises. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.	
(xx)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Being complied
Gener	al Conditions	
(i)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board, Central Pollution Control Board, State Government and any other statutory authority.	Complied
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alternations 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.	Noted
(iii)	The locations of ambient air quality monitoring stations shall be decided in consultation with State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Complied 2 nos. of additional CAAQMS under BS-VI fuel quality up-gradation project is installed in addition to existing 7 nos. of CAAQMS.
(iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826 (E) dated 16 th November, 2009 shall be followed.	Complied
(v)	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 Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Complied
(vi)	The Company shall harvest rainwater from the roof tops of the building and storm water drains to recharge the ground water and us the same water for the process activities of the project to conserve fresh water.	Complied
(vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Being complied
(viii)	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management and risk mitigation measures relating to the project shall be implemented.	Shall be complied
(ix)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. ESC activities shall be undertaken by involving local	Complied

SI. No.	EC Conditions	Compliance Status
- Friends	villages and administration.	
(x)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied
(xi)	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.	Being implemented
(xii)	A copy of the clearance letter shall be sent by the project 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.	Complied
(xiii)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website to the company.	This is being complied already and will continue to do so in future
(xiv)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted 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 clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	This is being complied already and will continue to d so in future
(xv)	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 SPCB/Committee and may also be seen at Website of the Ministry at http://moef.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 concerned Regional Office of the Ministry.	
(xvi)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	

ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEFCC FOR INSTALLATION OF 100 KLPD LIGNO-CELLULOSIC 2G ETHANOL PLANT AT BAHOLI, BLOCK MADLAUDA, PANIPAT REFINERY ROAD, DISTRICT PANIPAT (HARYANA) BY M/S INDIAN OIL CORPORATION LIMITED - ENVIRONMENTAL CLEARANCE - REG.

(Ref. No. IA-J-11011/43/2018-IA- II (I) dated 13.11.2019)

SN	EC Conditions	Compliance Status
Gen	eral Conditions	
1.	The project authorities must strictly adhere to the stipulations made by State Pollution Control Board (SPCB), State Govt. and/or any other statutory authority.	Shall be adhered
2.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this ministry for clearance a fresh reference should be made to the ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Noted & Shall be adhered
3.	The location of Ambient Air Quality Monitoring Stations shall be decided in consultation with the State Pollution Control Board and it shall be ensured that at least one stations each is installed in upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Will be complied.
4.	The Nation Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R No. 826 (E) dated 16 th November, 2009 shall be complied with.	Shall be complied
5.	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 source of noise generation. The ambient noise levels shall confirm to the standards prescribed under the Environment (Protection) Act, 1986 and the rules made there under.	Will be complied.
6.	The company shall harvest rain water from the rooftops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations inside the plant.	Will be complied.
7.	Training shall be imparted to all employees on safety and health aspects of chemical handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	Will be complied
8.	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the ministry. All the recommendations made in the EIA/EMP in respect of environmental management risk mitigation measures and public hearing shall be implemented.	Will be complied.
9.	The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental shall be undertaken for overall improvement of the environment.	Will be complied
10.	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Will be complied
11.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forests and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	Being implemented

12.	A copy of the clearance letter shall be sent by the project proponent to the concerned Panchayat, Zila Parishad/Municipal corporation, urban local body and local NGO, if any, from whom suggestion/representation, if any, were received while processing the proposal.	Complied
13.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (Both in hard copy as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status reports shall be posted on the website of the company.	Complied
14.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted 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 Clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Will be complied
15.	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 SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of 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 of the Ministry.	Complied
Spe	ecific Conditions	
1.	The project proponent shall install 10 TPD 2G Ethanol demo plant for R&D purpose.	Will be complied.
2.	Prior approval shall be obtained from the Petroleum & Explosive Safety Organization (PESO) for the site and layout plan submitted to this ministry along with the proposal for EC. In case of any changes therein post PESO approval, the proposal shall require fresh appraisal by the sectoral EAC.	Will be complied.
3.	Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 as applicable from time to time shall be obtained from the State Pollution Control Board as required.	CTE dated 10.1.2020 received
4.	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste / treated water shall be discharged outside the premises.	Will be complied.
5.	Sludge management plan shall be formulated and ensured.	Will be complied.
6.	Ash management shall be ensured by utilizing for manufacturing bricks.	Will be complied.
7.	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement Rules ,2016 Solid Waste Management Rules ,2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Will be complied.
3.	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	Will be complied.
	Total fresh water requirement shall not exceed 109 m ³ /hr., proposed to be met from Munak Regulator on Western Yamuna Canal. Prior permission shall be obtained from the concerned regulatory authority.	Will be complied.
0.	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arrester shall be provided on tank farm and the solvent transfer through pumps.	Will be complied.

11.	Process organic residue and spent carbon, if any shall be sent to cement industries. ETP sludge, process inorganic and evaporation salt shall be disposed off to the TSDF.	Will be complied.				
12.	The company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as mentioned time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicles Act, 1989.	Will be complied.				
13.	The company shall undertake waste minimization measures as below: (a)Metering and control of quantities of active ingredients to minimize waste. (b)Reuse of by-products from the process as raw materials or as raw materials substitutes in other processes. (c) Use of automatic filling to avoid spillage. (d)Use of Close Feed System into batch reactors. (e)Venting equipment through vapor recovery system (f) Use of high pressure hoses for equipment clearing to reduce waste water generation.	Project under execution.				
14.	The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be done as per the CPCB guidelines in consultation with the State Forest Department.	Will be complied.				
15.	All the commitments made regarding issues raised during the public hearing / consultation meeting shall be satisfactorily implemented.	Will be complied.				
16.		Will be complied.				
17.	For the DG sets, emission limits and stack height shall be in conformity with the extant regulations and the CPCB regulations. Acoustic enclosures shall be provided to the DG set for controlling the noise pollution.	Will be complied.				
18.	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	Will be ensured, after project execution.				
19.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Will be complied				
20.	There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.	Will be ensured, after project execution.				
21.	Storage of raw material shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.	Will be ensured, after project execution.				
22.	Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel /drain carrying effluent within the premises.	Will be ensured				

ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEFCC FOR SETTING UP 128 KL PER DAY ETHANOL PRODUCTION PLANT BY M/S INDIAN OIL CORPORATION LTD. (IOCL) IN PANIPAT REFINERY & PETROCHEMICAL COMPLEX AT PANIPAT, HARYANA - ENVIRONMENTAL CLEARANCE - REGARDING

(Ref. No. J-11011/78/2018-IA- II (I) dated 25.11.2019)

SN	EC Conditions	Compliance Status
Ger	neral Conditions	NEW WY WATER
1.	The project authorities must strictly adhere to the stipulations made by State Pollution Control Board (SPCB), State Govt. and/or any other statutory authority.	Shall be adhered.
2.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this ministry for clearance a fresh reference should be made to the ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Shall be adhered.
3.	The location of Ambient Air Quality Monitoring Stations shall be decided in consultation with the State Pollution Control Board and it shall be ensured that at least one stations each is installed in upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Will be complied
4.	The Nation Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R No. 826 (E) dated 16 th November, 2009 shall be complied with.	Will be complied
5.	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 source of noise generation. The ambient noise levels shall confirm to the standards prescribed under the Environment (Protection) Act, 1986 and the rules made there under.	Will be complied
5.	The company shall harvest rain water from the rooftops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations inside the plant.	Will be complied
,	Training shall be imparted to all employees on safety and health aspects of chemical handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Iraining to all employees on handling of chemicals shall be imparted.	Will be complied
.	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the ministry. All the recommendations made in the EIA/EMP in respect of environmental management risk mitigation measures and public hearing shall be implemented.	Will be Complied
	The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental shall be undertaken for overall improvement of the environment.	Will be Complied
0.	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	Will be Complied
1.	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forests and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other	Will be Complied

	purpose.	
12.	A copy of the clearance letter shall be sent by the project proponent to the concerned Panchayat, Zila Parishad/Municipal corporation, urban local body and local NGO, if any, from whom suggestion/representation, if any, were received while processing the proposal.	Complied
13.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (Both in hard copy as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status reports shall be posted on the website of the company.	Will be Complied
14.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted 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 Clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	Will be Complied
15.	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 SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in . This shall be advertised within seven days from the date of issue of 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 of the Ministry.	Complied
Spe	cific Conditions	
1.	Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 as applicable from time to time shall be obtained from the State Pollution Control Board as required.	Complied
2.	Effluent of 209 cum per day shall be treated in existing Effluent Treatment Plant of Panipat Refinery and Panipat Refinery will not exceed the permissible discharge as allowed to Panipat Refinery while granting environmental clearance vide letter dated 26 th March 2018.	Will be ensured
3.	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement Rules ,2016 Solid Waste Management Rules ,2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Will be complied
4.	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	Will be complied
5.	Odour shall be prevented at the source and effective odour management scheme shall be implemented.	Will be complied
5.	Total fresh water requirement shall not exceed 3600 cum/day, proposed to be met from Munak Regulator on Western Yamuna Canal. Prior permission shall be obtained from the concerned regulatory authority.	Will be ensured
7.	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arrester shall be provided on tank farm and the solvent transfer through pumps.	Will be complied
В.	Process organic residue and spent carbon, if any shall be sent to cement industries. ETP sludge, process inorganic and evaporation salt shall be disposed off to the TSDF.	Will be complied
9.	The company shall strictly comply with the rules and guidelines under	Continuous, Will b

	Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as mentioned time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicles Act, 1989.	A STANDARY DESCRIPTION OF THE PROPERTY OF THE			
10.	The company shall undertake waste minimization measures as below: (a)Metering and control of quantities of active ingredients to minimize waste. (b)Reuse of by-products from the process as raw materials or as raw materials substitutes in other processes. (c) Use of automatic filling to avoid spillage. (d)Use of Close Feed System into batch reactors. (e)Venting equipment through vapor recovery system (f) Use of high pressure hoses for equipment clearing to reduce waste water generation.				
11.	The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be done as per the CPCB guidelines in consultation with the State Forest Department.	Will be complied			
12.	All the commitments made regarding issues raised during the public hearing / consultation meeting shall be satisfactorily implemented.	Will be complied			
13.	At least 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Priority shall be given for construction/repair of the village roads.	Will be complied			
14.	For the DG sets, emission limits and stack height shall be in conformity with the extant regulations and the CPCB regulations. Acoustic enclosures shall be provided to the DG set for controlling the noise pollution.	Will be complied			
15.	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	Will be ensured after project execution			
16.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Will be complied			
17.	There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.	Will be ensured after project execution			
18.	Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel /drain carrying effluent within the premises.	Will be complied			
19.	The unit shall comply with NGT order and shall not damage environment any further including ground water.	Will be complied			
20.	The unit shall take precautionary measures for control of VOCs and shall follow CPCB guideline and norms.	Will be complied			

ENVIRONMENTAL CLEARANCE STIPULATIONS FROM MOEFCC FOR PANIPAT REFINERY CAPACITY EXPANSION FROM EXISTING 15 MMTPA TO 25 MMTPA WITHIN THE EXISTING REFINERY COMPLEX, ENVIRONMENTAL CLEARANCE – REGARDING

(EC Identification No. EC21A010HR142882; File No. J-11011/177/2016-IAII(I) dated 03.12.2021)

SN	EC Conditions	Compliance Status		
124	Specific Conditions	- 10 × 10		
(i).	The project shall conform to ZLD.	Noted		
(ii).	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	Will be complied		
(iii).	The National Emission Standards for Petroleum Oil Refinery issued by the Ministry vide G.S.R. 186(E) dated 18th March, 2008 and G.S.R.595(E) dated 21st August, 2009 as amended from time to time, shall be followed.	Noted		
(iv).	Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology. For emission control and management, use of FG/NG in heater as fuel, adequate stack height, use of Low NOX burners in heater & boiler, continuous stack monitoring, Sulphur recovery plant, etc. shall be installed/ensured.	Will be complied		
(v).	Total water requirement is 1,62,864 m3/day of which fresh water requirement of 98880 m3/day will be met from Western Yamuna Canal. Necessary permission in this regard shall be obtained from the concerned regulatory authority.	Will be complied		
(vi).	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Will be complied		
(vii).	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer to be done through pumps.	Will be complied		
(viii).	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.	Will be complied		
(ix).	Fly ash should be stored separately as per CPCB guidelines so that it should not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust should be avoided. The ash from boiler shall be sold to brick manufacturers/cement industry.	Mixed fuel (Liquid +Gas) will be fired in the Boiler; there will be no ash generation.		
(x).	The company shall undertake waste minimization measures as below: -	Will be complied		
A55,E5	 Metering and control of quantities of active ingredients to minimize waste. 			
	 Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. 			
	c. Use of automated filling to minimize spillage.			
	d. Use of Close Feed system into batch reactors.			
	Venting equipment through vapour recovery system. Use of high pressure hoses for equipment clearing to reduce wastewater generation.			

(xi).	The green belt of 5-10 m width shall be developed in the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. The project proponent shall ensure 33% greenbelt area vis-à-vis the project area through afforestation in the degraded area. The Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.			
(xii).	As per the Ministry's OM dated 30.09.2020 superseding the OM dated 01.05.2018 regarding the Corporate Environmental Responsibility, and as per the action plan proposed by the project proponent to address the socioeconomic and environmental issues in the study area, the project proponent, as committed, shall provide education funds in technical training centers/ support in nearby village's schools, support in health care facilities, drinking water supply and funds for miscellaneous activities like solar street lights, battery, solar panel etc., in the nearby villages. The action plan shall to be completed within time as proposed.			
(xiii).	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.			
(xiv).	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	Will be complied		
(xv).	Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.	Will be complied		
(xvi).	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Will be complied		
(xvii).	Process safety and risk assessment studies shall be further carried out using advanced models, and the mitigating measures shall be undertaken/implemented accordingly.	Will be complied		
(xviii).	The PP should improve the efficiency of ETP Plant and the water discharge should be as per prescribed CPCB Norms. They should also install 24x7 hours monitoring system (of the discharge) and the same should be connected to the server of SCPB/CPCB.	Noted and complied		
Gener	al Conditions			
(1).	No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. 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/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	oted		
ii).	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.	fill be complied		
iii).	The	/ill be complied		

	noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	
(iv).	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Will be complied
(v).	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/pollution control measures shall not be diverted for any other purpose.	Will be complied
(vi).	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	Complied
(vii).	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by email) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	This is being complied already and will continue to do so in future
(viii).	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted 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 clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	This is being complied already and will continue to do so in future
(ix).	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 SPCD/Committee and may also be seen at Website of the Ministry and at https://parivesh.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 concerned Regional Office of the Ministry.	Complied and informed
(x).	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Will be complied
(xi).	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Noted



Nitya NITYA LABORATORIES NITYA LABORATORIES 43, Sector-A1 Ext., Bhalla Enclave,

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

9 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C+91-191-2465597

info@nityalab.com & www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 20210722013-114 Test Report Date: 03/08/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring

Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Veerpal Singh

5r. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	nt Temp.	Stack Temp. (°C)	o. Gas	(as CO)		
			0.500 000	10.00	(°C)	100		mg/Nm³	Kg/hr	PPM
1	SRU-57	22/07/2021	70	1.9	31	433	10.18	84	5.33	73.32
2	SRU-26	22/07/2021	70	1.9	30	225	10.38	97	5.94	86.67
		Permissible Lim	its (mg/Nm ³)			Old		150	
							New		100	

Aemark:

BDL-Selow Detection Limit, Carbon Monoxide (as CO) BOL (LDC-1.0)

Somple Analysed within six days from the date of sampling, All above Farameters are measures with Flue Gas Analyses

(AUTHORISED SIGNATORY)

BOR

(RAVINDER MITTAL)

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♥ PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

3 +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com

www.nityalab.com



NITYA LABORATORIES NITYA LABORATORIES . 43, Sector-A1 Ext., Bhalla Enclave

• 43, Sector-A1 Ext. Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C+91 191-2465597

info@nityalab.com @ www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat

Haryana, INDIA

ULR No.: TC 636621000001213-1214 Test Report Date: 03/08/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

To Check the Pollution Load

IS 11255 (Part 7) Mr. Veerpal Singh

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diamete r (meter)	Ambient Temp. (°C)	Stack Temp. (°C)	Gas Velocity	Hydrogen Sulphide (as H ₂ S)			
							(m/s)	mg/Nm	Kg/hr	PPM	
1	SRU-57	22/07/2021	70	1.9	31	233	10.18	BDL		- 12	
2	SRU-26	22/07/2021	70	1.9	30	225	10.38	BOL	-		
		Permissible L	mits (mg/N	m ³)			014	15			
							New		10		
			Test Metho	d			-	(5:11255 (P-4)			

Remark

801 Selow Detection Limit," Mydrogen Sulphyde (es m,53-804 (LDG-0-1). Sensete Are loved within all days from the date of campling



(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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Himmat, Jammu-180 015, J&K (UT), India

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 20210722013-114 Test Report Date: 03/08/2021

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Method of Sampling

Monitoring Conducted By

: Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Veerpal Singh

Sr. No.	Stack Particulars	Date of Sampling		Stack Height	Stack Diameter	Ambient Temp.	Stack Temp.	Average Gas Velocity	1.010000	es of Sulp (as SO _x)		Oxid	es of Nitro (as NO.)	gen													
			(meter)	(meter)	(meter)	er) (meter)	(meter) (meter)	eter) (meter)	(meter)	(meter)	(meter)	(meter)	(°C)	(0)	(0)	10	10	(0)	(0)	(0)	(°C)	14	(m/s)	mg/N m³	Kg/	PPM	mg/Nm ³
		on decayous o		1.9	31	233	10.18	14	0.9	5.3	31	1.90	16.48														
1	SRU-57	22/07/2021	70		200			19	1.2	7.3	25	1.59	13.29														
2	SRU-26	22/07/2021	70	1.9	30	225	19.38	13	1,2		-																
•	Permissible Limits (mg/Nm)										-	350															
							New					250															

Remark:

801-Below Detection Limit, Oxides of Sulphur (as SO₄)-801 (LOQ-1.0) Sample Analysed within six days from the date of sampling, All above Parameters are measures with flue Gas Analyser

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(RAVINDER MITTAL)

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G +91-129-2241021

#91-9013591021, +91-9013552273

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202107220110-113, 202107230110-113, 202107260110-114

Date: 03/08/2021

ample Particulars

Nature of the Sample Purpose of Monitoring

Method of Sampling

Monitoring Conducted By

: Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Veerpal Singh

r. No.	Stack Particulars	Sampling H	Stack Height (meter)	leight Diameter	Diameter nt	t Temp.	Average Gas Velocity	Carbon Monoxide (as CO)			
20					(°C)		(m/s)	mg/Nm ³	Kg/hr	PPM	
21	HGU-PDS	22/07/2021	60	3.4	33	245	9.14			7.55500	
03.5		22/07/2021	60	1.7	32	243	240.000	40	6.88	34.92	
22	AVU-2	22/07/2021	100	5.1	2.80	1.408	10.86	44	2.25	38.41	
23	DHDS	22/07/2021	60	0.00	31	211	10.33	0	0.00	0.00	
24	OHCU LP Section	23/07/2021	(2000)	1.25	31	199	9.53	1	0.03	0.87	
25	OHCU RG Heater		65	2,42	31	225	10.11	74	7.42		
26	RFCC Heater	23/07/2021	63	1.35	32	207	9.67	84		64,59	
27		23/07/2021	59	0.9	32	246	10.28		2.60	73.32	
	RFCC Boiler	23/07/2021	100	2.4	33	252	2.000000	70	0.95	61.10	
28	MSQ-1	26/07/2021	60	1.64	32		9.46	79	6.91	68.96	
29	MSQ-2	26/07/2021	50.	1.64	33	214	9.12	47	2.00	41.03	
30	HGU 76	26/07/2021	60	3.3	31	221	9.68	50	2.22	43.65	
31	HGU 06	25/07/2021	50	2.64	32	180	8.95	34	6.17	29.68	
32	New Prime G	26/07/2021	60	0.8	33	225	9.15	1	0.11	0.87	
				470	33	178	8.18	98	0.96	85.54	
							Gas		150		
		Permissible Ilmi	ts (mg/Nm³)				Uquid		200		
emark:							FCCU		400		

BOL-Below Detection Limit, Carbon Monoxide (as CO) BOL (LOQ-1.0)

Sample Analysed within six days from the date of sampling. All above Parameters are measures with flue Gas Analyse r

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+91-9013591021, +91-9013552273

labsnitya@gmail.com

www.nityalab.com



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NITYA LABORATORIES

Q 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C +91-191-2465597

info@nityalab.com

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Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.:202107070110-114, 202107080110-112, 202107090110-114 202107160110-112

Date: 03/08/2021

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Method of Sampling

Monitoring Conducted By

: Stack Monitoring

: To Check the Pollution Load

: 15: 11255 (Part 7)

: Mr. Veerpal Singh

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity	Ca	(as CO)	eide.
			No.	20.972794*11)	2.07		(m/s)	mg/Nm³	Kg/hr	PPM
)	HRSG-1	7/7/2021	65	3.3	32	157	8.79	12	2.25	10.47
2	HRSG-Z	7/7/2021	70	3.3	34	162	9.45	10	1.99	8.73
3	HRSG-3	7/7/2021	70	3.3	31	167	10.35	10	2.16	8.73
4	HRSG-4	7/7/2021	70	3.3	33	168	9.61	4	0.80	3.49
5	HRSG-5	7/7/2021	70	3.3	34	172	9.37	6	1.16	5.24
6	CPP-VHP-1	8/7/2021	100	3.34	35	150	10.21	4	0.91	3.49
7	CPP-VHP-2	8/7/2021	100	3.34	34	149	9.60	4	0.86	3,49
07	Tagging Car	8/7/2021	100	3.04	36	151	9.53	4	0.70	3.49
8	U8-02 PX Isomer	9/7/2021	56	1.2	33	227	9,93	1	0.02	0.87
9	PX Isomer PX Tatory	9/7/2021	56	1.2	35	226	10.86	10	0.26	8.73
10	PXCCR	9/7/2021	100	1.9	32	273	11.58	60	3.87	52.37
11	15.177.17.17	9/7/2021	78	2	34	130	9.96	1	0.08	0.87
12	PX-Xylene	9/7/2021	30	1	36	290	11.10	26	0.43	22.70
13	PX NHT	10/7/2021	60	2.35	35	258	11.41	24	2.40	20.95
14	PTA/FCPH	1 (2.33 V.C.C.)			36	263	11,44	20	1.99	17.46
15	PTA/Hot Oil Heater	10/7/2021	60	2.35		- 17770	25700197		1275	
16	PTA/Thermal Oxidiser	10/7/2021	60	2.35	34	79	6.39	14	1.18	12,22
17	CCRU Reformer Heater-205 FF	16/07/2021	50	1.26	33	249	9.89	16	0.41	13.97
18	CCRU NHT Heater	16/07/2021	70	2.34	35	259	9.77	17	1.44	14.84
19	CCRU Reformer Heater-201, 202,203 FF	16/07/2021	60	1.64	32	254	10.12	55	2.39	48.01
	"	Permissible Un	nits (mg/Nm	3)			Gas		150	
		A TOTAL STREET	5,000				Liquid		200	
							FCCU	-	400	

BDL-Below Detection Limit, Cerbon Monoxide (as CO) BOL (LOC-1.0) Sample Analysed within six days from the date of sampling. All above Parameters are measures with Five Gas Analyses

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(RAVINDER MITTAL)

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+91-129-2241021

+91-9013591021, +91-9013552273

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C+91-191-2465597

info@nityalab.com @ www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test R., port No.: 202107220110-113, 202107230110-113, 202107250110-114

Date: 03/08/2021

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Veerpal Singh

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambie nt Temp,	Stack Temp. (°C)	Average Gas Velocity		es of Sulp! (as SO _x)	nur		s of Nitro (as NO,)	gen
					(°C)		(m/s)	mg/Nm²	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM
20	HGU 77	22/07/2021	60	3.4	33	245	9.14	6	1.0	2.3	6	1.60	1
21	HGU-PDS	22/07/2021	60	1.7	32	243	10.86	8	0.4	3.1	8	0.41	4.25
22	AVU-2	22/07/2021	100	5.1	31	211	10.33	3	1.4	1.1	51	23.87	27.11
23	DHDS	22/07/2021	60	1.25	31	199	9.53	3	0.1	1.1	0.385-	F-03/10/2005	Section 1
24	OHCU LP Section	23/07/2021	65	2.42	31	225	10.11	8	0.1		60	1.59	31.89
25	OHCU RG Heater	23/07/2021	63	1.35	32	207	9.67	10		3.1	41	4.11	21.79
26	RECC Heater	23/07/2021	59	0.9	32	246	10.28	3273	0.3	3.8	35	1.08	18.60
27	RFCC Boiler	23/07/2021	100	2.4	33	252		8	0.1	3.1	120	1.52	63.78
28	MSQ-1	26/07/2021	60	1.64			9.46	10	0.9	3.8	117	10.24	52.19
29	MSQ-2	26/07/2021	60		32	214	2112	9	0.4	3.4	76	3.23	40.40
30	HGU 76			1.64	33	221	9.68	7	0.3	2,7	76	3.38	40.40
31	Later Process	26/07/2021	60	3.3	31	180	8.95	3	0.5	1.1	82	14.88	43.58
3000	HGU 06	26/07/2021	50	2.64	32	225	9.15	3	0.3	1.1	35	3.78	13.60
32	New Prime G	26/07/2021	60	0.8	33	178	8.18	3	0.0	1.1	33	0.32	
		Permissible Li	mits (mg/Nn	n³)			Gas		50			350	17.54
							Liquid		1700			450	

BDL-Below Detection Limit, Oxides of Sulphur (as 50,)-601 (LOQ-1.0) Sample Analysed within six days from the date of sampling, All above Parameters are measures with Flue Gas Analysis

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(RAVINDER MITTAL)

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+91-9013591021, +91-9013552273

labsnitya@gmail.com



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-91-191-2465597

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202107070110-114, 202107080110-112, 202107090110-114 202107160110-112

Date: 03/08/2021

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Method of Sampling

Monitoring Conducted By

Stack Monitoring

: To Check the Pollution Load

:15: 11255 (Part 7)

Mr. Veerpal Singh

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diamete	Ambient Temp. ("C)	Stack Temp. (*C)	Average Gas Velocity	20000000	es of Sulph (as SO ₃)	nur	Oxio	(as NO ₂)	ogen
			(incar)	(meter)	1.5	3,407.0	(n./s)	mg/Nm ¹	Kg/hr	PPM	mg/N m³	Kg/hr	PPM
1	HR5G-1	7/7/2021	55	3.3	32	157	8.79	8	1.5	3.1	229	42.95	121.72
2	HRSG-2	7/7/2021	70	3.3	34	1/2	9.45	11	2.2	4.2	112	22.33	59.53
3	HRSG-3	7/7/2021	70	3.3	31	167	10.35	18	3.9	6.9	114	24.61	60.59
4	HRSG-4	7/7/2021	70	3.3	33	168	9.61	13	2.6	5.0	226	45.19	120,12
5	HRSG-5	7/7/2021	70	3.3	34	172	9.37	18	3.5	6.9	214	41.38	113.75
6	CPP-VHP-1	8/7/2021	100	3.34	35	150	10.21	9	2.0	3.4	240	54.49	127.57
1000		8/7/2023	100	3.34	34	149	9.60	9	1.9	3.4	226	48.34	120.12
7	CPP-VHP-2		100	3.04	36	151	9.53	9	1.6	3.4	228	39.93	121.19
8	UB-02	8/7/2021 9/7/2021	56	1.2	33	227	9.93	3	0.1	1.1	80	1.93	42.52
9	PX isomer	110000000000000000000000000000000000000	56	1.2	35	226	10.86	3	0.1	1.1	78	2.06	41.46
10	PX Tatory	9/7/2021	8592	1.9	32	273	11.58	3	0.2	1.1	107	6.90	56.87
11	PXCCR	9/7/2021	100	2	34	130	2.56	3	0.2	1.1	86	7.17	45.71
12	PX-Xylene	9/7/2021	78	-	5540	290	11.10	3	0.0	1.1	90	1.50	47,84
13	PX NHT	9/7/2021	30	1	36	11556	11.41	6	0.6	2.3	119	11.90	63.25
14	PTA/FCPH	10/7/2021	60	2.35	35	258			923	1000000	1899	200000	56.87
15	PTA/Hot Oil Heater	10/7/2021	60	2.35	36	203	11.44	6	0.6	2.3	107	10.63	
16	PTA/Thermal Oxidiser	10/7/2021	60	2.35	34	79	6.39	15	1.3	5.7	138	11.66	73.35
17	CCRU Reformer Heater-205 FF	16/07/2021	60	1.26	33	249	9.89	3	0.1	1.1	80	2.03	.42.50
10	CCRU NHT Heater	16/07/2021	70	2.34	35	259	9.77	3	0.3	1.1	72	6.10	38.2
18	- Andrew Comment	+5/07/2021	60	1.64	32	254	10.12	6	0.3	2.3	140	6.09	74,4
19	CCRU Reformer Heater-201, 202,203 FF	16/07/2021				UC 35%	334.55	177	50			350	
		Permissible Li	mits (mg/Ni	m')			in in		50				
							Liquid		1700			450	

Remark:

BDL-Below Detection Limit, Oxides of Sulphur (as SO,)-RDL (LOQ-1.0) DDL-below Desection Limit, Colors of America, and America, Sample Analysed within ale days from the date of sampling. All above Parameters are measures with Five Gas Analyses.

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+91-9013591021, +91-9013552273

labsnitya@gmail.com



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Himmat, Jammu-180 015, J&K (UT), India

C+91-191-2465597

info@nityalab.com € www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

ULR No.: TC 636621000001209-1212, 1223-1235, 1240-1242 Test Regort Date: 03/08/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: I5: 11255 (Part 7) : Mr. Veerpal Singh

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp. (*C)	Average Gas Velocity	Partice Matters ¹			I & Vanadi as Ni & Vj ^z	
							(m/s)	mg/Nm³	Kg/hr	mg/Nm ¹	Kg/hr	PPM
20	HGU 77	22/07/2021	60	3.4	33	245	9.14	21.26	3.7	BDL		2
21	HGU-PDS	22/07/2021	60	1.7	32	243	10.86	10.36	0.5	BDL		
22	AVU-2	22/07/2021	100	5.1	31	211	10.33	16.28	7.6	BDL	-27	2
23	DHDS	22/07/2021	60	1.25	31	199	± 53	12.28	0.33	8DL	*	€
24	OHCU LP Section	23/07/2021	65	2.42	31	225	10.11	15.23	1.5	BDL	*	
25	OHCU RG Heater	23/07/2021	63	1.35	32	207	9.67	8.96	0.3	BDL	•	3
26	RFCC Heater	23/07/2021	59	0.9	32	246	10.28	9.24	0.1	BOL	-	100
27	RFCC Boiler	23/07/2021	100	2.4	33	252	9.46	8.42	0.7	BDL	*	
28	MSQ-1	26/07/2021	60	1.64	32	214	9.12	8.96	0.4	BOL		
29	MSQ-2	26/07/2021	60	1.64	33	221	9.68	7.34	0.3	BDL	-	¥
30	HGU 76	25/07/2021	60	3.3	31	180	8.95	21.24	3.9	BDL	*	-
31	HGU 06	25/07/2021	50	2.64	32	225	9.15	17.84	1.9	BDL		
32	New Prime G	26/07/2021	60	0.8	33	178	8.18	9.84	0.1	BOL	- 2	- 2
-		Permissible I	Limits (mg/N	m³)			r as	1	0			-
							Liquid	10	10		5	7
			Test Metho	d				IS-1125	is (P-1)	USEPA I	Method 29	By AAS

BDL-Below Detection Limit, 1 Particulate Matters (as PMI-BDL (LOQ- 5.0), 2 Nickel & Vanadium (as Ni & V) -BDL (LOQ- 0.5) Sample Analysed within six days from the date of sampling.



Certificate No. T-5366

(AUTHORISED SIGNATORY)

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H +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

- Himmat, Jammu-180 015, J&K (UT), India
- +91-191-2465597
- info@nityalab.com 🕻 www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

ULR No.: TC 6366. 1000001115-1122, 1129-1136,1153-1155 Test Report Date: 03/08/2021

Sample Particulars Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Veerpal Singh

Analysis Report

Sr.	Stack Particulars	Date of Sampling	Stack Height	Stack Diamet	Ambie nt	Stack Temp.	Average Gas Velocity	Partic Matters ¹	olate (as PM)	Nickel (a	& Vanadi s Ni & V)²	um*
No.		Samoning	(meter)	er (meter	(°C)	(°C)	(m/s)	mg/Nm ³	Kg/hr	mg/Nm³	Kg/hr	PPM
				3.3	32	157	8.79	7.29	1.4	BDL	-	-
1	HRSG-1	7/7/2021	65	3.3	34	162	9.45	9.36	1.9	BOL		_
2	HRSG-2	7/7/2021	70	10.575.0	31	N. 7-32	10.35	9.23	2.0	BDL	*	
3	HRSG-3	7/7/2021	70	3.3	1745.77	167	9.61	100000	1.3	BDL	-	- 36
127	HRSG-4	7/7/2021	70	3.3	33	158	15402-25	6.26	4.2	BDL	-	
4	(8.900 pt.0)	7/7/2021	70	3.3	34	172	9.37	21.94	3.3	BOL		
5	HRSG-5	8/7/2021	100	3.34	35	150	10.21	14.46	2500			-
6	CPP-VHP-1		100	3.34	34	149	9.60	15.64	3.3	BOL	-	-
7	CPP-VHP-2	8/7/2021	D 26.5	3.04	36	151	9.53	13.24	2.3	BDL		*
8	UB-02	8/7/2021	100	1.2	33	227	9.93	10.24	0.2	BDL		
9	PX Isomer	9/7/2021	56	1.2	35	226	10.86	18.84	0.5	BDL		*
10	PX Tatory	9/7/2021	56	1.9	32	273	11.58	24.32	1.6	BDL		-
11	PXCCR	9/7/2021	100	2	34	130	9.96	13.27	1.1	BOL		
12	PX-Xylene	9/7/2021	78		36	290	11.10	21.29	0.4	BDL		
13	PX NHT	9/7/2021	30	1	35	258	11.41	6.29	0.6	BDL	- 5	1 *
14	PTA/FCPH	10/7/2021	60	2.35	5.517	-0.0000000	- Carrie	0.02	0.9	201	1	-
14	- Contraction	10/7/2021	60	2.35	36	263	11.44	8.92		BDL	-	-
15	PTA/Hot Oil Heater	11319434.5.00.5-	60	2.35	34	79	6.39	10.2	0.9	BDL	19	138
16	PTA/Thermal Oxidiser	10/7/2021		03.07	33	249	9.89	9.28	0.2	BUL		
4.00	CCRU Reformer Heater-	16/07/2021	60	1.26	-33	243	15087	11 1000000	100,000	OU.	_	-
17	205 FF	- 1	70	2.34	35	259	9.77	8.46	0.7	BDL	-	
18	CCRU NHT Heater	16/07/2021	70	AT 0011	15,75	254	10.12	8.24	0.4	1004	-	1
	CCRU Reformer Heater-	16/07/2021	60	1,64	32	254	10.12		78.0	BOL		
19			to be			-	Gas		10			
	Pe	ermissible Limits	(mg/Nm ⁻)				2009		100	-	5	
							Liquid		***************************************	1000000		
			Method		-	12.95		15-11	255 (P-1)	USEPA	Method	29 By A

BDL-Below Detection Limit, Particulate Matters (as PM)-BDL [LOQ- 5.0], Nice & Validation (... Ni & V) -BDL [LOQ- 0.5] 77

Sample Analysed within six days from the date of sampling.

Certificate No. T-6360

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destroyed offer 30 days from the date of the state of the

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B +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Q 43 Sector 41 EV., Bhalla Foctave, Channe riminat, Iammo 1802015, 18647011 Irilia

Q+91-191-2465597

🖾 info@nityalab.com 🧗 www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distr. Panipat Haryana, TNDIA

ULR No.: TC 636621000001388-1394 Test Report Date: 28/08/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

: To Check the Pollubon Load

: 15: 11255 (Part 7)

Mr. Veerpal Singh

Analysis Report

Sr.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambie nt Temp.	Stack Temp . (°C)	Average Gas Velocity		culate rs' (as M)	00,000,000	& Vanadi s Ni & V) ²	
				05542 151	(°C)		(m/s)	mg/N m³	Kg/hr	mg/N m ²	Kg/hr	PP M
1	DHDT-1	19/08/2021	70	1.8	35	225	9.59	16.54	0.9	BDL	-	
2	DHDT New	19/08/2021	20	1.8	36	155	9,53	19.32	1.2	BDL	-	2.
3	DHDT H-02	19/08/2021	70	1.8	35	235	9.30	20.21	1.0	BDL	-	+
4	DEU	20/08/2021	70	3	33	156	9.68	16.86	2.7	BDL	- ≥	-
5	HGU-BSVI	20/08/2021	59.7	4	32	152	8.83	13.76	3.9	BDL	-	-
6	New MSQ-3	20/08/2021	60	1,64	34	273	11.02	17.43	0.8	BDL		-
7	HCU Unit	20/08/2021	70	1.7	32	172	9.95	12.56	0.7	BDL	3	-
	-		/29.1520 Januari				Gas	1	0		24	
		Permissible	Limits (mg/	Nm.)			Liquid	10	10		5	
			Test Meth	od				IS-1125	5 (P-1)	USEPA	Method 2	9 By

Bemark

BDL Below Detection Limit, Particulate Matters (as PM)-BDL (LOQ: 5.0), Nulser & Vasadium rac Nr. & V), RDL (LDQ: 0.5) Sample Analysed within six days from the date of sampling.



(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

water the intensive acquisition increases the colored of reject. The results contained in the less separated by a property of the intensive acquisition of the import in attribute and the property of the intensive acquisition of the property of the action of the intensive acquisition of the intensive acqui If you have any completes feedback regarding the sample collection/testing test report, receive sund an entail at infloring plate your and call at +91-191-1465507, +91-9673924093



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Q 43, Sector A1 Est, Bhalla Enclave Channel Himmat, Jansmo 186 015, J&K (UT) Indio

C +91 191 2465597

🗃 mfo@nityalab.com 📢 www.ncy.can.com

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Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distr. Panipat Haryana, INDIA

Test Report No.: 202108190110-112, 202108200110-113 Test Report Date: 28/08/2021

Sample Particulars

Nature of the Sample Purpose of Manitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

To Check the Pollution Load

IS: 11255 (Part 7)

Mr. Veerpal Singh

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diamet er	Ambie nt Temp.	Stack Temp . (°C)	Average Gas Velocity		s of Sul as SO _x)		Oxide	es of Nit (as NO.	
				(meter)	(°C)		(m/s)	mg/N m³	Kg/	PPM	mg/N m³	Kg/	PPM
1	DHDT-1	19/08/2021	70	1.6	35	225	9.59	16	0.8	6.1	210	11.04	111.62
2	DHOT NEW	19/08/2021	70	1.8	35	155	9.53	18	1.1	6.9	74	4.50	39.33
3	DHDT H-02	19/08/2021	70	1.8	35	235	9.30	10	0.5	3.8	92	4.60	48.90
4	DCU	20/08/2021	70	3	33	156	9.08	4	0.6	1.5	69	11.08	36.68
5	HGU-BSVI	20/08/2021	59.7	4	32	152	8.83	6	1.7	2.3	94	26.34	49.96
6	New MSQ-3	20/08/2021	60	1.64	34	273	11.02	9	0.4	3.4	97	1.44	51.56
7	HCU Unit	20/08/2021	70	1.7	32	172	9.95	12	0.7	4.6	89	4.85	47.31
		Permissible	timits (ma	(Nm ³)			Gas		50			350	
		1 Citilisatore	cinico (mg)	inn Y			Liquid		1700			450	

601. Below Detection Limit, Oxides of Sughtur (a) 30,0 No. (b00-1,0) namely enabled within the data from the date of sampling. 40 above Parameters are measures with Net Cas Analyses.

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE: The devicing except the responsibility for content of legal, the results considered in the formal edited are to the amount shall not be equal to the most shall not be equal to the most approach of the interval of the interval of the edited approach of the interval of the interval



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- 43 Sector Al Ext. Bhalla Enclave. Channi Hommat, Jamenu-185 015, 3&k (UT), India
- C +91 191 2465597
- 🗃 info@ditvalah.com 🐔 www.ninjalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Retinery Division) Panipat Refinery, Disti. Panipat Haryana, INDIA

ULR No.: TC 636621000001476-1477

Test Report Date: 08/09/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

: To Check the Pollution Load IS: 11255 (Part 7) Mr. Veerpal Singh

Analysis Report

No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambie nt Temp.	Stack Temp . (°C)	Average Gas Velocity		gen Sulphi as H ₂ S)	ide
			(meter)	(meter)	(°C)	. (5.7	(m/s)	mg/Nm ³	Kg/hr	PPM
-	SRU-57	31/08/2021	70	1.9	33	227	9.75	BDL		
2	SRU-26	31/08/2021	70	1.9	34	217	10.07	BDL	+	
_	100000000000000000000000000000000000000		Old		15					
		Permissible L	imits (mg/	Nm³)			New		10	
			Test Meth	od				IS:1	1255 (P-4))

Remark

Bir deise Detection (ent., exprogen Submide las (13) 600, 100-001, sample Analyses within the days from the date of semants.



(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distr. Panipat Haryana, INDIA

Test Report No.: 202108310110-111 Test Report Date: 08/09/2021

Sample Particulars

Nature of the Sample Purpose of Manitoring Method of Sampling Monitoring Conducted By

: Stack Monitoring

: To Check the Pollution Load

: 15: 11255 (Part 7)

: Mr. Veerpal Sinon

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Amb ient Tem	Stack Temp . (°C)	Average Gas Velocity	1.0000000000	s of Su as SO _x			es of Nitro (as NO,)	gen
					p. (°C)		(m/s)	mg/N m ³	Kg/	PPM	mg/N m³	Kg/hr	PPM
1	SRU-57	31/08/2021	70	1.9	33	227	9.75	17	1.0	6.5	26	1.54	13.87
2	SRU-26	31/08/2021	70	1.9	34	217	10.07	21	13	8.0	29	1.81	15.41
		Permissible L	imits (mo/)	Nm ³ \			Old		•			350	
lemark.			127			New		- 2			250		

Mit. Below Defection Lend. Custers of Subhur (as NO4)-600 (NAC): It founds for expected within an object from the date of sampling. All above Parameters are mensions with Five Gas frish set

(AUTHORISED SIGNATORY) (RAVINDER MITTAL)

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Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 2021063:0110-111 Test Report Date: 08/09/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

To Check the Pollution Load

IS: :1255 (Part 7) Mr. Veerpai Singh

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter	Stack Diamet er	Ambi ent Temp	Stack Temp . (°C)	Average Gas Velocity	Car	(as CO)	ide
)	(meter)	. (°C)	[15](9)(6)(2)	(m/s)	mg/Nm ³	Kg/hr	РРМ
1	5KU-57	31/06/2021	70	1.9	33	227	9.75	88	5.22	76.82
2	SRU-26	31/08/2021	70	1.9	34	217	10.07	81	5.06	70.71
		and a state of the					Old		150	
	Pe	rmissible Lim	its (mg/Ni	11.)			New		100	

BD1 Bettie Detaction and Carrott Macrospe in COL 606 (1.002) (0)

parties analysed within as days from the date of satisfying. All above Parameters are impassive alth him bus Analyses

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)



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Himmat, Jammu-180 015, J&K (UT), India

+91-191-2465597

■ info@nityalab.com € www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

ULR No.: TC 636621000001566-1570, 1574, 1583-1587, 1609-1612, 1618-1622 Test Report Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

Sr.	Stack Particulars	Date of Sampling	Stack Height	Stack Diamet	Ambie nt	Stack Temp.	Average Gas Velocity	Partic Matters ¹	ulate (as PM)	Nickel (a	& Vanad s Ni & V)	ium"
No.			(meter)	er (meter)	Temp. (°C)	(°C)	(m/s)	mg/Nm	Kg/ħr	mg/Nm	Kg/h	PPN
				3.3	31	162	9.03	8.28	1.6	BDL	(-)	
1	HRSG-1	10/9/2021	65	300	29	159	10.83	7.14	1.6	BEM.	150	
2	HRSG-2	10/9/2021	70	3.3		162	9.60	8.16	1.7	BDL	1.00	
3	HRSG-3	10/9/2021	70	3.3	28	1. 1900		5.23	1.3	SDL	1.5	-
4	HRSG-4	10/9/2021	70	3.3	29	165	11.66		3.6	BDL	-	- 1
	HRSG-5	10/9/2021	70	3.3	28	169	10.61	16.34	1,000			-
5	TAMES DE COMPANY	13/09/2021	100	3.34	30	166	10.66	14.46	3.3	BDI.		
6	CPP-VHP-1	100000000000000000000000000000000000000	60	3.4	34	204	10.12	18.96	3.9	BDL		
7	HGU 76	14/09/2021	1000	2000	34	247	10.82	9.28	0.5	BDI.	7,1	
8	HGU-PD5	14/09/2021	60	1.7	31	219	11.22	9.46	0.5	BOL	-	
9	MSQ-1	14/09/2021	60	1.64	31	221	12.20	9.31	0.5	BDL	- 4	
10	MSQ-2	14/09/2021	60	1.64	31	272	12.87	9.16	0.1	BDL.		- 3
11	New Prime G	14/09/2021	60	0.8	31	219	10.15	16.24	1.7	BDL.	+	-
12	OHCU LP Section	15/09/2021	65	2,42	32	210	9.94	9.21	0.3	BDL.		13
13	OHOU RG Heater	15/09/2021	63	1.35	34	293	12.86	8 46	5.1	BDL	-	
14	RFCC Heater	15/09/2021	59	0.9			2000MF-7	9.24	1.1	25000		-
15	RFCC Boiler	15/09/2021	100	2.4	40	287	13.55	39724		BDL.		_
15	CCRU Reformer Heater-	16/09/2021	60	1.26	32	159	10.41	8.24	0.3	BDL		
17	205 FF CCRU NHT Heater	16/09/2021	70	2.34	34	261	10.14	9.64	0.8	BDL	-	
18	CCRU Reformer Heater-	16/09/2021	60	1.54	32	252	10.35	10.64	0.5	BDL		
	201, 202,203 FF	16/09/2021	70	1.8	34	230	11.55	8.94	0.6	BDL	- 17	
19	DHOT H-01	missible Limits	/ma/Nm³)	-		Gas	10			+:	
	Per	missions chine	/mal				Liquid	10	0		5	
		Test	Method					IS-1125	5 (P-1)	USEPA	Method	29 By

BOX Below Detection Limit, *Particulate Matters (as PM) BDL (LDX)-5 (CL* hicker & Variation (as No 8 V)* Sample Analysed within six cays from the date of simpling.



T-6.366

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE the assoratory accepts the responsibility for content of record. The secits contained in this fest report record to the sample fest report that had be reported as a second as four as though without sections and the towards the least a received only by your guidance and not for legal purpose of the department that report that not be reported in the will have the window and the regularization of the programment for people with the programment for the programm absroyed after \$1 days from the date of four of four of their preferate where difference precised, any compactify about this report to the compact and the warry which if days of their or their precise at their accounts about this report to the compact and the compact and the compact accounts and their precise at their precise a recular ted Funded ground only

Fyou have any compilal/feedback regarding the sample collection/festing-fest report please send on email of injurinty (spin com and case or +1) (11) 246,6377 +2) -367,272,2073

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P PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

+91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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Work for Quality

Sample Particulars

Nature of the Sample Purpose of Monitoring

Method of Sampling

Monitoring Conducted By

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued to: M/s Indian Oil Corporation Limited

Haryana, INDIA

(Refinery Division)

Panipat Refinery, Distt. Panipat

• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

+91-191-2465597

■ info@nityalab.com < www.nityalab.com

Test Report

ULR No.: TC 636621000001652-1654, 1660-1664, 1680-1682, 1702, 1729

1730, 1755-1756

Lest Report Date: 04/10/2021

: Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

Mr. Rishi Pal

Analysis Report

šr.	Stack	Date of	Stack Height	Stack Diameter	Ambien t Temp.	Stack Temp.	Averag e Gas	Particu Matters ¹ (ilate (as PM)	Nicke (i	l & Vanadi as NI & V)	um*
No.	Particulars	Sampling	(meter)	(meter)	(°C)	(°C)	(m/s)	mg/Nm	Kg/hr	mg/Nm³	Kg/hr	PPM
					33	235	9.48	9.12	0.5	BOL		
20	DHDT H-02	16/09/2021	10	1.8		223	10.84	14.86	7.1	BOL.		*
21	AVU-1	18/09/2021	100	5.1	32	177	9.08	15 92	1.8	BDL		
22	HGU 06	18/09/2021	50	2.64	33	190	9.00	14.28	2.50	BDL	1.	
23	UB-02	18/09/2021	100	3.04	35	166	9.86	12.33	0.3	BDL		
24	PX Isomer	20/09/2021	56	1.2	35	221	10.80	17.26	0.5	BOL		
25	PX Tatory	20/09/2021	56	1.2	35	220	11.50	19.26	1.2	BDL	-41	
26	PX CCR	20/09/2021	100	1.9	33	167	10.56	12.21	1.0	BOL	347	
27	PX-Xylene	20/09/2021	78	2	34	260	11.65	18.34	0.3	BOL		
28	PX NHT	20/09/2021	30	1	34	180	11.73	7.26	0.5	BDL		
29	DHDT BSIV	21/09/2021	70	1.8	37	180	11.22	9.14	2.2	BOL		
30	HGU-BS-VI	21/09/2021	0	3.4	35	175	11.03	11.34	2.1	BDL		
31	DCU Heater-1	21/09/2021	70	3	33	231	11.81	10.32	2.2	BOL	-	
32	HGU 75 F-101	23/09/2021	60	3.3		187	9.51	11.18	0.3	BDL	-	
33	DHDS	24/09/2021	60	1.25	28	198	11.28	14,22	7.5	BOL		
34	AVU-11	24/09/2021	100	5.1	38	267	13.00	10.28	1.2	BOL		1
35		27/09/2021	60	2.35	.579	253	12 96	9.22	1.1	80.		
36	PTA/Thermal	27/09/2021	60	2.35	35	253	100000		10	-	-	
1	Oxidiser	Dermissit	ole Limits (m	g/Nm³)			Gas		5	-	5	
		1 Cililiani					Liquid		100	l let ver	A Method	29 By AA
			Test Me	othod				IS-11	255 (P-1)	USEP	M IMELIOR	A 1 2 10 1

BDL Below Detection Limit, * Particulate Metters (as PM) 480. [LDQ: 5.0]. Mickel & Variation (as Ni 8 V) Sample Analysed within six days from the date of sampling

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(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

1.6.33 NOTE The parameters account the reconsidery for current of reconst the reconstruction and the second or an experience of the current of the reconstruction of the second or an experience of the second or an experience of the current of the second or an experience of the second or must not be indicational societies for extract the working appropriate the properties of functions are o

PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

A +91-129-2241021

+91-9013591021, +91-9013552273



NITYA LABORATORIES

 43. Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu 180 015, J&K (UT), India

C+91-191-2465597

info@nityalah.com 6 www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.:202109100110-114, 202109130110, 202109140110-114, 202109150110-113, 202109160110-113

Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

Sr. Stack No.	Particulars	Date of Sampling	Stack Height (meter)	Stack Diamete	Ambient Temp. ("C)	Stack Temp. (°C)	Average Gas Velocity		es of Suip (as SO _x)	hur	Oxio	Jes of Nitr (as NO.)	ogen
k			unctery	(meter)	(.4)		(m/s)	mg/Nm³	Kg/hr	PPM	mg/N m ¹	Kg/hr	PPM
1 HRSG	1	10/9/2021	65	3.3	31	162	9.03	6	1.1	2.3	29	5.52	15.41
2 HRSG	-2	10/9/2021	70	3.3	29	159	10.83	7	1.6	2.7	2.2	5.06	11.69
3 HRSG	-3	10/9/2021	70	3.3	28	152	9.60	7	1.4	2.7	26	5.27	13.82
4 HRSG	-4	10/9/2021	70	3.3	29	165	11.66	16	3.9	6.1	230	56.20	122.25
5 HRSG	1000	10/9/2021	70	3.3	28	169	10.61	14	3.1	5.3	221	48.71	117,4
6 CPP-V		13/09/2021	100	3.34	30	166	10.66	298	68.0	113.7	148	33.78	78.67
7 HGU 7	M172	14/09/2021	60	3.4	34	204	10.12	6	1.2	2.3	16	3.31	8.50
(8) 753969610	100 m	17:M423433005	60	1.7	34	247	10.82	6	0.3	2.3	ú	0.30	3.19
8 HGU-F		14/09/2021	60	1.64	31	219	11.22	6	0.3	2.3	7	0.36	3.72
9 MSQ		14/09/2021	60	1.64	31	221	12.20	- 6	0.3	2.3	8	0.45	4.25
10 MSQ-2		14/09/2021	7.7	0.8	31	272	12.87	4	0.1	1.5	7	0.09	3.72
	rime G	14/09/2021	60	1,000,000,000	31	219	10.15	6	0.6	2.3	20	2.04	10.63
12 OHCU	LP Section	15/09/2021	65	2.42	377	- 1971 I G A	9.94	6	0.2	2.3	10	0.32	5.32
13 OHCU	RG Heater	15/09/2021	63	1.35	32	210	12.86	6	0.1	2.3	13	0.20	6.91
14 RFCC	Heater	15/09/2021	59	0.9	34	293	100000000		_3474_	77.00	199	2011	
15 RFCC	Boiler	15/09/2021	100	2.4	40	287	13.56	3	0.4	1.1	112	13.17	59.53
16 CCRU	Reformer r-205 FF	16/09/2021	60	1.26	32	159	10,41	8	0.3	3.1	38	1.22	20.20
The state of the s	NHT Heater	16/09/2021	70	2.34	34	261	10.14	5	0.4	1.9	52	4.56	27.64
		1640043031	60	1.64	32	252	10.35	7	0.3	2.7	6	0.27	3,19
18 CCRU Heater 202,20		16/09/2021	00						0.9	5.3	189	11.85	100.46
19 DHDT	Annual State of State	16/09/2021	70	1.8	34	530	11.55	14	19.50	3.5	109	- STORES	100.90
19 1/10/	(11.95)	Permissible Li	mits (mg/Nn	n')			Gas		50			350	
		- Carterior and Car	nonset = 14 975 501 6.7567				Liquid		1700			450	-
										_			

BDL Below Retection Limit, Oxides of Sulphur (as SO₂) 80L (LOC-1.0) Sumple Analysed within six days from the date of sampling. All above Parameters are measures with Flue Can Analysin

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE The indicentary of cepts the removability for content of report, The results contained in this test report recited envise the sample lesson feet report shall not no represent enter without without without without an expensive of the Moved the report is interested by for your guidance and not for legal purpose or for dozenhancer. The report shall not be represented except in fall without the written proposed of the original states with the proposed of the original states or o

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PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

B +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Himmat, Jammu-180 035, J&K (UT), India

+91-191-2465597

info@nityalab.com & www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distr. Panipat Haryana, INDIA

Test Report No.: 202109160114, 202109180110-112, 202109200110-114

207109210110-113, 202109230110, 202109240110 111

202109270110-111

Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr.Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height	Stack Diameter (meter)	Amble nt Temp.	Stack Temp. ("C)	Average Gas Velocity		es of Sulph (as 50x)	ur	0.000	s of Nitros	en
			(meter)	(meter)	(°C)	()	(m/s)	mg/Nm ³	Kg/hr	PPM	mg/Nm ¹	Kg/hr	
20	DHDT H-02	16/09/2021	70	1.8	33	235	9.48	12	0.6	4.6	104	5.30	55.28
	AVU-1	18/09/2021	100	5.1	32	223	10.84	5	2.4	1.9	57	27,30	30.20
21		18/09/2021	50	2.64	33	190	9.08	б	0.7	2.3	46	5.30	74.45
22	HGU 06	0.54.7.6.0000000	100	3.04	35	166	9.88	124	21.7	47.3	44	7.72	23.39
23	UB-02	18/09/2021	1707073	1.2	35	221	9.85	- 5	0.1	2.3	52	1.26	27.56
24	PX Isomer	20/09/2021	56			1	10.80	5	0.1	1.9	47	1.25	24.95
25	PX Tatory	20/09/2021	56	1.2	35	220			0.4	2.3	26	1.66	13.80
26	PXCCR	20/09/2021	100	1.9	33	274	11.50	6	-			130/50	9.57
27	PX-Xylene	20/09/2021	78	2	34	16/	10.56	6	0.5	2.3	18	0.28	7.97
28	PX NHT	20/09/2021	30	1	34	260	11.65	6	0.1	2.3	15 62	4.39	32.9
29	DHDT BSIV	21/09/2021	70	1.8	37	180	11.73	14	1.0	5.3	The state of the s		30.9
30	HGU-BS-VI	21/09/2021	0	3.4	38	180	11.22	8	1.9	3.1	58	14,00	4.78
31	DCU Heater-1	21/09/2021	70	3	35	175	11.03	19	3.5	7.3	9	1.68	1
32	HGU 75 F-101	23/09/2021	60	3.3	33	231	11.81	19	4.1	7.3	9	1.94	4.78
33	DHDS	24/09/2021	60	1.25	28	187	9.51	3	0.1	1.1	57	1,55	30.3
34	AVU-II	24/09/2021	100	5.1	34	198	11.28	173	90.8	66.0	27	14.17	2.66
35	PTA/Hot Oil	27/09/2021	60	2.35	38	267	13.00	9	1.0	3.4	5	0.56	1 5000
36	PTA/Thermal Oxidiser	27/09/2021	60	2.35	35	253	12.96	75	8.6	28.6	69	7.91	
	Coodiser	Permissible I	imits (mg/	4m³)			Gas		50			350	
		r granisanic i		255650			Liquid		1700			450	

Remark:

upo-Selvius Detection Limit, Oxidox of Sulphur (at SO.) 9DL (COD-1.0) Sample Analysed within see days from the date of sampling. All above Parameters are interested with from Gas Analyses

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE: The appointment of the second of regard the result shall be read to the regard to the second of the second o NOTE the dispersion of copy the exponents to contempt replicative exposure of the properties to the copy of the exposure of th

If you have any complaint/seadback regarding the sample collection/testing fest report piears seed an email of physinifesting care and call at +91 191 2445577 +91 9873924093

CORPORATE OFFICE & CENTRAL LABORATORIES :-PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HAKYANA, INDIA

E +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



Sample Particulars Nature of the Sample

Purpose of Monitoring

Monitoring Conducted By

Method of Sampling

NITYA LABORATORIES NITYA LABORATORIES 43, Sector-A1 Ext., Bhaila Enclave

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C+91-191-2465597

info@nityalab.com @ www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202109100110-114, 202109130110, 202109140110-114, 202109150110-113, 202109160110-113

Date: 04/10/2021

: Stack Monitoring

: To Check the Pollution Load

1 1S: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

ir. Vo.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. ("C)	Stack Temp. ("C)	Average Gas Velocity (m/s)	C.	arbon Monox (as CO)	ide
					14.5.4		No.	mg/Nm1	Kg/hr	PPM
1	HRSG-1	10/9/2021	65	3.3	31	162	9.03	9	1.71	7.86
2	HRSG-2	10/9/2021	70	3.3	29	159	10.83	12	2,76	10.47
3	HRSG-3	10/9/2021	70	3.3	28	152	9.60	11	2.23	9.60
4	HRSG-4	10/9/2021	70	3.3	29	165	11.66	5	1.47	5.24
5	HRSG-S	10/9/2021	70	3.3	28	169	10.61	5	1.10	4.36
6	CPP-VHP-1	13/09/2021	100	3.34	30	155	10.66	12	2.74	10.47
7	HGU 76	14/09/2021	60	3.4	34	204	10.12	72	1.55	19.20
8	HGU-PDS	14/09/2021	60	1.7	34	247	10.82	14	0.71	12.23
9	MSQ-1	14/09/2021	60	1.64	31	219	11.22	106	5.48	92.5
10	MSQ-2	14/09/2021	60	1.64	31	221	12.20	110	6.16	96.03
11	New Prime G	14/09/2021	60	0.8	31	272	12.87	129	1.64	112.6
12	OHCU LP Section	15/09/2021	65	2.42	31	219	10.15	70	7.13	61.10
13	OHCU RG Heater	15/09/2021	63	1,35	32	210	9.94	79	2.50	68,96
14	RFCC Heater	15/09/2021	59	0.9	34	293	12.86	128	1.99	111.7
15	RFCC Boiler	15/09/2021	100	2.4	40	287	13.56	131	15.41	114.3
16	CCRU Reformer Heater-205 FF	16/09/2021	60	1.26	32	159	10.41	22	0.71	19.20
17	CCRU NHT Heater	16/09/2021	70	2.34	34	261	10.14	17	1.49	14.84
18	CCRU Reformer Heater-201, 202,203	16/09/2021	60	1.64	32	252	10.35	6	0.27	5.24
19	DHDT H-01	16/09/2021	70	1.8	34	230	11.55	12	0.75	10.47
25	689-3616.23						Gas		150	-
		Permissible Lin	nits (mg/Nm	3)			Liquid		200	
				FCCU		400				

BOL-Below Detection Limit, Carbon Monoxide (as EO) BOL (LOQ-1.0) Sample Analysed within six days from the date of sampling. All above Parameters are measures with flue Gas Analyses

(RAVINDER MITTAL)

MQTE The observative accounts the responsibility to content of report. The results combined in this rest wood registed by the except exists of the post stage in the except that report shall not be repredicted except that we want to except the except of t laboratory. This report is mierided only for your guidance and not for legal purpose or for consistence in foreigned in the windowed except in the window the work appropriate in agreement foreigned in the report and in the window of the consistence in the window of the window of the consistence in the window of the window dentered after 20 days have the date of more of less confidens when otherwise specified Any complete about the record which we communicated in white about it days of the region to the process of the Laboratories is firsted evolution unrount only If you have any complaint/readbuck regarding the sample collection/lesting/rest report pieces send an email of interestyphic com one call mi +91 -191 -2445597 +97 -9875924093

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₱ PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

F +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, I&K (UT), India

G+91-191-2465597

■ info@nityalab.com 《 www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division)

Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202109160114, 202109180110-112, 202109200110-114 202109210110-113, 202109230110, 202109240110-111

202109270110-111

Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: 15: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

r. No.	Stark Particulars	Date of	Stack Height	Stack Diameter	Ambient Temp.	Stack Temp	Average Gas Velocity	Car	(as CO)	e
		Sampling	(meter)	(meter)	(°c)	(°c)	(m/s)	mg/Nm*	Kg/hr	PPM
				1.8	33	235	9.48	3	0.46	7.86
20	DHDT H-02	16/09/2021	70	175.00	1.775	223	10.84	11	5.27	9.60
21	AVU-1	18/09/2021	100	5.1	32		9.08	5	0.58	4.36
22	HGU 06	18/09/2021	50	2.64	33	190	200000	39	6.84	34.04
23	UB-02	18/09/2021	100	3.04	35	166	9.88	2.670	0.97	34.92
	PX Isomer	20/09/2021	56	1.2	35	221	9.86	40		26.19
24	100000000000000000000000000000000000000	20/09/2021	56	1.2	35	220	10.80	30	0.80	
25	PX Tatory	20/09/2021	100	1.9	33	274	11.50	56	3.58	48.88
26	PXCCR	0.505 (2.800)	78	2	34	167	10.56	100	8,09	87.29
27	PX-Xylene	20/09/2021			34	260	11.65	73	1.35	63.72
28	PX NHT	20/09/2021	30	1		180	11.73	12	0.85	10.47
29	DHDT BSIV	21/09/2021	70	1.8	37	A 04,5	11.22	49	11.83	42.77
30	HGU-BS-VI	21/09/2021	0	3.4	38	180	500	5	0.93	4.36
	DCU Heater-1	21/09/2021	70	3	35	175	11.03		1,000,000	4.36
31	HGU 75 F-101	23/09/2021	60	3.3	33	231	11.81	5	1.08	
32	TARREST COLOR	24/09/2021	60	1.25	28	137	9.51	7	0.19	6.11
33	DHDS	24/09/2021	100	5.1	34	198	11.28	38	19.94	33.17
34	AVU-II	EL MILETINGE	60	2.35	39	267	13.00	56	6.28	46.88
35	PTA/Hot Oil Heater	27/09/2021	1	2.35	35	253	12.96	9	1.03	7.86
36	PTA/Thermal Oxidiser	27/09/2021	60	2,33	33	1	Gas		150	4
-							Liquid	-	200	
		Permissible Li	mits (mg/N	m³)					400	
			The same of the sa				FCCU		400	

Remark:

BDL-Below Detection Limit, Carbon Monoside (as CO) BDL (LCQ-1.0) Sample Analysed within six days from the nate of sampling. All above Parameters are measures with Hue Gas Analyser

SED SIGNATORY)

(RAVINDER MITTAL)

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C +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmall.com



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NITYA LABORATORIES

 43, Sector-A1 Ext. Bhalla Enclave, Channi Himmat, Jammu-180.015, J&K (U7), India

C+91-191-2465597

info@nityalab.com € www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

UER No.: 1C 636621000001731-1732 Test Report Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

: Stack Monitoring

: To Check the Pollution Load : IS: 11255 (Part 7) : Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity		gen Sulph (as H ₂ S)	ide
			(meet)	Cincidity	1.70	10.36	(m/s)	mg/Nm ³	Kg/hr	ррм
1	5RU-26	24/09/2021	70	1.9	35	225	11.03	BOL		
2	SRU-57	24/09/2021	70	1.9	34	235	11.06	901.	-	
							Old		15	
		Permissible	Limits (mg	/Nm³)			New		10	
			Test Me	thod				15:1	1255 (P-4)

Remark:

BDL Helow Detection Limit, ¹ Hydroger, Sulphide (as H,S)-Bbt. [LDQ-0.1]. Sample Analysed within six days from the date of sampling.



(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE the traceromy or certain the reaconsbat, for content of legion the result contained in my let report use to the content and recording or not be recorded in the recording notice traceromy. The record is recorded in the record in the record of the recording of the record in the

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C +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C+91-191-24G5597

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202109240112-113

Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

, Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height	Stack Diameter	Ambien t Temp.	Stack Temp.	Average Gas Velocity		s of Sulp as SO _X)	nur		es of Nitro (as NO _x)	
NO.	Pardening		(meter	(meter)	(°C)	(°C)	(m/s)	mg/N m ³	Kg/h	PPM	mg/N m³	Kg/h r	РРМ
	1				1				2.4	13.7	6	0.40	3,3
	1000000	24/00/2021	70	1.9	35	225	11.03	36	I mile	277 1000	8	0.53	4.2
1	SRU-26	24/09/2021	70	1.9	34	235	11.08	37	2.5	14.1	G	0.00	
2	SRU-57	24/09/2021	(2,346)	Old					350				
_							Old		11111			200	
		Permissih	le Limits (n	ng/Nm³)			New					250	

Remarkt

BOL-Below Detection Limit, Oxides of Sulphur (as 50,)-55. (COO: 1.0) SOU-section Detection units, desires of surgimizing Swappoor, (controlling).

Sample Analysis within the days from the date of surgipling. All above Sarams care measures with flor flat Analysis.

> (AUTHORISED SIGNATORY) (RAVINDER MITTAL)

NOTE the discretory accepts the registratity for content of report. The results contained a respect to the content finded, but import that not be industrially for intended only to your guidance and not for registratives or to adequatement. This report shall not be reported and not for registratives or to adequate the report shall not be reported and not for registrative and according to the registrative and the content of the registrative and the content of the registrative and the content of the registrative and registrative and the registrative an

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S+91-191-2465597

🞽 info@nityalab.com 🤹 www.nityalab.com

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Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No. 202109240112-113

Date: 04/10/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By Stack Monitoring

: To Check the Pollution Load

: 15: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height	Stack Diameter	Ambie	Stack Temp.	Average Gas Velocity	Car	(as CO)	ide
			(meter)	(meter)	(°C)	(°C)	(m/s)	mg/Nm ¹	Kg/hr	PPM
)					35	225	11.03	89	6.00	77.59
1	SRU-26	24/09/2021	70	1.9	40.		11.08	52	3.45	45.39
2	SRU-57	24/09/2021	70	1.9	34	235	11.00		desine)	
	300 31	11:510000000					Old		150	
		Permissible !	lmits (mg/l	Nm³)			New		100	

BOL Below Detection Limit, Carbon Monacide (as CO) NOL (LOG-10) Sample Analysed within six days from the date of sampling. All above Parameters are measures, with flux dat Analyses

(RAVINDER MITTAL)

NOTE The supercitory document the responsibility for content of report, the net of contented and test report registed any to the particular and the responsibility for contents of the observable of the observable of the supercitory document in the report of the report of the report of the observable If you have any completely amount only.

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+91-191-2465597

info@nityalab.com 🕻 www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Disti. Panipat

Haryana, INDIA

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By URR No.: TC 636621000002204-2205, 2208-2212, 3254-2162, 2450-1165 Test ReportDate: 07/19/2021

Stack Monitoring

. To Check the Pollution I ad-. IS: 11255 (Part /) : Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diamet or	Ambie nt Temp.	Stack Temp. (*C)	Gas Velocity	Partic Matters ¹		Nickel (a)	S Vanadi s Ni S V)	um"
			4936554	(meter)	(°C)	7 (2)	(m/s)	mu/Nm	Kg/hr	mg/#m	Kg/h	3-F:
1	AVU-1	8/11/2021	100	5.1	23	119	9,55	17.38	5.0	172		
2	DHDS	8/11/2021	60	1.25	74	200	10.20	9.52	0.3	tio.		
3	HRSG-1	9/11/2021	65	3.3	24	155	5.97	5-19	1.4	1101		
4	HRSG-3	9/11/2021	70	3.3	2.3	149	9,65	617	1.8	60		
5	HRSG-4	9/11/2021	70	3.3	201	231	10 15	11,45	2.1	+3		
6	HR5G-S	9/11/2021	70	3.3	23	726	12.16	13.21	2.4	+10:		
7	CPP-VHD-1		100	3:30	7/4	145	10.51	11.007	15	3177	4	
8	HGU 76	9/11/2021	60	3.4	23	230	15.40	13.76	2.5	RO.		
9	HGU-PDS	22/11/2021	60	17	26	237	10:11	3.74	0.5	155		
10	DHDT H-01	22/11/2021	70	1.8	24	23-1	11.00	0.36	0.1:	ED.		
11	DHD/ H-02	22/11/2021	70	1.6	24	220	10-50	397	0.5	HD:		
12	HCU	22/11/2021	70	1.3	25	157	9.61	14.21	0.5	310		
13	MSQ-1	23/11/2021	60	1.64	26	299	11.51	4.38	3.5	HD:		
14	H5Q-2	23/11/2021	60	1.61	22	30%	11.92	2,80	0.4	E3		
15	New Prime G	23/11/2021	62	0.8	21	29%	13.77	1400	5.7	1:3		
16	AVU-II	23/11/2021	100	5.1	23	150	9.31	34.32	7.2	#D.		
17	DCU Heater-1	24/11/2021	70	3	23	143	9.81	1,74	1.8	50)		
18	CCRU Reformer Heater- 205 FF	24/11/2021	60	1.26	24	293	152,541	2.34	0.2	(2)		
19	CCRU NHT Heater	24/11/2023	70	2.34	2/4	261	10.10	8.57	0.8	83		
20	CCRU Reformer Heater	34/11/2021	60	1,54	29	273	10.43	9.71	0.3	110	L	
-	201, 202,203 FF	missible Limit	s (mg/Nm²)		30000	Gas	L)	a .			
		erandonia, en 10.016	TO BE STORES				Liquid	10	10		5	
		Tes	t Method			15-1125	5 (P 1)	USEPA	Method :	29 A		

ROBERTS: TO SECURE UNITY PROCESS MADE NOTE IN PROCESS TOO SECURE A VESSELLE AS SECURE AS SECURE



NOTE: the universely acceptable in contract should be contract entering that the destroyed values and the surface that it is appropriate to be projected used from the standard for the contract and on the specific project and the surface that is a project for a project

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G +91-129-2241021

+91-9013591021, +91-9013552273

■ labsnitya@gmail.com



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Work for Quality

Sample Particulars

Nature of the Sample

Purpose of Monitoring

Monitoring Conducted By

Method of Sampling

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+91-191-2465597

ULR No.: TC 636621000002394 2397, 7412-2417, 7431 2131 2660 449, 240

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Harvana, INDIA

. Stack Monitoring

: To Check the Pollution Load

Test Report Date: 97-12/2011

15: 11255 (Part 7)

- Mr. Rishi Pal

Analysis Report

					Analysis R	epare						
r.	Stack Particulars	Date of Sampling	Stack Height	Stack Diameter (meter)	Ambien t Temp. (*C)	Stack Temp. (°C)	Averag e fias Velocity	Particu Scatters' (Nie ko	is Vanor)
			(meter)	(meter)	4 5-1		(m/s)	matt #75ms	its for	mg/Rei	Selbr	¥7/8
21	OHCU LP	25/11/2021	23	2.42	23	327	9.93	9//7	1.1	1531		
**	Section							- 7.0	6.3	100		
22	ONCU RG Heater	25/11/2021	23	1.35	23	120	H, 701	3.4				
23	RFCC Heater	25/11/2021	23	0.9	23	367	11.18	1	0.13	* 50		
24	RECC Boller	25/11/2021	23	2.4	23	251	17.19	1640				
35	DHDT BSIV	26/11/2021	25	1.8	.25	125	9.19	***	908	INDL	1 33	
26	HGU	20/11/2071	26	3.4	26	150	10.17	0.1	5.94	rigo		
17	vHP-3 Boxer	26/11/2021	25	3.04	25	151	2.99	11.17	3.7			
26	UB-02	26/11/2021	24	3.04	24	150	7.10	15,15	=6	POS		
	UB-01	26/11/2021	23	3.04	23	134	937	12,14	1.7	11674		
25	HGU-BS-VI	26/11/2021	25	3.4	25.	158	6.93	9.07	- 4	HEAL.		
30		27/11/2021	25	1.2	25	236	10.76	13.74	0.3	表決		
31	PX Isomer	27/11/202	24	1.2	2/1	340	11.52	5.3	1.5	60	3.	
32	PX Tatory	27/11/2021	25	1.9	25	252	11,26	15.76	0.9	.846		
33	PXCCR	ENGLISH STATE OF	24	2	71	185	5.97	0.9	- 11	10		
34	PX-Xylene	27/11/2021	24	1	24	256	18.51	15,5%	3.3	lette-		
35	PX NHT	27/11/2071	24	2.35	24	163	10.16	14/250	1.2	6%	- 7	
36	PTA/Hot Oil	29/11/2021	1			78	1.30	1400	0.0	102		
37	and the same of th	29/11/2021	23	2.25	25		1127	10.07	1.5	925		
13	And the second district the second se	29/11/2021	25	2.35	29	166	1		DE:	1	-	
		Permissibl	e Limits (mg	1.55		100		iĝ	-			
							Figure		255 (P.1)	- Cores	a filter nos	

Test Method

The Book Detection and Performe Majors on PM-STA (LDQ-SV). Takke S. Amstern in This of 600 mode of the performance of common processes of common processes of the performance of the per



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NOTE: The straight of a state of the state o CORPORATE OFFICE & CENTRAL LABORATORIES :-

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C +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



NITYA LABORATORIES

9 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C+91-191-2465597

info@nityalab.com @www.nityalab.com

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Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202111080110-111, 202111090110-114, 202111220110-114, 202111230100-113, 202111240110 113

Date: 07/12/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diamete	Ambient Temp. (°C)	Stack Temp. (*C)	Average Gas Velocity		es of Sulp (as SO ₂)	hur	Oxi	des of Nit (as NO.)	
			10.400000000	(meter)	116-51	0.00	(m/s)	mg/Nm ¹	Kg/hr	PPM	mg/N m²	Kg/hr	PPM
1	AVU-1	8/11/2021	100	5.1	23	119	9.50	9	4.8	3.4	47	24.97	24.98
2	DHDS	8/11/2021	50	1.25	24	200	10.20	16	0.5	5.1	63	1.79	33.49
3	HRSG-1	9/11/2021	65	3.3	24	155	8.99	8	1.5	3.1	254	48.97	135.01
4	HRSG-3	9/11/2021	70	3.3	23	148	8.88	12	2.3	4.6	110	21.31	58.47
5	HRSG-4	9/11/2021	70	3.3	24	231	10.18	16:	3.0	6.1	200	38.01	108.96
- 6	HRSG-5		70	3.3	23	226	10.06	14	2.6	5.3	258	47.76	137.13
7	CPP-VHP-1	9/11/2021		3.34	24	148	10.51	248	58.2	24.6	153	35.93	81.32
8	HGU 76	9/11/2021 22/11/2021	100	3.34	23	220	10.62	12	2.5	4.6	21	4.41	11.16
9	HGU-PDS	22/11/2021	60	1.7	26	232	10.81	10	0.5	3.8	18	0.94	9.57
10	DHDT H-01	22/11/2021	70	1.8	24	234	11.90	8	0.5	3.1	120	7.69	63.78
1000	DHDT H-02	22/11/2021	70	1.8	24	220	10.95	11	0.7	4.2	132	8.01	70.16
11	HCU	22/11/2021	70	1.3	25	157	9.61	8	0.3	3.1	121	3.85	64.31
13	MSQ-1	23/11/2021	60	1.64	22	299	11.51	8	0.4	3.1	54	2,46	28.70
14	MSQ-2	23/11/2021	60	1.64	22	305	11 92	-9	0.4	3.4	56	2.62	29.77
		(Asset Sections 2)	60	0.8	21	296	11.73	-6-	0.1	2.3	48	0.53	25.51
15	New Prime G	23/11/2021	60	2000		1					27	13.73	14.35
16	AVU-II	23/11/2021	100	5.1	23	150	9.30	173	88.0	66.0	2700	37.50	
17	DCU Heater-1	24/11/2021	70	3	23	143	9.81	14	2.7	5.3	43	8.19	22.86
18	CCRU Reformer Heater-205 FF	24/11/2021	60	1.26	24	293	10.44	3	0.1	1.1	105	2,51	55,81
19	CCRU NHT Heater	24/11/2021	70	2.34	24	264	10.10	6	0.5	2.3	199	17.83	105.77
20	CCRU Reformer Heater-201, 202,203 FF	24/11/2021	60	1.64	24	273	10.43	6	0.2	2,3	176	6.52	93.55
	L S STEEL	Permissible Lin	nits (mg/Nm	1			Gas		50			350	
							Liquid		1700			450	

Remarkt

BDs. Below Detection Limit, Oxides of Sulphur (as SU.). BDL (LDQ-1.0)

Sample Analysed within so days from the date of sampling. All above Parameters are measures with five Gas Analyses

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PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

E +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



NITYA LABORATORIES NITYA LABORATORIES A 43, Sector-A1 Ext., Bhalla Enclave

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Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202111250110-113, 202111260110-115, 202111270110-114, 202111290110-112

Date: 07/12/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By : Stack Monitoring

: To Check the Pollution Load

: IS: 11255 (Part 7)

: Mr.Rishi Pal

Analysis Report

Sr.	Stack Particulors	Date of Sampling	Stack Height	Stack Diameter	Amble	Stack Temp.	Average Gas		s of Sulphi as SO ₄)	ur		of Nitrogo as NO,	en
No.		3.mpmg	(meter)	(meter)	Temp. (°C)	(°C)	Velocity (m/s)	mg/Nm ¹	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM
		1					8.93	8	1.0	3.1	47	5 64	24.98
21	OHCU LP Section	25/11/2021	23	2.42	23	127	9.72	12	0.5	4.5	31	1.20	16.48
22	OHCU RG Heater	25/11/2021	23	1.35	23	170		27	0.4	10.3	89	1.38	47.31
	RFCC Heater	25/11/2021	23	0.9	23	267	11.18		4.1	18.3	172	14.65	91.42
23) Parameter and the	25/11/2021	23	2.4	23	251	12.29	48	10.00	3.4	70	4.99	37.21
24	RFCC Boiler		25	1.8	25	128	9.19	9	0.6		3	0.68	1.59
25	DIIDT BSIV	26/11/2021		3.4	26	159	10.47	9	2.0	3.4		1.57	4.78
26	HGU	26/11/2021	26		26	151	9.99	19	3.3	7.3	9		48.90
27	VHP-3 Boiler	26/11/2021	26	3.04	4	150	9.50	86	14.4	32.8	92	15.45	73.35
-	UB-02	26/11/2021	24	3.04	24	134	9.12	86	16.3	32.8	138	26.24	39.33
28	UB-01	26/11/2021	23	3.04	23	158	9.93	14	3.4	5.3	74	18.01	24.45
30	HGU-BS-VI	26/11/2021	25	3.4	25	236	10.76	6	0.2	2.3	46	2.77	54.7
31	PX Isomer	27/11/2021	25	1.2	25	240	11.02	6	0.2	2.3	103		40.4
32	PX Tatory	27/11/2021	24	1.2		252	11.36	6	0.3	2.3	76	4.30	22.8
	PXCCR	27/11/2021	25	1.9	25	185	9.77	3	0.2	1.1	43	1.49	45.7
33	PX-Xylene	27/11/2021	24	2		254	10.51	3	0.1	1.1	88	11.17	-
34	PX NHT	27/11/2021	24	1 200	24	163	10.16	6	0.7	2.3	103	11.17	3.448
36		29/11/2021	24	2.35	24	102	1 550000	1	-	70.5	86	10.55	45.7
30	Heater			2.35	23	78	9.34	197	24.4	75.2	50	10.00	1
37	PTA/Thermal	29/11/2021	23	2.33	1				0.6	2.5	220	23.39	
-	Oxidiser	THE STUTIE OF A	25	2.35	25	168	10.07	- 6	0.5	6.4	18.00	100000	3
38	PTA/FCPH	29/11/2021				_1	Gas	-	50		1	350	
		Permissible	Limits (mg.	/Nm³)					1700			450	X
		FEITHER	: Control (1997)		Liquid	4	1700						

Remark:

BDL-Bakiw Detection Limit, Quides of Sulphwi (as Sq.) RDL (LDQ-1.0) Sample Analysed within six days from the dails of sum third. At above Farameters are measures with five Gas Analyses.

> BORA NOER MITTAL

NOTE: The laboratory accepts the responsibility for an extraction of the laboratory accepts the responsibility for an extraction of the laboratory accepts the responsibility for an extraction of the laboratory accepts the responsibility for an extraction of the laboratory accepts in the section of the sec

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Himmat, Jammu-180 015, J&K (UT), India

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

Test Report No.: 202111080110-111, 202111090110-114, 202111220110-114, 202111230100-113, 202111240110-113

Date: 07/12/2021

Sample Particulars

Nature of the Sample Purpose of Manitoring Method of Sampling Monitoring Conducted By : Stack Monitoring

. To Check the Pollution Load

: IS: 11255 (Part 7)

, Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp ("C)	Average Gas Velocity (m/s)	G	arbon Monoxi (as CO)	de
			(meter)	(III.CCC)				mg/Nm ³	Kg/hr	PPM
1	AVU-1	8/11/2021	100	5.1	23	119	9.50	14	7,44	12.22
2	DHDS	8/11/2021	60	1.25	24	200	10.20	9	0.26	7,86
3	HRSG-1	1.0010100000	**		24	1.2	8.59	12	2.31	10.47
	NOTE: SE	9/11/2021	65	3,3	23	148	8.88	18	3.49	15.71
4	HRSG-3	9/11/2021	70	3,3	24	231	10.18	7	1.30	6.11
5	HRSG-4	9/14/2021	70	3.3	23	226	10.06	12	2.22	10.47
6	HRSG-5	9/11/2021	70	3,3	1928	148	10.51	20	4.70	17,46
7	CPP-VHP-1	9/11/2021	100	3.34	24	50.00	100000000000000000000000000000000000000	47	9.87	41.03
8	HGU 76	22/11/2021	60	3.4	23	220	10.62	21	1.10	18.33
9	HGU-PDS	22/11/2021	50	1.7	26	232	11.90	7	0.45	6.11
10	DHDT H-01	22/11/2021	70	1.8	24	777	10.95	9	0.55	7.86
11	DHDT H-02	22/11/2021	70	1.8	24	220 157	9.61	8	0.25	6.98
12	HCU	22/11/021	70	1.3	25		11.51	9	0.41	7 86
13	MSQ-1	23/11/ 021	50	1.64	22	299 305	11.92	18	0.84	15.71
14	MSQ-2	23/11, 2021	60	1.64	22	I I I I I I I I I I I I I I I I I I I	11.00000	(5880)	518/0	63.72
	New Prime G	23/11/2021	60	0.8	21	296	11.73	73	0.81	
15			100	5.1	23	150	9.30	38	19.33	33.17
16	AVU-II	23/11/1121	d chian	3000	23	143	9.81	147	28.00	128.32
17	DCU Heater-1	24/11/2021	70	3		15-110	NVI/SVI)	64	1.53	55.87
18	CCRU Reformer	24/11/2021	60	1.26	24	293	10.44	04	1.33	33.0
10	Heater-205 FF	Control of the contro		124	29	201	10.10	26	2.35	22.70
19	CCRU NHT Heater	24:111	70	2,34		-	1000000	35	1.30	30:55
20	CCRU Reformer Heater-201,	24/11/2021	60	1.54	24	273	10.43	33	1.50	
	202,203 FF	-					Gas		150	
		Permissible L	mits (mg/N	m³)			Liquid		200	
							FCCU		400	

BDL-Below Detection Limit, Caroon Monomin Let (1 101) (LOQ-1.0) Sample Analysed within six days from the children hing. All above Parameters are measures with Fluc Cas Analyser.

NOTE: The appraisory accepts the responsibility for content and the content and the content and the sent responsibility accepts the responsibility and the representation of the laboratory.

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NITYA LABORATORIES

Issued to: M/s Indian Oil Corporation Limited (Refinery Division)

Panipat Refinery, Dest. Panipat Haryana, INDIA

Test Report No.: 202111250110-113, 202111260110-115, 202111270110-114, 202111290110-112

Date: 07/12/2021

Sample Particulars

Nature of the Sample Purpose of Monitoring Method of Sampling Monitorina Conducted By : Stack Monitoring

: To Check the Pollution Load

15: 11255 (Part 7)

: Mr. Rishi Pal

Analysis Report

Sr. No.	Stack Particulars	Date of	Stack	Stack Diameter	Ambient Temp.	Stack Temp.	Average Gas Velocity	Car	bon Monoxid (as CO)	e
	1	5,mipling	Height (meter)	(meter)	(°c)	(°c)	(m/s)	mg/Nm³	Kg/hr	PPM
- 1					23	127	8.93	91	10.92	79.43
21	OHCU LP Section	je : /2021	23	2.42			9.72	105	4.07	91.65
22	OHCU RG Heater	25/11/2021	23	1.35	23	170		145	2.25	126.57
77507	RFCC Heater	25/11/2021	23	0.9	23	267	11.18	147	12.52	128.32
23		25/11/2021	23	2.4	23	251	12.29			2
24	RFCC Boiler	. 202	25	1.8	25	128	9.19	BDL		
25	DHDT BSIV	26/11/2021	19791	3.4	26	159	10.47	12	2.70	10.47
26	HGU	26/11/2021	26		26	151	9.99	5	0.87	4.36
27	VHP-3 Boiler	285, 382,033	26	3.04	100	150	9.50	21	3.53	18.33
28	UB-02	26 1-2521	24	3,04	24	10000	9.17	BDL		
040(2)	UB-01	26 1 2/21	23	3.04	2.1	134		STARRES	0.24	0.87
29		26/1/2/21	25	3.4	25	158	9.93	1	0.05	1.75
30	HGU-BS-VI	37 - 3.3		1.2	25	236	10.76	2	4857715	V ANTES
31	PX Isomer	200 - 2-50	10 L Sec.	1,2	24	240	11.02	14	0.38	12.22
32	PX Tatory	72.11123		1.9	25	252	11.36	2	0.11	1.75
33	PXCCR	dentile d			24	185	9,77	BOL	-	
34	PX-Xylene	177	24	2	24710	254	10.51	4	0.07	3.49
35	PX NHT	27/11/2/21	24	1	24	1	10.16	BDL	-	
	PTA/Hot Oil Heater	70/12/7	24	2.35	24	163	-355000	34	4.21	29.68
36	PTA/Thermal Oxidiser	200100	23	2.35	23	78	9.34	95.00	0.21	1.75
37			The second second	2,35	25	168	10.07	2		1.00
38	PTAFCPH	10.4		_			Gas		150	
			na esta e major seculo				Liquid		200	
		Pormasita-	limits (mg/l	Nm ²)			FCCU		400	

Remark:

BDL-Below Detection Limit, Carbon Hundrede in-

(0.1.0)

Sample Analysed within six days from the district and a second Parameters are measures with Flue Cas Analyser

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C +91-129-2241021

+91-9013591021, +91-9013552273

🕿 labsnitya@gmail.com



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• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C+91-191-2465597

info@nityalab.com € www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

ULR No.: TC 636621000002377, 2398 Test Report Date: 07/12/2021

Sample Particulars Nature of the Sample Purpose of Monitoring Method of Sampling Monitoring Conducted By

: Stack Monitoring To Check the Pollstion Load : IS: 11255 (Part 7)

Analysis Report

: Mr. Rishi Pal

Sr. No.	r. No. Stack Particulars 1 SRU-26 2 SRU-57	Date of Sampling	Stack Height	Stack Diameter	Ambient Temp.	p. Temp.	Average Gas Velocity	Hydrogen Sulphica (as H ₂ S)		
			(meter)	(meter)	(°C)	(°C)	(m/s)	mq/Am ¹	Kg/hr	PPH
1	SRU-26	24/11/2021	70	1.9	25	219	10.61	am		2 12
2	SRU-57	25/11/2021	70	1.9	25	225	11.12	340)		
				14			Old		15	500
		Permissible	Limits (mg	/Nm1)			New		10	
					tse	11755 (2-4	1			

Bit. Relow Selection Limit, Hydrogen Scipnide (as HyS) BOX (COC) 0.1]. Sample Analysed within six days from the dirte of sampling





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+91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued to: M/s Indian Oil Corporation Limited

Refinery Division Panipat Refinery, Distr. Panipat Haryana, INDIA

Test Report

ULR NO., TC, 515621000001104, 1106, 1123, 1137, 1156, 1193, 1217, 1247 Test Report Date: (Ia/08/2021

Sample Particulars

Nature of the Sample Sampling Location Purpose of Manitoling rzethod of Sampling Menitoring Conducted By Sampling Duration (Hw.)

Ambient Air Quality Monitoring

Root of Administration suitaling annexe. to Check the Pollutian Load 5.5152 (Port 14) Mr. Velopal Engli 74 Hrs.

Date of						Paran	neter					
Sampling	Particular e Matter (PM2.5) pg/m3	Particulat e Matter (PM10) µg/m3	Sulphur Dioxide (as 502) pg/m3	Nitrogen Dioxide (at NO2) ug/m3	Ozone (as 03) ug/m3	Lead (as Pb*) µg/ m3	Carbon Monoxid e (as CO) mg/m3	Ammon ia (as NH3) ug:m3	Nickel (as NF) ng/m²	Arsenic (as As ³) ng/m3	Senta (a) pyrene (as BAP4) ng/m)	Benzen e (C6H6)) ug/m3
02/07/2007	46,62	E4.82	321	66.41	3302	201	k ja	46.89	801	BCH	300	:801
35/6/1/2021	54.12	52.40	20.25	34 3	36.49	8CL	1112	50.24	B01	8Dt	BEXL	800
09907/2021	26.9	90.15	1623	32.24	34.22	116	0.76	32.43	BDE	800	BOL	1474
(2,07/202)	52.82	94.95	22,92	36,14	2294	351	1.55	48.66	804	BSIL	BOL	:80)
12/07/2021	50:44	88.94	15.42	30.45	26.43	351	1.34	52.18	301	801	85%	50%
(4.07/2001	56-24	18/87	32/69	38 Je	21.28	BEG		10.35	804	BE.	fitte.	1979
39/07/2021	84.92	98.80	25.72	32.25	26.14	10.	2.91	54.2e	201	30.	Oth	200
18/07/2021	33.29	08:W2	24.62	34.16	7:35	500	174	11.26	êC:	BDL	90.0	BOX
Minimum	46,91	86.62	(6.4)	30.47	20,74	- G	ŭ,d€	48.37	121	2.		-
Maximum	56.24	98,62	22.92	38.56	28.43		1.74	94.76	16	4.1	-	-
Average	52.05	92:43	22.96	34.36	23.58		THE	55.50	3		-	1
NAA QM Standards	60	100	50	80	100	1	2	400	20	å	t	\$
Test Method	40CFR Appendi x 1 Part 53 CPCB Guidelin	(5:5182 (F-23)	13:5762 (P-2)	(5:5182 (F-6)	15:5182 (P-9)	NUSOF /AAQ 11	(F-10)	Method of Air Samplin g & Analysis	P/AAQ -13	AAQ 12	(P-12)	(5:5182 (# 11)

*NAA(3) has one Ambient Air Querty Mandards Schedule Vi [Nair 3 [AR]] (Partie Sec. Air) [0.21.2009

20, 60 to Detectant (4m 4 | Asset 2 (24) 000 to 51 "647 (50,) 000 (2.51) Settleme 825 (100, 0.51) Need L'sonition of the

Simple Analysist within Seventhers from the date of sampling.

Certificate No.

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Test Report

Issued to: M/s Indian Oil Corporation Limited ULR No.: TC 636621000001264, 1291, 1312, 1336, 1358, 1397, 1408, 1433 (Refinery Division) Panipat Refinery, Distt. Panipat

Test Report Date: 05/09/2021

Sample Particulars

Nature of the Sample Sampling Location Purpose of Monitoring Method of Sampling Manitoring Conducted By Sampling Duration (Hrs.) : Ambient Air Quality Monitoring

: Roof of Administration Building Annexe

: To Check the Pollution Load

: 15 5182 (Part 14)

: Mr. Veerpal Singh

: 24 Hrs.

Date of Sampling						Para	meter					
Sampling	Particula te Matter (PM2.5) µg/m3	Particula te Matter (PM10) µg/m3	Sulphur Dioxide (as 502) µg/m3	Nitroge n Dioxide (as NO2) ug/m3	Ozone (as O3) ug/m3	Lead (as Pb ¹) µg/ m3	Carbon Monoxid e (as CO) mg/m3	Ammon ia (as NH3) ug/m3	Nickel (as Ní²) ng/nt³	Arsenic (as As ³) ng/m3	Benzo (a) pyrene (as BAP ⁴) ng/m ³	Benzer e (C6H6) ug/m3
02/08/2021	40.82	80.62	20.61	30.62	16.44	BDL	1.08	40.62	BOL	BOL	BD (BDL
06/08/2021	45.32	86.92	18.42	28.55	20.62	BDI	1:11	48.26	BOIL	80%	BOL	BDL
89/08/2021	41.22	82.46	22.68	30.99	18.55	BOL	0.96	44,96	BOL	BOL	BOL	BOL
13/08/2021	44.63	83.17	16.93	26.96	14.69	BOL	1.02	16.22	DOL	BOL	BOL	BOL
16/08/2021	47.58	84.24	21.81	32.68	22.84	BOL	1.13	42.28	BDL	BOL	BOL	BDL
20/08/2021	45.92	88.94	17.44	27.95	17.21	BDL	1.12	47.35	BDL	SDL	BDL.	BDL
23/08/2021	48.66	82.22	22.68	24.99	21.38	BDI.	0.91	43,92	BOL	BDL	BDL	BOL
27/08/2021	45.25	87.93	19.84	28.44	23.95	BDL	1.18	45.39	BDL	BOL	BDL	BDL
Minimum	40.82	80.62	16.93	24.99	14.69		0.91	40.62			*	-
Maximum	48.66	88.94	22.68	32.68	23.95	-	1.18	48.26				
Average	45.18	84.56	20.05	28.89	19.46		1.06	44.88	-	- 1		
NAAQM' Standards	60	100	80	80	100	1	2	400	20	6	1	5
Test Method	40CFR Appendix L Part 53 CPCB Guideline S	IS:5182 (P-23)	IS:5182 (P-2)	15:5182 (P-6)	15:518 2 (P-9)	NL/SO P/AAQ- 11	15:5182 (P-10)	Method of Air Samplin g & Analysis	NL/SO P/AAQ -13	NL/SOP /AAQ- 12	15:5182 (P-12)	IS:5182 (P-11)

*NAAQS: Notional Ambient Air Quality Standards; Schedule-VIII, Pade 3 (38)], [Part 11-sec. 3(i)] 16.11.1009

BOL-Below Detection Limit, "Assent-BBL [LOQ- 6.5], "BAP-BDL [LOQ- 6.5], "Senzene-BCL [LOQ- 6.5], "Local BDL (LDQ- 6.5), "Rickel-BDL [LOQ- 1.0] Sample Analysed within Seven days from the date of sampling.

> Certificate No. T-6366

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE: The fact story occupy the responsibility for costs to direct or the lessest contained in this less income related only to be surgicilities. The import shall be improved on the contained on the less to income only for you godines and not be less to income only for you godines and not be improved only for you godines and not be improved only for your or the income operate of the contained on the income of the income of the contained on the income of t



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info@nityalab.com

€ www.nityalab.com

ULR No.: TC 636621000001523, 1551, 1560, 1592, 1629, 1680, 1726, 1762

Test Report Date: 07/10/2021

Sample Particulars

Nature of the Sample Sampling Location Purpose of Monitoring Method of Sampling Monitoring Conducted By Sampling Duration (Hrs.)

Issued to: M/s Indian Oil Corporation Limited

Haryana, INDIA

(Refinery Division) Panipat Refinery, Distt. Panipat

Ambient Air Quality Monitoring

: Roof of Administration Building Annexe

: To Check the Pollution Load

: 15 5182 (Part 14)

Test Report

: Mr. Veerpal Singh

: 24 Hrs.

Date of						Paran	neter					
Sampling	Particula te Matter (PM2.5) µg/m3	Particula te Matter (PM10) µg/m3	Sulphur Dioxide (as SO2) µg/m3	Nitroge n Dioxide (as NO2) ug/m3	Ozone (as O3) ug/m3	Lead (as Pb ¹) µg/ m3	Carbon Monoxid e (as CO) mg/m3	Ammon ia (as NH3) ug/m3	Nickel (as Ni ²) ng/m ³	Arsenic (as As ³) ng/m3	Benzo (a) pyrene (as BAP ⁴) ng/m ³	Benzen e (C6H6 ⁵) ug/m3
03/09/2021	36.52	83.87	16.24	26.71	18.97	BDL.	1.18	46,48	BDL	BDL	BCX.	BOL
07/09/2021	42.97	89.71	22.28	35.66	16.55	BDL	1.09	40.57	BDL	BOL	BOL	BOL
10/09/2021	38.52	86.54	18.47	32.84	11.73	BDL	0.94	43.88	BDL	BOL	SDL	BOL
14/09/2021	41.97	78.68	12.83	28.44	15.69	BDL	0.98	41.52	BDL	BOL	SDL	801.
17/09/2021	43.92	80.21	23.74	38.46	20.58	BDL	1.05	48.91	BOL	BDL	BOL	500
21/09/2021	40.98	84.86	20.58	34.52	14.81	BDL	1.15	44.55	BOL	BDL	BOL	901
24/09/2021	44.66	87.69	26.84	40.77	25.91	BDL	1.18	50.49	BOL	BDL.	BOL	BOL
28/09/2021	42.94	85.42	24.18	37.88	22.84	BDL	631	42.71	BOL	BDI.	BOL	801
Minimum	36.52	78.68	12.83	26.71	11.73		0.94	40.57		100		14
Maximum	44.66	89.71	26.84	40.77	25.91		1.18	50.49		3.00		*
Average	41.56	84.62	20.65	34.41	18.39		1.09	44.89		75		
NAAQM Standards	60	100	80	80	100	1	2	400	20	6	1	5
Test Method	ADCFR Appendix L Part 53 CPCB Guideline S	IS:5182 (P-23)	IS:5182 (P-2)	IS:5182 (P-6)	IS:518 2 (P-9)	P/AAQ- 11	IS:5182 (P-10)	Method of Air Samplin g & Analysis	P/AAQ -13	NL/SOP /AAQ- 12	IS:5182 (P-12)	IS:518 (P-11)

*NAAOS: National Ambient Air Quelity Standards, Schedule-VII, [Rule 3 (38)], [Part-II-sec -32/14/09/3005 BUIL-Bollow Detection Limit, "Arsence BDL (LOQ: 0.5), "BAP BDL (LOQ: 0.5), "Beneare BD, Sample Analysed within Seven days from the date of sampling.

[LOG 5.5] Nickel BOL [LOC] 1.0

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

NOTE: The electropy accepts the re-contrated for content of report. The results contained in this text report existed only to the sample nested. Text report sour long or reporting discrete, or the willbust and two appeared in the above of report is interced only for your guidance and not for legal purpose or for adventuement. This report shall not be recommended exercit in the window motion approval of the organization. Supplement to describe the property of the organization organization or organization organization or organization organiza

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NITYA LABORATORIES

 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-186 015, J&K (UT), India

C +91-191-2465597

anto@nityalab.com & www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

ssued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDTA

Sample Particulars

Nature of the Sample Sampling Location Purpose of Monitoring Method of Sampling Monitoring Conducted By Sampling Duration (Hrs.)

Test Report

ULR No.: TC 636621000001897, 1912, 1941, 1954, 2009,2091,2114,2133

Test Report Date: 09/11/2021

Ambient Air Quality Monitoring

: Roof of Administration Building Annexe

: To Check the Pollution Load

: IS 5182 (Part 14)

: Mr. Rishi Pal

: 24 Hrs.

Date of Sampling						Paran	neter					
Sampling	Particul ate Matter (PM2.5) µg/m3	Particul ate Matter (PM10) µg/m3	Sulphur Dioxide (as SO2) µg/m3	Nitroge n Dioxide (as NO2) ug/m3	Ozone (as O3) ug/m3	Lead (as Pb*) µg/ m3	Carbon Monopid e (as CO) mg/m3	Ammon ia (as NH3) ug/m3	Nickel (as Ni ^a) ng/m ^a	Arsenic (as As*) ng/m3	Benzo (a) pyrene (as BAP') ng/m'	Benzen e (C6H6') ug/m3
01/10/2021	38.47	81.94	18.59	34.12	22.94	BDL	1,12	42.67	EDL	BOL	BOL	BDL
05/10/2021	45,98	85.64	20.88	30.99	20.92	BDL	1.04	45.14	BDL	BDL	BDL	BOL
08/10/2021	42.46	82.86	15.91	28.43	18.24	801	0.96	40.58	BDL	BDL	BDL	BOL
12/10/2021	46.98	92.45	14.66	24.49	21.64	BDL	0.94	44.19	BDL	BDL	BDL	BDL
19/10/2021	40.88	80.96	20.28	36.11	17.58	BDL	1.01	41.85	BDL	BOL	BOL	BDL
22/10/2021	35,49	76.85	17.55	33.42	19.66	BOL	1.12	43.86	ни.	BDL	BDL	BDL
26/10/2021	34.58	81.46	25.66	43.91	26.21	BDL	1.13	56.29	BDL	BDL	BDL	BDC,
29/10/2021	41.88	84.4Z	22.92	40.53	23.84	BOL	1.16	48,51	BDL	BDL	BOL	BDL
Minimum	34.58	76.85	14.66	24.49	17.58	0	0.94	40.58	•			
Maximum	46.98	92.45	25.66	43.91	26.21		1.16	56.29			-	- 5
Average	40.84	83.32	19.57	34,00	21,32		1.06	45.39	-		-	
NAAQM Standards	60	100	80	80	100	1	2	400	20	6	1	5
Test Method	40CFR Appendix L Part 53 CPCB Guideline s	IS:5182 (P-23)	IS:5182 (P-2)	IS:5182 (P-6)	IS:518 2 (P-9)	NL/SO P/AAQ- 11	IS:5182 (P-10)	Method of Air Samplin g & Analysis	NL/SO P/AAQ -13	NL/SOP /AAQ- 12	15:5182 (P-12)	IS:5182 (P-11)

NAMES. National Ambient Air Quality Standords, Scheduler-VJI, (Ruie 3 (38)). [Part-II-sec.-2(1)] 16.11.2009

801-Below Detection Limit, Miseric-BDL [LOQ-0.5], "BAP-BDL [LOQ-0.5], "Benvene-801 [LOQ-0.5], "Lead-BDL [LOQ-0.5], Naturi-BDL [LOQ-0.5], Sample Analysed within Seven days from the date of sampling.



(AUTHORISED SIGNATORY)

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19 +91-129-2241021

4 +91-9013591021, +91-9013552273

labsnitya@gmail.com



NITYA LABORATORIES NITYA LABORATORIES A13, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

NITYA LABORATORIES

Himmat, Jammu-180 015, J&K (UT), India

C +91-191-2465597

Minfo@nityalab.com www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited (Refinery Division) Panipat Refinery, Distt. Panipat Haryana, INDIA

ULR No.: TC 636621000002185, 2198, 2217, 2262, 2307, 2325, 2367, 2422, 2443 Test Report Date: 07/12/2021

Sample Particulars

Nature of the Sample Sampling Location Purpose of Monitoring

Method of Sampling Monitoring Conducted By Sampling Duration (Hrs.)

: Ambient Air Quality Monitoring

: Roof of Administration Building Annexe

: To Check the Pollution Load

: IS 5182 (Part 14) : Mr. Rishi Pal

: 24 Hrs.

Date of Parameter Sampling Particula Sulphur Nitroge Lead Carbon Ammon Nickel Arsenic Benzo Benzen Particula Ozone Monoxid (as As³) (a) te te Dioxide (as (as ia (as (as (C6H65 Matter Matter (as 502) Dioxide 03) Pb1) e (as NH3) Ni2) ng/m3 pyrene (PM2.5) (PM10) µg/m3 CO) ng/m3 (as (as ug/m3 ua/m3 Mg/ BAP4) mg/m3 ug/m3 µg/m3 NO2) µg/m3 m3 ng/m³ ug/m3 BOL 02/11/2021 34.34 44.69 BDI BDL BOL 78.28 16.22 30.41 24.71 BDL 1.08 BOL 05/11/2021 40.66 82.64 22.41 35.75 28.22 BOL 1.06 48.41 BOL BDI BOL 38.46 09/11/2021 80.96 18.69 21.43 43.58 BOL BOL BDL BDL 26.19 BDL 0.92 12/11/2021 42.84 20.84 28.92 26.58 46.42 BOL BDL BDL BOL 88.47 BDL 0.97 16/11/2021 94.67 92.68 24.78 34.92 30.73 **HOI** 1.05 42.81 ICB BDI BOI. PD: 19/11/2021 40 94 37.17 82:47 20.44 37.48 32.46 BOL 1.14 BOIL. BDL BDL BDU 23/11/2021 17,95 25.88 22.58 BDL 1.18 50.47 35.97 75.21 BOL BDL BDL BDL 27.49 26/11/2021 43.64 96.44 21.73 32.73 BDL 45.28 BDL BDL BDL 10 90.34 23.48 35.60 13.52 \$40U 1 190 29/11/2021 41.26 13131 832 84 Black 44.67 96.44 24.78 37.48 32.46 1.18 50.47 Minimum 34.34 75.21 16.22 25.88 21.43 0.92 40.94 Maximum 85.28 20.73 31.99 26.41 1.07 45.54 39.89 Average . . NAAQM 100 60 100 80 RO 1 2 400 20 6 5 Standards IS:5182 IS:5182 15:518 NL/SO IS:5182 IS:5182 Method NL/SO 40CFR NL/SOP Test Method 15:5182 IS:5182 (P-2) (P-6) 2 (P-9) P/AAQ-(P-10) (P-23) of Air Appendix P/AAQ /AAQ-(P-12) (P-11) 11 Samplin -13 12 L Part 53 98 CPCB Analysis Guideline

*NAAQS: National Ambient Air Quality Standards: Schedule-VII, [Rule 3 (38)], [Part-II-sec.-3(i)] 16.11.2039

HDL-Below Detection Limit, Parsenk-BDL [LOQ- 0.5], BAP-BDL [LOQ- 0.5], Benzene-BDL [LOQ- 0.5], Lead-BDL [LOQ- 0.5], Nickel-BDL [LOQ- 1.0]

Sample Analysed within Seven days from the date of sampling.

5



BOR (AUTHOR)

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+91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

NITYA LABORATORIES

C+91-191-2465597

info@nityalab.com @ www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001162 Test Report Date: 27/07/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter. Pet Bottle

Test Started on

: 19/07/2021

Test Completed

: 26/07/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling

: 17/07/2021

Sampling Conducted By Place of Samplina

: Mr. Veerpal Singh

: ETP-1 O/L IPRI

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	На	224	7.74	6.0-8.5	I\$:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	12.8	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	90	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days of 27°C) (BOD)	mg/L	8.4	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	BDL (LOQ-1.0)	5.0	IS:3025 (P-39)
6	Prienols(C ₄ H ₅ OH)	mg/L	0.24	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	C.42	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	0.42	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr**)	mg/L	BDL (LOQ-0.1)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.25)	1.0	APHA -23 rd Ed
12	Lead (Pb)	mg/L	0.08	0.1	APHA-23rd Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.01)	0.01	APHA-23rd Ed.
14	Zinc (Zn)	mg/L	3.15	5.0	APHA-23rd Ed.
15	Nickel (Ni)	mg/L	0.61	1.0	APHA-23 ^{ro} Ed.

(RAVINDER MUTAL)

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+91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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NITYA LABORATORIES

- 9 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu 180 015, J&K (UT), India
- F91-191-2465597
- info@nityalab.com & www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery Distt. Panipat, Haryana, INDIA

Test Report No: 202107170110 Test Report Date: 27/07/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Started on

: 19/07/2021

Test Completed Method of Sampling

: 26/07/2021 : SOP/B/D-3

Date of Sampling

: 17/07/2021

Sampling Conducted By

: Mr. Veerpal Singh

Place of Sampling

: ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	7.14	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	BDL (LOQ-0.2)	0.20	APHA-23rd Ed
3	Total Chromium	mg/L	BDL(LOQ-2.0)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	BDL(LOQ-0.2)	0.2	APHA-23rd Ed.
5	Benzene	mg/L	BDL(LOQ-0.1)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyreen	mg/L	BDL(LOQ-0.2)	0.2	APHA-23 rd Ed.

Bolow Detection Limit, LOQ-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.

(RAVINDER MITTAL)

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E +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



NITYA LABORATORIES

43, Sector-A1 Ext., Bhalla Enclave, Chann.
 Himmat, Jammu-180 015, J&K (UT), India

G-91-191-2465597

■ info@nityalab.com € www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.:1C636621000001163 Test Report Date: 27/07/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Started on

: 19/07/2021

Test Completed

: 26/07/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling

: 17/07/2021

Sampling Conducted By

: Mr. Veerpai Singh

Place of Sampling

: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1:	pH		7.61	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Salids (TSS)	mg/L	14.6	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	80	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	6.8	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	BDL (LOQ-1.0)	5.0	IS:3025 [P-39]
6	Phenois(C₀H₅OH)	mg/L	0.22	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.48	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	40	IS:3025 (P-34)
9	Phosphale	mg/L	0.51	3.0	I5:3025 (P-31)
10	Chromium Hexavalent (Cr*)	mg/L	BDL (LOQ-0.1)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.25)	1,0	APHA -23rd Ed.
12	Lead (Pb)	mg/L	0.04	0.1	APHA-23™ Ed.
13	Mercury (Hg)	mg/L	BDL [LOQ-0.01]	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	1.88	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.65	1.0	APHA-23 rd Ed.

any determination and 100 cars of Quantification, the lowest concentration of a substance may can be accurately measured under pregned representational conditions.

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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C +91-129-2241021

+91-9013591021, +91-9013552273

■ labsnitya@gmail.com



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- Himmat, Jammu-180 015, J&K (UT), India
- H+91-191-2465597
- 🖴 info@nityalab.com 🗗 www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipal Refinery

Distt. Panipat, Haryana, INDIA

Test Report No: 202107170111 Test Report Date: 27/07/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling Date of Sampling

Sampling Conducted By

Place of Samplina

: 1.0 Liter, Pet Bottle

: 19/07/2021

: 26/07/2021

: SOP/B/D-3

: 17/07/2021

: Mr. Veerpal Singh

: ETP-2 O/L (PR) **Test Report**

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	7.86	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	BDL (LOQ-0.2)	0.20	APHA-23 rd Ed
3	Total Chromium	mg/L	BDL(LOQ-2.0)	2.0	I\$:3025 (P-52)
4	Vanadium (V)	mg/L	BDL(LOQ-0.2)	0.2	APHA-23rd Ed.
5	Benzene	mg/L	BDL(LOQ-0.1)	0.1	APHA-23™ Ed.
6	Benzo(a)-Pyreen	mg/L	BDL(LOQ-0.2)	0.2	APHA-23™ Ed.

BDL-Below Detection Limit, LOG-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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+91-129-2241021

A +91-9013591021, +91-9013552273

labsnitya@gmail.com



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• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

C +91-191-2465597

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001164 Test Report Date: 27/07/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

: 19/07/2021

: 26/07/2021

: SOP/B/D-3 : 17/07/2021

: Mr. Veerpal Singh

: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Urit	Result	Permissible Limits	Protocol
1	На		7.64	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	52	100	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	130	250	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	12.6	30	IS:3025 (P-44)
5	Phenois(C ₆ H ₉ OH)	mg/L	0.06	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.6	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	2.8	<5	IS:3025 (P-60)
8	Chromium Hexavalent (Cr**)	mg/L	BDL(LOQ-0.1)	0.1	IS:3025 (P-52)

BDL-Below Detection Limit, LOG-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.



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E +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



NITYA LABORATORIES NITYA LABORATORIES 43, Sector-A1 Ext., Bhalla Enclave, Channi

Himmat, Jammu-180 015, J&K (UT), India

C+91-191-2465597

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No: 202107170112 Test Report Date: 27/07/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Started on

: 19/07/2021

Test Completed

: 26/07/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling

17/07/2021

Sampling Conducted By

: Mr. Veerpal Singh

Place of Samplina

: ETP-3 (PTA-LIP)

Test Report

Sı, No.	Parameter	Unii	Result	Permissible Limits	Protocol
1	Cyanide (CN)	mg/L	BDL (LOQ-0.2)	0.20	APHA-23™ Ed.
2	Total Chromium	mg/L	BDL(LOQ-2.0)	2.0	IS:3025 (P-52)

BDL-Below Detection Limit, LCQ-Limit of Quantification, the lowest concentration of a substance that can be occurately ministed under specified experimental conditions.

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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C +91-129-2241021

+91-9013591021, +91-9013552273

■ labsnitya@gmail.com



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Q 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

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info@nitvalab.com & www.nd.wiab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panigat Refinery Distt. Panipat, Haryana. INDIA ULR No -TC636621000001342 Test Report Date: 23/08/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Buttle

Test Started on

: 14/08/2021

Test Completed

21/08/2021

Method of Sampling

SOP/B/D-3

Date of Sampling

E 13/08/2021

Sampling Conducted By

: Mr. Veerpal Singh

Place of Sampling

: ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH		7.42	6.0-8.5	15:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	16.8	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	110	125.0	15:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (800)	mg/L	10	15.0	15:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	BDL (LOQ-1.0)	5.0	IS:3025 (P-39)
6	Prienois(C _t H ₅ OH)	mg/L	0.21	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.42	0.5	15:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	rng/i.	BDL (LOQ-0.2)	40	15:3025 (P-34)
9	Phosphate	mg/L	0.69	3.0	(5:3025 (P-31)
10	Chromium Hexavalent (Cr-6)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23 rd Ed.
12	Lead (Pb)	mg/L	0.05	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.005)	0.01	APHA-23" Ed.
14	Zinc (Zn)	mg/L	3.6	5.0	APHA-23" Ed.
15	Nickel (Ni)	mg/L	0.72	0.1	APHA 23 rd Ed.

EDL Selow Descript Linet, LOG-cand of Disartification. The owest concernation of a substance that can be accurately measured under specified expendence conditions.



Certificate No. T-6 = 6

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Disit, Pacipat, Haryana, 19DIA

Test Report

Test Report No. 202108130110 Test Report Date: 23/08/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

1.0 Liter, Pet Bottle

14/08/2021

: 21/08/2021

SOP/8/D-3

: 13/08/2021

: Mr. Veerpal Singh

: ETP-1 O/L (PR)

Test Report

r. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	and w			
	and the second second	mg/L	6.8	15.0	IS:3025 (P-34)
5	Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	15:3025 (P-52)
4	Vanadium (V)	mg/L	Deutage was	1 121011	
	1000 - 10	mg/L	BDL(LOQ-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-23 Fd.
6	Benzo(a)-Pyresin	mg/L	BDL(LOQ-0.02)	0.2	APHA 23" Ed

west concentration of a substance that can be acceptately medisared under specified experimental conditions.

(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001343

Test Report Date: 23/08/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Report

Test Started on

: 14/08/2021

Test Completed

21/08/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling

: 13/08/2021

Sampling Conducted By

: Mr. Veerpal Singh

Place of Sampling

: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	рН	(4)	7.55	6.0-8.5	(S:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	12.8	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	100	125.0	IS:3025 (P 58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (800)	mg/L	8.2	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	BDL (LOQ-1.0)	5.0	IS:3025 (P-39)
6	Phenois(C ₆ H ₅ OH)	mg/L	0.24	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.42	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	0.94	3.0	15:3025 (P-31)
10	Chromium Hexavalent (Cr+5)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23" Ed.
12	Lead (Pb)	rrig/L	0.06	0.1	APHA-23 ^{rs} Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.005)	0.01	APHA-23 nd Ed.
14	Zinc (Zn)	rng/L	2.18	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.68	1.0	APHA-23 rd Ed.

BDL-Beton Detaction Lend, LOQ-Land or Quantification this lowest concentration of a substance that can be accurately measured under appointed experiments concerns



Certificate No T-6366

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(RAVINDER-MITTAL)

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Q 43, Sector-A1 Ext., Bhalla Enclave, Chann. Himmes, Jammu-180 015, J&K (UT), India

C +91-191-2465597

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No. 202108130111 lest Report Date; 23/08/2021

Sample Particulars:

Sample Quartity & Packaging

Test Started on

Test Completed Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

14/08/2021

1 21/08/2021

: SOP/B/D-3

: 13/08/2021

: Mr. Veerpal Singh

ETP-2 O/L (PR)

Test Report

Parameter	Unit	Result	Permissible Limits	Protocol
Ammonia (N)	mg/L	8.2	15.0	TS:3025 (P-34)
Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	15:3025 (P-52)
Vanadium (V)	mg/L	BDL(LOQ-0.1)	0.2	APHA-23" Ed.
Benzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-Z3 rd Ed.
Benzn(a)-Pyreen	mg/L	BDL(LOQ-0.0Z)	0.2	APHA-23° Ed
	Ammonia (N) Cyanide (CN) Total Chromium Vanadium (V) Benzene	Ammonia (N) mg/L Cyanide (CN) mg/L Total Chromium mg/L Vanadium (V) mg/L Benzene mg/L	Ammonia (N) mg/L 8.2 Cyanide (CN) mg/L 8DL (LOQ-0.1) Total Chromium mg/L 8DL(LOQ-0.05) Vanadium (V) mg/L 8DL(LOQ-0.1) Benzene mg/L 8DL(LOQ-0.01)	Ammonia (N) mg/L 8.2 15.0 Cyanide (CN) mg/L 8DL (LOQ-0.1) 0.20 Total Chromium mg/L 8DL(LOQ-0.05) 2.0 Vanadium (V) mg/L 8DL(LOQ-0.1) 0.2 Benzene mg/L 8DL(LOQ-0.01) 0.1

BDL-Below Dissection Limit, 1,000 Limit of Quartification, the lewest concentration of a substance that can be accurately theistand under specified experimental conductors.

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(RAVINDER MITTAL)

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- Himmat, Jammy 180 015, 28X (UT), India
- C+91-191-2465597
- minfo@nityalab.com & www.mtyaap.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery Distt. Panipat, Haryana, INDIA

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

ULR No. TC636621000001344 Test Report Date: 23/08/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Started on

14/08/2021

Test Completed

21/08/2021

Method of Sampling

SOP/8/0-3

Date of Sampling

13/08/2021 : Mr. Veerpal Singh

Sampling Conducted By Place of Sampling

: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	рн		7.53	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	68	100	15:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	140	250	15:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	14.8	30	IS:3025 (P-44)
5	Phenois(C _s H _s OH)	mg/L	0.07	<1	15:3025 (P-43)
6	Sulphide (5)	mg/L	1.4	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	2,2	<5	IS:3025 (P 60)
8	Chromium Hexavalent (Cr+5)	mg/L	BDL(LOQ-0.05)	0.1	IS:3025 (P-52)

BDL-Bettys Detection Lend. LCG-Lund of Quantification, the lowest concentration of a substance trial can be accurately measured under specified expensence concentration.



(AUTHORISED-SIGNATORY)

(RAVINDER MITTAL)

NOTE The foreign are process the requiremental for continuent report. The results contained in this war report related with in the service water. These report would not be represented an experience of which water approve of the latest super. in invested drug to your good and will be light become in the absence on the absence of the properties of the absence of the a



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C +91 101 2465597

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt, Panipat, Haryana, INDIA

Test: Report No.: 202108130112 Test Report Date: 23/08/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

14/08/2021

: 21/08/2021

: SOP/B/D-3

: 13/68/2021

: Mr. Veerpal Singh

ETP-3 (PTA ETP)

Test Report

	Parameter	Unit	Result	Permissible	
				Limits	Protoco
1 Cyanide (CN)					
		mg/L	BDL (LOQ-0.1)	0.20	APHA 23°C Ed
2	Total Chromium				14 (M 2) EU
		mg/L	BDt (LOQ-0.05)	2.0	IS:3025 (P-52

BDL Before December 1 will LCQ Circle of Quartification (the linears) concentration of a substance that can be accurately measured under operated expendiental conditions.

(ADEHORISED SIGNATORY)

(RAVINDER MITTAL)



BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

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- +91-191-2465597
- info@nityalab.com & www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.: TC636621000001575 Test Report Date: 22/09/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

: 14/09/2021

: 21/09/2021

: SOP/B/D-3

: 13/09/2021

: Mr. Rishi Pal

: ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	ald		7.27	6.0-8.5	IS:3025 (P-11)
	pH Total Suspended Solids (TSS)	mg/L	17.8	20.0	(S:3025 (P-17)
2	Chemical Oxygen Demand (COD)	mg/L	56	125.0	IS:3025 (P-58)
3	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	12	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2	5.0	15:3025 (P-39)
6	Phenois(C ₆ H ₅ OH)	mg/L	0.28	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.4	0.5	I5:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	0.21	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr+6)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23 rd Ed.
	Lead (Pb)	mg/L	0.08	0.1	APHA-23 rd Ed.
12		mg/L	BDL (LOQ-0.005)	0.01	APHA-23 ^{nt} Ed.
13	Mercury (Hg)	rng/L	3.2	5.0	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	0.53	1.0	APHA-23 rd Ed.
15	Nickel (Ni)	Tig/c		440	

BDL-Below Detection Limit 1.00-Limit of Quantification, the lowest concentra

Certificate No. 1-6366

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C +91-129-2241021

A +91-9013591021, +91-9013552273

labsnitya@gmail.com



Nitya NITYA LABORATORIES NITYA LABORATORIES 43, Sector-A1 Ext., Bhaila Enclave

Himmat, Jammu-180 015, J&k (UT), India

3+91-191-2465597

info@nityalab.com € www.riityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report No. 202109130110 Test Report Date: 22/09/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

: 14/09/2021

: 21/09/2021

: 50P/B/D-3

: 13/09/2021

: Mr. Rishi Pal

: ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	7.4	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 Ed.
3	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	BDL(LOQ-0.1)	0.2	APHA-23 ^m Ed.
5	Benzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-23" Ed.
6	Benzo(a)-Pyreen	mg/L	BDL(LOQ-0.02)	0.2	APHA-23 rd Ed.

BDL Below Detection Limit 1.00 - unit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experiments concerns

(AUTHORISED SIGNATORY)

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)
Panipat Refinery
Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001576 Test Report Date: 22/09/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

: 14/09/2021

: 21/09/2021

: SOP/B/D-3

: 13/09/2021

: Mr. Rishi Pal

: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	рН	140	8.23	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	16.0	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	88	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	14	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2	5.0	IS:3025 (P-39)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.22	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.42	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	10	IS: 3025 (P-34)
9	Phosphate	mg/L	0.064	3,0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr+6)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23 rd Ed.
12	Lead (Pb)	mg/L	0.04	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	2 58	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.37	1.0	APHA-23 rd Ed.

BDL-Below Detection Limit 1.00-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specification developments conductors



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(RAVINDER MITTAL)

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E +91-129-2241021

H +91-9013591021, +91-9013552273

Tabsnitya@gmail.com



NITYA LABORATORIES

 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No: 202109130111 Test Report Date: 22/09/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

: 14/09/2021

: 21/09/2021

: SOP/B/D-3

: 13/09/2021

: Mr. Rishi Pal

: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	0.258	15.0 -	IS:3025 (P-34
2	Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 nd Ed.
3	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	15:3025 (P-52
4	Vanadium (V)	mg/L	BDL(LOQ-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyreen	mg/L	BDL(LOQ-0.02)	0.2	APHA-23 rd Ed.

BOL-Below Detection Limit, LOQ-Limit of Quantitization, the loanest concentration of a substance that can be accurately reasoned under scription expuriments concentration.

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+91-9013591021, +91-9013552273

a labsnitya@gmail.com



NITYA LABORATORIES NITYA LABORATORIES 43, Sector-A1 Ext., Bhalla Enclave,

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu 180 015, J&K [UT), India

C+91-191-2465597

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001577 Test Report Date: 22/09/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on Test Completed Method of Sampling Date of Sampling

Sampling Conducted By Place of Sampling

: 1.0 Liter, Pet Bottle

: 14/09/2021 : 21/09/2021

: SOP/B/D-3 : 13/09/2021

: Mr. Rishi Pal

: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	***	7.23	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	25	100	15:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	136	250	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	22	30	IS:3025 (P-44)
5	Phenois(C ₆ H ₅ OH)	mg/L	0.14	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.6	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	2.48	<5	IS:3025 (P-60)
8	Chromium Hexavalent (Cr+6)	mg/L	BDL(LOQ-0.05)	0.1	15:3025 (P-52)

K

BOX-Balow Detection Linet, LOQ-Limit of Quantitication, the lowest concentration at a substance that can be accurately measured under specified experimental conductions.



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(RAVINDER MITTAL)

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■ +91-9013591021, +91-9013552273

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- Himmat, Jammu-180 015, J&K (UT), India
- C +91-191-2465597
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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No: 202109130112 Test Report Date: 22/09/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Started on

: 14/09/2021

Test Completed

: 21/09/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling

: 13/09/2021

Sampling Conducted By

: Mr. Rishi Pal

Place of Sampling

: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
2	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	IS:3025 (P-52)

RDL Rainw Betection Limit 1.00 J. Imit of Quantification, Its inwest concervation of a substance that can be accurately headsured under swell or experience course one

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Himmat, Jaminu-180 015, J&K (UT), India

C +91-191 2465597

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001914 Test Report Date: 16/10/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle : 07/10/2021

Test Started on Test Completed

: 15/10/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling Sampling Conducted By

: 06/10/2021

Place of Sampling

: Mr. Rishi Pal : ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH.		7.65	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	14.0	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	60	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	8	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	3.8	5.0	IS:3025 (P-39)
6	Phenois(C ₆ H ₅ OH)	mg/L	0.24	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.2	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	EDL (LOQ-0.2)	40	15:3025 (P-34)
9	Phosphate	mg/L	0.35	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁻⁶)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23" Ed.
12	Lead (Pb)	mg/L	0.06	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	3.5	5.0	APHA-23 rd Ed.
15	Nickel (NI)	mg/L	0.41	1.0	APHA-23 rd Ed.



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Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No. 202110060110 Test Report Date: 16/10/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

: 07/10/2021

: 15/10/2021

SOP/B/D-3

: 06/10/2021

: Mr. Rishi Pal

: ETP-1 O/L (PR)

Test Report

		Result	Permissible Limits	Protocol
Ammonia (N)	mg/L	5.8	15.0	IS:3025 (P-34
Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	IS:3025 (P-52)
Vanadium (V)	mg/L	BDL(LOQ-0.1)	0.2	APHA-23 rd Ed.
Senzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-23 rd Ed.
Senzo(a)-Pyreen	mg/L	BDL(LOQ-0.02)	0.2	APHA-23 rd Ed.
3	Cyanide (CN) Fotal Chromium /anadium (V) lenzene enzo(a)-Pyreen	Cyanide (CN) mg/L Fotal Chromium mg/L /anadium (V) mo/L lenzene mg/L	Cyanide (CN)	Cyanide (CN)

BDL Below Detection Limit, LOQ-Limit of Quantification, the lowest concentration of a substance trice can be accurately measured under specified exponential conditions.

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No.:TC636621000001916 Test Report Date: 16/10/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Liter, Pet Bottle

07/10/2021

: 15/10/2021

: SOP/B/D-3

: 06/10/2021

: Mr. Rishi Pal

: ETP-3 (PTA-ETP)

lest Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	рН		7.67	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	54	100	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	160	250	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	16.0	30	IS:3025 (P-44)
5	Phenols(C ₆ H ₅ OH)	mg/L	0.16	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.8	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	2.82	<5	IS:3025 (P-60)
8	Chromium Hexavalent (Cr-6)	mg/L	BDL(LOQ-0.05)	0.1	IS:3025 (P-52)



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II +91-129-2241021

+91-9013591021, +91-9013552273

absnitya@gmail.com



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Q 43, Sector A1 Ext., Bhalla Enclave, Charmi Himmat, Jammu-180 015, 18 K (UT), India

₽ +91 191-2465597

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division) Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No: 202110060112 Test Report Date: 16/10/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Liter, Pet Bottle

Test Started on

: 07/10/2021

Test Completed

: 15/10/2021

Method of Sampling

: 50P/B/D-3

Date of Sampling

: 06/10/2021

Sampling Conducted By

: Mr. Rishi Pal

Place of Sampling

: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
2	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	IS:3025 (P-52)

BDL Below Detection Limit, LDG-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conductors.

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T +91-129-2241021

★91-9013591021, +91-9013552273

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• 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

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Test Report Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Panipat Refinery

Distt. Panipat, Haryana, INDIA

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Litre, Pet Bottle

ULR No.:TC636621000002315

Test Report Date: 26/11/2021

: 18/11/2021

: 25/11/2021

: SOP/8/D-3

. 17/11/2021

: Mr. Rishi Pal

: ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH		7.49	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	18.0	20.0	15:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	70	125.0	15:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	6	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2.9	5.0	15:3025 (P-39)
6	Phenois(C ₆ H ₅ OH)	mg/L	0.21	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.26	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	0.67	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁻⁶)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23 rd Ed.
12	Lead (Pb)	mg/L	0.08	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	3.1	5.0	APHA-23'd Ed.
15	Nickel (Ni)	mg/L	0.67	1.0	APHA-23 rd Ed.

remark:
BDL-Below Detection Limit LOO-Limit of Quantification, the lowest concurtitation of a substance that can be accurately missisted under specified experimental conditions



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+91-9013591021, +91-9013552273

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Test Report No: 202111170110

Test Report Date: 26/11/2021

Panipat Refinery

Distt. Panipat, Haryana, INDIA

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Litre, Pet Bottle

: 18/11/2021

: 25/11/2021

: SOP/B/D-3

: 17/11/2021

: Mr. Rishi Pal

: ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	3.8	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/t.	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	15:3025 (P-52)
4	Vanadium, (V)	mg/L	BDL(LOQ-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyreen	mg/L	BDL(LOQ 0.02)	0.2	APHA-23 rd Ed.
U	Denzo(a) i free:	3.7		1000	

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BDI -Below Dotestion Limit, LOQ-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experiments: concentration

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+91-9013591021, +91-9013552273

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- Himmat, Jammu-180 015, J&K (UT), India
- C+91-191-2465597
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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Panipat Refinery

Distt. Panipat, Haryana, INDIA

ULR No :TC636621000002316 Test Report Date: 26/11/2021

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Litre. Pet Bottle.

Test Started on Test Completed

: 18/11/2021 : 25/11/2021

Method of Sampling

: SOP/8/D-3

Date of Sampling

: 17/11/2021

Sampling Conducted By

Mr. Rishi Pal

Place of Sampling

ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	+	7.69	6.0-8.5	IS:3025 (P-11
2	Total Suspended Solids (TSS)	mg/L	14	20.0	IS:3025 (P-17
3	Chemical Oxygen Demand (COD)	mg/	100	125 0	IS:3025 (P-58
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	10	15.0	IS:3025 (P-44
5	Oil & Grease (O&G)	mg/L	1.8	5.0	IS:3025 (P-39
6	Phenois(C, H _o OH)	mg/1	0.26	0.35	IS 3025 (P-43
7	Sulphide (S)	mg/L	0.3	0.5	15:3025 (P-29
8	Total Kjeldahl Nitrogen (NH3)	mg/L	BDL (LOQ-0.2)	40	IS:3025 (P-34
9	Phosphate -	mg/L	0.43	3.0	IS:3025 (P-31
10	Chromium Hexavalent (Cr ⁻⁶)	mg/L	BDL (LOQ-0.05)	0.1	IS:3025 (P-52
11	Copper (Cu)	mg/L	BDL (LOQ-0.1)	1.0	APHA -23" Ed
12	Lead (Pb)	mg/L	0.04	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	BDL (LOQ-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/l	2.62	5.0	APHA-23 rd Ed
15	Nickel (Ni)	mg/L	0.84	1.0	APHA-23 rd Ed.

BIDL Basew Despoten Limit, LDQ-Limit of Quantification, the lowest concentration of a substa-



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for content of report. The results contained in this limit report related only to the sumple lessor. This report shall not be reproduced except at NOTE: The decouple, action for incomposition for regarding the sample collection/basing/test report, please send as a for incomposition for regarding the sample of the action of the configuration for the sample of the sample of the configuration for the configuration for the configuration for the configuration for the configuration of the conf

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3 +91-129-2241021

+91-9013591021, +91-9013552273

■ labsnitya@gmail.com



Nitya NITYA LABORATORIES

NITYA LABORATORIES

◆ 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India

+91-191-2465597

🖬 info@nityalab.com 🕻 www.nityalab.com

BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Test Report No: 202111170111 Test Report Date: 26/11/2021

Panipat Refinery

Distt. Panipat, Haryana, INDIA

Sample Particulars:

Sample Quantity & Packaging

: 1.0 Litre, Pet Bottle

Test Started on

: 18/11/2021

Test Completed

: 25/11/2021

Method of Sampling

: SOP/B/D-3

Date of Sampling

: 17/11/2021

Sampling Conducted By

: Mr. Rishi Pal

Place of Sampling

: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)-	mg/L	3.6	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	BDL(LOQ-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	BDL(LOQ-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	BDL(LOQ-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyreen	mg/L	BDL(LOQ-0.02)	0.2	APHA-23 rd Ed.

BDL-Below Detection Limit LOO Limit of Quantification, the lowest concentration of a substance may come accurately measured under specified expensional, cancer any

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PLOT NO. 118, CHURCH ROAD, BEHIND KAUSIK VATIKA, BHAGAT SINGH COLONY, BALLABHGARH, FARIDABAD - 121004, HARYANA, INDIA

+91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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BUILDING & ROAD, MATERIAL, SOIL, ENVIRONMENTAL & CALIBRATION TESTING LAB

- 9 43, Sector-A1 Ext., Bhalla Enclave, Channi Himmat, Jammu-180 015, J&K (UT), India
- +91-191-2465597
- info@nityalab.com 🕏 www.nityalab.com

Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

ULR No.:TC636621000002317

Test Report Date: 26/11/2021

Panipat Refinery

Distt. Panipat, Haryana, INDIA

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Litre, Pet Bottle

: 18/11/2021

: 25/11/2021

: SOP/B/D-3

: 17/11/2021

: Mr. Rishi Pal

: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
			7.92	6.5-8.5	15:3025 (P-11)
1	pH			100	IS:3025 (P-17)
2	Total Suspended Solids (TSS)	mg/L	68		
	Chemical Oxygen Demand (COD)	mg/L	180	250	IS:3025 (P-58)
3		one ti	18.0	30	IS:3025 (P-44)
4	Bio-Chemical Oxygen Demand (3 days at	mg/L	10.0	2800	
	27°C) (BOD)	mg/L	0.26	<1	IS:3025 (P-43)
5	PhenoIs(C ₆ H ₅ OH)	VIA10.003	1.4	2.0	IS:3025 (P-29)
6	Sulphide (S)	mg/L			
7	Fluoride	mg/L	3.57	<5	IS.3025 (P-60)
*	THE TOTAL SECTION SECT		BDL(LOQ-0.05)	0.1	IS:3025 (P-52)
8	Chromium Hexavalent (Cr-b)	mg/L	DULLLOQ 0.03)		Januarios de Santo

Remark
BDL-Below Detection Limit, 1,00-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions



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HOTE. The laboratury accepts the resourceably for content of report. The regula contented in the test report related, any or the service cases. Test report out and the resourceable has contented except in his willow whiter approval of the treport produce except in his window the written approval of the content of the produced except in his written approval of the organization. Samples will be destroyed after 10 Cars to report and the written approval of the organization. Samples will be personally also produced except in his written approval of the creation of the organization. Samples will be personally a content to the produced except in his written approval of the creation and the organization. Samples will be contented as the content of the produced except in his written approval of the creation and the creation of the creation and the creation are creation and the creation are creation and the creation and

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3 +91-129-2241021

+91-9013591021, +91-9013552273

labsnitya@gmail.com



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C +91-191-2465597

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Test Report

Issued to: M/s Indian Oil Corporation Limited

(Refinery Division)

Panipat Refinery

Distt. Panipat, Haryana, INDIA

Test Report No: 202111170112 Test Report Date: 26/11/2021

Sample Particulars:

Sample Quantity & Packaging

Test Started on

Test Completed

Method of Sampling

Date of Sampling

Sampling Conducted By

Place of Sampling

: 1.0 Litre, Pet Bottle

: 18/11/2021

: 25/11/2021

: SOP/B/D-3

: 17/11/2021

: Mr. Rishi Pal

: ETP-3 (PTA-ETP)

Test Report

Parameter	Unit	Result	Permissible Limits	Protocol
Cyanide (CN)	mg/L	BDL (LOQ-0.1)	0.20	APHA-23 rd Ed.
I otal Chromium	mg/L	BDL(LOQ-0.05)	2.0	IS:3025 (P-52
	Cyanide (CN)	Cyanide (CN) mg/L	Cyanide (CN) mg/L BDL (LOQ-0.1)	Cyanide (CN) mg/L BDL (LOQ-0.1) 0.20

BDL Balow Detection Limit, LOG-Limit of Quantification, the lowest concentration of a substance that can be accountely mudaun it under specified experimental conductors.

MOTE: The liboratory accepts the responsibility for containing of report. The results containing in this test report related only to the sample tested. Lest report that not be recentled a-cost in fail, without separation is intended only for your purishing and not for legal purpose or for advectisement. This report is intended except in fail without the written approval of this organization. Samples will be costroyed after 10 or issue of test certificate unless otherwise specified. Any complainty about this report, housing a communicated in writing aution 2 case of this report. Total fails to of high Laboratories is feeded invocat amount print. In your have any complainty feedback regarding the sample collection/testing/test report, please send an enterfal of injustificate success and call at +91-191-2465897, +91-9573924993.

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+91-9013591021, +91-9013552273

labsnitya@gmail.com

TLV for Noise (OISD-GDN-166, First Edition, July, 1997)

Exposure Time (In hours)

8

90

4

95

2

1

105

1/2 hrs.

TLV (in dB)

90

110

SOUND LEVEL METER MODEL NO. :- RT-5001

METER SR. NO.:- 111102404 MAKE:- REYTHON TECHNOLOGY CALIBRATION ON:- 10.12.2020

NEXT DUE DATE OF CLIBRATION:-10.12,2021

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	SRU-I	21-PM-CF-002-A	PUMP	84.3	02.12.2021
2	SRU-I	21-PM-CF-001-C	PUMP	86.7	02.12.2021
3	SRU-I	21-PM-CF-003-C	PUMP	89.9	02.12.2021
4	SRU-I	21-PM-CF-007-A	PUMP	87.3	02.12.2021
5	SRU-I	18-PA-CF-004-B	PUMP	87.5	02.12.2021
					10167016
1	SRU-II	51-PM-104-8	PUMP	87.8	02.12.2021
2	SRU-II	51-PM-109-B	PUMP	89.1	02.12.2021
3	SRU-II	53-PM-103-A	PUMP	88.4	02.12.2021
4	SRU-II	53-PM-101-B	PUMP	86.7	02.12.2021
5	SRU-II	54-PM-103-B	PUMP	85.1	02.12,2021
6	SRU-II	54-PM-102-A	PUMP	87.4	02.12.2021
7	SRU-II	57-PM-101-A	PUMP	90	02.12.2021
8	SRU-II	57-PM-103-A	PUMP	90	02.12.2021
9	SRU-II	57-PM-102-B	PUMP	89.9	02.12.2021
10	SRU-II	26-KM-101-B	COMPRESSOR	88.5	02.12.2021
11	SRU-II	57-KM-101-8	COMPRESSOR	90	02,12,2021
12	SRU-II	57-KM-101-A	COMPRESSOR	89.9	02.12.2021
13	SRU-II	20-PM-103-B	PUMP	89.7	02.12.2021
14	SRU-II	20-PM-102-A	PUMP	88.9	02.12.2021
15	SRU-II	25-PM-109-B	PUMP	87.9	02.12.2021
16	SRU-II	25-PM-108-B	PUMP	88	02.12.2021
17	SRU-II	88-PM-1002-B	PUMP	89.6	02.12.2021
18	SRU-II	26-PM-101-B	PUMP	86	02.12.2021
19	SRU-II	26-PM-103-A	PLIMP	89.7	02.12.2021
20	SRU-II	26-PM-102-A	PUMP	90	02.12.2021
100	- 10				
1	MSQ	301-KM-201-B	COMPRESSOR	77.9	03.12.2021
2	MSQ	301-KM-101-A	COMPRESSOR	76.2	03.12.2021
3	MSQ	301-PM-101-8	PUMP	83	03.12.2021
4	MSQ	303-PM-206-A	PUMP	79.5	03.12.2021
5	MSQ	303-PM-202-A	PUMP	84.5	03.12.2021
6	MSQ	303-PM-102-A	PUMP	84.7	03.12.2021
7	MSQ	303-PM-204-B	PUMP	86.2	03.12.2021
8	MSQ	303-PM-202-B	PUMP	87.5	03.12.2021
9	MSQ	303-PM-101-B	PUMP	85.8	03.12.2021
10	MSQ	303-PM-210-A	PUMP	85	03.12.202
11	MSQ	301-PM-211-B	PUMP	83.6	03.12.2021
12	MSQ	301-PM-213-A	PUMP	83	03.12.202
13	MSQ	301-PM-214-B	PUMP	81.9	03.12.202
14	MSQ	301-PM-212-B	PUMP	84.2	03.12,202
15	MSQ	301-PM-201-A	PUMP	88.5	03.12.202
16	MSQ	301-PM-203-A	PUMP	83.5	03.12.202
17	MSQ	301-PM-215-A	PUMP	82.4	03.12.202
18	MSQ	301-PM-254-A	PUMP	81	03.12.207

19	MSQ	301-PM-253-B	PUMP	88.8	03.12.2021
20	MSQ	303-K-201-B	COMPRESSOR	80	03.12.2021
21	MSQ	UNDER COMPRESSOR HOUSE	COMPRESSOR	77.9	03.12.2021
22	MSQ	303-K-301-B	COMPRESSOR	89.7	03.12.2021
23	MSQ	303-P-303-A	PUMP	82.7	03.12.2021
24	MSQ	303-P-301-A	PUMP	87.8	03.12.2021
25	MSQ	303-P-111-A	PUMP	84.2	03.12.2021
	TATES HI	THE RESERVE THE PROPERTY OF THE PARTY OF THE	A STATE OF THE STA	ALEJEROM FAIR	2 27 20 2
1	DHDT	72-PM-003-B	PUMP	90	04.12.2021
2	DHDT	72-P-02-C	PUMP	85.7	04.12.2021
3	DHDT	72-PM-004-A	PUMP	87.9	04.12.2021
4	DHDT	72-PM-005-B	PUMP	87.7	04.12,2021
5	DHDT	72-PM-007-B	PUMP	88.3	04.12.2021
6	DHDT	UNDER COMP. HOUSE	COMPRESSOR	85.5	04.12.2021
7	DHDT	72-KM-002-A	COMPRESSOR	85.6	04.12.2021
8	DHDT	72-KM-002-B	COMPRESSOR	88.3	04.12.2021
9	DHDT	72-PM-001-A	PUMP	83.5	04.12.2021
Second			BOLESON PERSONS	making and	BANKS INTERIOR
1	HGU-II (75)	76-P-103-B	PUMP	85.8	04.12.2021
2	HGU-II (76)	76-KM-001-B	COMPRESSOR	77.9	04.12.2021
3	HGU-II (76)	76-KM-103-A	COMPRESSOR	78.7	04.12.2021
4	HGU-II (76)	UNDER COMP. HOUSE	COMPRESSOR	77.2	04.12.2021
5	HGU-II (76)	76-P-002-A	PUMP	88	04.12.2021
6	HGU-II (76)	76-P-101-B	PUMP	89.8	04.12.2021
en s	Ann tenn		THE RESERVE OF THE PARTY OF THE	- The state of	7/10
1	CPP/TPS	UB CONTROL ROOM	CONTROL ROOM	64.2	07.12.2021
2	CPP/TPS	VHP CONTROL ROOM	CONTROL ROOM	69.3	07.12.2021
3	CPP/TPS	GTG-3	GENERATOR	92.5	07.12.2021
4	CPP/TPS	GTG-2	GENERATOR	92.8	07.12.2021
5	CPP/TPS	BOILER NO.1 STG	BOILER	92.8	07.12.2021
6	CPP/TP5	BOILER NO.3 STG	BOILER	89.8	07.12.2021
7	CPP/TPS	9060-39-FD-FM-101-A	FD FAN 1 A	89.6	07.12.2021
9	CPP/TPS	9060-39-FD-FM-101-B	FD FAN 1 B	87.5	07.12.2021
10	CPP/TP5	9060-39-ID-PM-101-B	ID FAN	85.6	07.12.2021
-	CPP/TPS	9060-39-ID-PM-101-A	ID FAN	87	07.12.2021
12	CPP/TPS	9060-39-PM-CF-408-B	PUMP	80.9	07.12.2021
13	CPP/TPS CPP/TPS	9060-89-PM-CF-608-B	PUMP	85.5	07,12,2021
14	CPP/TPS	9060-89-PM-CF-508-A 89 PM CF-808-A	PUMP	87.7	07,12,2021
15	CPP/TPS		PUMP	84.1	07.12.2021
16	CPP/TPS	9060-89-FD-FM-1103-A 9060-39-ID-FM-301-B	FD FAN	87.2	07.12.2021
17	CPP/TPS	9060-39-FD-FM-301-B	ID FAN 3 B	85	07.12.2021
18	CPP/TPS	9060-39-FD-FM-301-A	FD FAN 3 B	87	07.12.2021
19	CPP/TPS		FD FAN 3 A	89.9	07,12.2021
20	CPP/TPS	9060-39-PM-CF-457-8	PUMP	89.8	07.12.2021
21	CPP/TPS	9060-89-PA-CF-9904-A	PUMP	89	07.12.2021
22		9060-89-PA-CF-9904-C	PUMP	88.7	07.12.2021
4.6	CPP/TPS	9060-89-PA-CF-9902-A	PUMP	89.4	07.12.2021
23	CPP/TPS	9060-89-FD-FM-1103-B	FD FAN	89.4	07.12.2021

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	AVU-I	03-PM-CF-103-C	PUMP	89.8	05.11.2021
2	AVU-I	03-PM-CF-103-A	PUMP	90	05.11.2021
3	AVU-I	03-P-22-A	PUMP	89.4	05.11.2021
4	AVU-I	03-PM-CF-21-A	PUMP	93.5	05.11.2021
5	AVU-I	03-P-102-A	PUMP	94.2	05.11.2021
6	AVU-I	03-P-61-B	PUMP	90	05.11.2021
7	AVU-I	03-PM-CF-16-B	PUMP	93.8	05.11.2021
8	AVU-I	03-PM-CF-15-B	PUMP	94.6	05.11.2021
9	AVU-I	03-PM-CF-5-B	PUMP	97.2	05.11.2021

-		02 DM CF 4 0	PUMP	98.6	05.11.2021
10	AVU-I	03-PM-CF-4-B	PUMP	89.6	05.11.2021
11	AVU-I	03-P-13-A	PUMP	93.8	05.11.2021
12	AVU-I	04-P-04-B	PUMP	90	05.11.2021
13	AVU-I	03-P-07-B	PUMP	93.8	05.11.2021
14	AVU-I	03-PM-CF-7-A		94.6	05.11.2021
15	AVU-I	04-P-02-B	PUMP	90	05.11.2021
16	AVU-I	04-PM-CF-3-D	PUMP	89.5	05.11.2021
17	AVU-I	04-FF-FN-04	ID FAN	86.9	05.11.2021
18	AVU-I	04-FF-FN-03-A	FD FAN	84.5	05.11.2021
19	AVU-I	04-FF-FN-03-B	FD FAN	88.1	05.11.2021
20	AVU-l	03-FF-FN-04	ID FAN	85.2	05.11.2021
21	AVU-I	03-FF-FN-03-B	FD FAN	84.2	05.11.2021
22	AVU-I	03-FF-FN-03-A	FD FAN	89.9	05.11.2021
23	AVU-I	03-P-9-A	PUMP	89.8	05.11.2021
24	AVU-I	03-P-9-B	PUMP	99.8	05.11.2021
25	AVU-I	03-PM-CF-14-A	PUMP	90	05.11.2021
26	AVU-I	03-PM-CF-14-D	PUMP	89.9	05.11.2021
27	AVU-I	03-PM-CF-8-A	PUMP	95.1	05.11.2021
28	AVU-I	03-PM-CF-6-A	PUMP	96.2	05.11.2021
29	AVU-I	03-PM-CF-6-B	PUMP	93.5	05.11.2021
30	AVU-I	03-PM-CF-8-B	PUMP	89.5	05.11.2021
31	AVU-I	19-PM-CF-01-B	PUMP	93.4	05.11.2021
32	AVU-I	03-P-35-A	PUMP	93.1	05.11.2021
33	AVU-I	03-PM-CF-36-B	PUMP	90	05.11.2021
34	AVU-I	04-P-101-A	PUMP	93.4	05.11.2021
35	AVU-I	03-PM-CF-11-B	PUMP	96	05.11.2021
36	AVU-I	03-P-01-B	PUMP	95.2	05.11.2021
37	AVU-I	03-P-01-C	РИМР	THE PARTY OF	
THE REAL	PHA VIEW AND		PUMP	86.1	09.11.2021
1	PTA	21-P1-125-A	COMPRESSOR	104.5	09.11.2021
2	PTA	Process Air Compressor	TO FAN	89.5	09.11.2021
3	PTA	21-FN-164-A	FD FAN	89.4	09.11.2021
4	PTA	21-FN-165	PUMP	88.9	09.11.2021
5	PTA	21-P1-0512	PUMP	88.8	09.11.2021
6	PTA	21-P1-632-B	PUMP	87.8	09.11.2021
7	PTA	21-P1-407-B	PUMP	90	09.11.2021
			FUIVIF	30	\$6.00 T & N. OK. 90 S J A
8	PTA	21-P1-1606-B	DUMP	89 9	09.11.2021
9	PTA	21-P1-165-A	PUMP	89.9	09.11.2021
	PTA PTA	21-P1-165-A 21-P1-606-A	PUMP	90	09.11.2021
9	PTA PTA PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B	PUMP PUMP	90 92.5	09.11.2021 09.11.2021
9 10	PTA PTA PTA PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A	PUMP PUMP PUMP	90 92.5 90	09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13	PTA PTA PTA PTA PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A	PUMP PUMP PUMP PUMP	90 92.5 90 89.9	09.11.2021 09.11.2021
9 10 11 12 13 14	PTA PTA PTA PTA PTA PTA PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-B	PUMP PUMP PUMP PUMP PUMP	90 92.5 90 89.9 89.8	09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15	PTA PTA PTA PTA PTA PTA PTA PTA PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D P1-1209-D	PUMP PUMP PUMP PUMP PUMP PUMP	90 92.5 90 89.9 89.8 89.7	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D P1-1209-D K1-1260	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN	90 92.5 90 89.9 89.8 89.7 86.6	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D P1-1209-D K1-1260 FN-1259-A	PUMP PUMP PUMP PUMP PUMP PUMP FUMP FUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D P1-1209-D K1-1260 FN-1259-A FN-1259-B	PUMP PUMP PUMP PUMP PUMP PUMP FORAN FD FAN	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C	PUMP PUMP PUMP PUMP PUMP PUMP FORAN FD FAN FD FAN PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1251-A	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-B P1-1209-B K1-1260 FN-1259-A FN-1259-A FN-1251-C 21-P1-1251-A 21-P1-1407 21-P1-1602-B	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-B P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407 21-P1-1602-B 21-P1-1616-B	PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-B P1-1209-B K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407 21-P1-1602-B P1-1410-B	PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407 21-P1-1616-B P1-1410-B 21-P1-1420-A	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-B P1-1209-B K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407 21-P1-1602-B P1-1410-B	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP PUM	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7 89.8	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407 21-P1-1616-B P1-1410-B 21-P1-1420-A	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP PUM	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7 89.8 90	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D R1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1407 21-P1-1602-B 21-P1-1616-B P1-1410-B 21-P1-1420-A P1-2301-A	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP PUM	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7 89.8	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1251-A 21-P1-1407 21-P1-1616-B P1-1410-B 21-P1-1420-A P1-2301-A P1-1816-B	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP PUM	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7 89.8 90	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1251-A 21-P1-1616-B P1-1410-B 21-P1-1420-A P1-1816-B 21-P1-2202-A 21-P1-2210-B	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP PUM	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7 89.8 90 89.6	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	PTA	21-P1-165-A 21-P1-606-A 21-P1-607-B P1-1207-A P1-1209-A P1-1209-D K1-1260 FN-1259-A FN-1259-B 21-P1-1251-C 21-P1-1251-A 21-P1-1407 21-P1-1616-B P1-1410-B 21-P1-1420-A P1-1816-B 21-P1-2202-A	PUMP PUMP PUMP PUMP PUMP PUMP ID FAN FD FAN FD FAN PUMP PUMP PUMP PUMP PUMP PUMP PUMP PUM	90 92.5 90 89.9 89.8 89.7 86.6 88.7 89.1 88.8 89.5 88.7 89.6 88.2 88.7 89.8 90 89.6 89.9	09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021 09.11.2021

33	PTA	21-P1-2401-B	PUMP	88.1	09.11.202
34	PTA	Near Combuster Heater	COMPRESSOR	103.1	09.11.202
			HER SERVICE		ESPECIAL SECTION
1	PX-I	202-P-10-A	PUMP	85.4	12.11.202
2	PX-1	202-PM-16-A	PUMP	87.1	12.11.2021
3	PX-I	202-PM-02-A	PUMP	84.4	12.11.202
4	PX-I	202-P-01-B	PUMP	88.6	12.11.2021
5	PX-I	202-P-03-A	PUMP	88	12.11.2021
6	PX-I	202-P-04-P	PUMP	87.5	12.11.2021
7	PX-I	201-PM-01-A	PUMP	90	12.11.2021
8	PX-I	201-P-08-B	PUMP	89.4	12.11.2021
9	PX-I	201-P-02-A	PUMP	87.6	12.11.2021
10	PX-I	202-KM-2-A	COMPRESSOR	89.6	12.11.2021
11	PX-I	202-KM-4	COMPRESSOR	89.1	12.11.2021
12	PX-I	202-KM-3	COMPRESSOR	89.3	12.11.2021
13	PX-I	201-KM-1-A	COMPRESSOR	88.5	12.11.2021
2010				underlines Tribungo	
1	PX-II	205-P-101-8	PUMP	88.3	12.11.2021
2	PX-II	205-PM-02-A	PUMP	90	12.11.2021
3	PX-II	205-PM-02-B	PUMP	89.8	12.11.2021
4	PX-II	205-P-04-B	PUMP	89.4	12.11.2021
5	PX-II	205-P-08-B	PUMP	89.7	12.11.2021
6	PX-II	206-Р-07-В	PUMP	88.8	12.11.2021
7	PX-II	207-PM-01-B	PUMP	83.5	12.11.2021
8	PX-II	205-P-03-A	PUMP	89.5	12.11.2021
9	PX-II	205-PM-07-B	PUMP	90	12.11.2021
10	PX-II	206-PM-03-8	PUMP	89.9	12.11.2021
11	PX-II	205-PM-06-A	PUMP	89.1	12.11.2021
12	PX-II	205-PM-05-A	PUMP	82.1	12.11.2021
13	PX-II	206-PM-04-C	PUMP	83.6	12.11.2021
15	PX-II	206-PM-04-A	PUMP	83.9	12.11.2021
16	PX-II	206-PM-02-B	PUMP	90	12.11.2021
17	PX-II	206-FN-02	FD FAN	91.2	12.11.2021
18	PX-II	206-FN-01	FD FAN	90	12.11.2021
19	PX-II	206-FN-03	ID FAN	89.7	12.11.2021
20	PX-II	207-PM-04-B	PUMP	89.7	12.11.2021
21	PX-II	207-PM-02-A	PUMP	89.3	12.11.2021
22	PX-II	207-PM-03-A 208 KM-01	PUMP	88.9	12.11.2021
23	PX-II		COMPRESSOR	87	12.11.2021
24	PX-II	208-P-03-A 208-P-02-A	PUMP	88.2	12.11.2021
25	PX-II	208-P-01-A	PUMP	87.4	12.11.2021
26	PX-II	206-P-013-A	PUMP	89.8	12.11.2021
CYE VIII	III NOSSELLER COM III	2007-013-8	PUMP	87.5	12.11.2021
1	RFCCU	12-KM-001-A	COMPRESSOR	00.4	
2	RFCCU	07-P-002-A	PUMP	89.1	20.11.2021
3	RFCCU	07-PM-CF-302-B	PUMP	90	20.11.2021
4	RFCCU	07-PM-CF-212-B	PUMP	89.5	20.11.2021
5	RFCCU	07-PM-CF-209-A	PUMP	87.4	20.11.2021
5	RFCCU	07-PM-CF-202-A	PUMP	89.1	20.11.2021
,	RFCCU	07-PM-CF-207-B	PUMP	90.1	20.11.2021
	RFCCU	07-PM-CF-202-B	PUMP	89.6	20.11.2021
	RFCCU	07-PM-CF-201-B	PUMP	90	20.11.2021
	RFCCU	07-PM-CF-303-A	PUMP	89	20.11.2021
	RFCCU	07-PM-CF-303-B		89.1	20.11.2021
	RFCCU	07-PM-CF-204-B	PUMP	87.1	20.11.2021
	RFCCU	07-PM-CF-205-A	PUMP	90	20.11.2021
	RFCCU	07-PM-CF-306-A	PUMP	89.9	20.11.2021
	RFCCU	07-PM-CF-203-A	PUMP	89.5	20.11.2021
,	RFCCU	07-PM-CF-311-A	PUMP	89.6	20.11.2021
			UNIT	87	20.11.2021

18	RFCCU	07-PM-CF-210-A	PUMP	90	20.11.2021
19	RECCU	07-PM-CF-210-B	PUMP	89.9	20.11.2021
19	M. C.C.				
1	CCRU	KA-RP-202-A	COMPRESSOR	86.9	22.11.2021
2	CCRU	KA-RP-301-A	COMPRESSOR	90	22.11.2021
3	CCRU	KA-RP-202-C	COMPRESSOR	80.9	22.11.2021
4	CCRU	KA-RP-101-A	COMPRESSOR	86.7	22.11.2021
5	CCRU	UNDER COMPRESSOR HOUSE	COMPRESSOR	81.9	22.11.2021
6	CCRU	08-KM-RP-303-B	COMPRESSOR	82.6	22.11.2021
7	CCRU	08-PM-CF-202-A	PUMP	85.6	22.11.2021
8	CCRU	08-PM-CF-104-A	PUMP	84.8	22.11.2021
9	CCRU	08-PM-CF-102-A	PUMP	87.4	22.11.2021
10	CCRU	08-PM-CF-203-B	PUMP	89.8	22.11.2021
11	CCRU	08-PM-CF-201-B	PUMP	90	22.11.2021
diene	CCRU	08-PM-CF-201-0	PUMP	88.5	22.11.2021
12	CCRU	08-PM-CF-101-A	PUMP	88.3	22.11.2021
13		08-PM-CF-105-A	PUMP	89.1	22.11.2021
14 15	CCRU	08-PM-CF-701-A	PUMP	89.9	22.11.2021

+14	mt + 0 + 1+	Noise survey of Target un	Source	Sound Level(dB)	DATE
NO.	Plant/Unit	DS-PMRC-07-F	PUMP	91.8	04.10.2021
1	OHCU	P-001-A	PUMP	87.8	04.10.2021
2	онси	05-PM-CF-503-B	PUMP	91.5	04.10.2021
3	OHCU	05-PM-CF-511-A	PUMP	95.2	04.10.2021
4	OHCU		PUMP	93.8	04.10.2021
5	OHCU	05-PM-CF-301-A	PUMP	94.6	04.10.2021
6	OHCU	05-PM-CF-504-B	PUMP	94.2	04.10 2021
7	OHCU	05-PM-CF-501-A	PUMP	92.1	04.10.2021
8	OHCU	05-PM-CF-505-A	PUMP	93.8	04.10.2021
9	OHCU	05-PM-CF-508-A	PUMP	91.3	04.10.2021
10	OHCU	05-PM-CF-502-B	PUMP	91.8	04.10.2021
11	OHCU	05-PM-CF-507-A	PUMP	91.2	04.10.2021
12	OHCU	05-PM-CF-506-A	PUMP	91.5	04.10.2021
13	OHCU	05-PM-CF-510-A	PUMP	85.8	04.10.2021
14	OHCU	05-PM-CF-509-B	PUMP	81.5	04.10.2021
15	OHCU	05-PM-CF-529-A	OF NAMED AND STREET	CURING TO A VITAL	OUT THE REAL PROPERTY.
FER			PUMP	89.9	04.10.2021
1	HGU-1	06-P-202-A	PUMP	89.4	04.10.2021
2	HGU-1	06-P-203-B	ID FAN	82	04.10.2021
3	HGU-1	06-KA-203-A	ID FAN	86.2	04.10.2021
4	HGU-1	06-KA-202	FD FAN	81	04.10.2021
5	HGU-1	06-KA-201	WE DAIL DO NOT SEE	Louis to King and Park	
THE SHAPE		ALC: NAME OF THE PARTY OF THE P	ID FAN	79.3	05.10.2021
1	AVU-II	73-FN-002	IO FAN TURBINE	93.5	05.10.2021
2	AVU-II	73-FN-02	ID FAN	93.1	05.10.2021
3	AVU-II	73-FN-001	ID FAN	89.2	05.10.2021
4	AVU-II	73-FN-01	PUMP	89.7	05.10.2021
5	AVU-II	74-PM-05-B	PUMP	88.5	05.10.2021
6	AVU-II	74-PM-05-A	PUMP	89.2	05.10.2021
7	AVU-II	73-PM-10-B	PUMP	88.9	05.10.2021
8	AVU-II	73-PM-10-A	PUMP	86.3	05.10,2021
9	AVU-II	74-PM-01-B	PUMP	88.6	05.10.2021
10	AVU-II	74-PM-02-B	PUMP	88.7	05.10.2021
11	AVU-II	73-P-013-C	PUMP	88.8	05.10.2023
12	AVU-II	73-P-013-B		93.8	05.10.2021
13	AVU-II	73-P-09-C	PUMP	86.6	05.10.2021
14	AVU-II	73-PM-08-B	PUMP	88.4	05.10.202
15	AVU-II	74-PM-06-A	PUMP		05.10.202
16	AVU-II	74-PM-06-B	PUMP	89.3	05.10.202
17	AVU II	59-PM-01-A	PUMP	94.5	U5.10.202

1457					
18	AVU-II	59-PM-02-B	PUMP	89.7	05.10.2021
19	AVU-II	73-PM-14-B	PUMP	86.3	05.10.2021
20	AVU-II	73-PM-02-D	PUMP	88.3	05.10.2021
21	AVU-II	73-PM-02-B	PUMP	85.9	05.10.2021
22	AVU-II	73-PM-02-A	PUMP	87	05.10.2021
23	AVU-II	73-PM-003-A	PUMP	83.3	05.10.2021
24	AVU-II	73-PM-032-A	PUMP	90.1	05.10.2021
25	AVU-II	73-PM-024-B	PUMP	86.8	05.10.2021
26	AVU-II	73-PM-811-C	PUMP	84.8	05.10.2021
27	AVU-II	74-PM-04-A	PUMP	89	
28	AVU-II	73-P-01-A	PUMP	85.3	05.10.2021
29	AVU-II	73-P-01-B	PUMP	86.2	
30	AVU-II	73-P-01-D	PUMP	88.5	05.10.2021
31	AVU-II	73-PM-D4-A	PUMP	88	05.10.2021
32	AVU-II	73-PM-015-B	PUMP	89,9	05.10.2021
33	AVU-II	59-PM-04-B	PUMP		05.10.2021
34	AVU-II	73-P-012-A	PUMP	87.4 85	05.10.2021
35	AVU-II	73-P-006-A	PUMP	88.7	05.10.2021
36	AVU-II	73-PM-036-A	PUMP	87.7	05.10.2021
37	AVU-II	73-P-007-A	PUMP	85.7	05.10.2021
38	AVU-II	74-P-007-A	PUMP	84.2	05.10.2021
39	AVU-II	74-P-03-A	PUMP		05.10.2021
40	AVU-II	74-P-03-C	PUMP	83.1 88.7	05.10.2021
41	AVU-II	73-PM-020-A	PUMP	88.9	05.10.2021
42	AVU-II	73-PM-05-B	PUMP		05.10.2021
A POLICE			TO DESCRIPTION OF THE PERSON O	88.1	05.10.2021
1	HCU	75-FN-103	ID FAN	81.9	05.10.2021
2	HCU	75-FN-102	ID FAN	80.7	06.10.2021
3	нси	75-FN-101	ID FAN	82	06.10.2021
4	HCU	75-PM-106-B	PUMP	86.8	06.10.2021
5	HCU	75-PM-107-A	PUMP	89.1	06.10.2021
6	HCU	75-PM-111-B	PUMP	93.1	06.10.2021
7	HCU	75-PM-104-A	PUMP	92	06.10.2021
8	HCU	75-PM-103-B	PUMP	89.9	06.10.2021
9	HCU	75-PM-102-A	PUMP	89.8	06.10.2021
10	HCU	75-PM-113-8	PUMP	91.2	06.10.2021
11	HCU	75-PM-114-B	PUMP	92.3	05.10.2021
12	HCU	75-PM-112-B	PUMP	89.8	06.10.2021
13	HCU	75-PM-116-8	PUMP	96.5	06.10.2021
14	HCU	75-PM-115-B	PUMP	89.7	06.10.2021
15	HCU	75-PM-201-B	PUMP	89.8	06.10.2021
16	HCU	75-K-002-A	COMPRESSOR	92.1	06.10.2021
17	HCU	75-K-002-B	COMPRESSOR	92.8	06.10.2021
18	HCU	UNDER COMP. HOUSE	COMPRESSOR	88.4	06.10.2021
19	HCU	75-PT-2034	PUMP	78.5	06.10.2021
20	HCU	75-P-001-A	PUMP	84.6	06.10.2021
					00.10.2021
1	DCU	PB-79-PM-01-8	PUMP	80.7	12.10.2021
2	DCU	78-PM-135-B	PUMP	88.1	12.10.2021
3	DCU	78-PM-148-B	PUMP	87.3	12.10.2021
4	DCU	78-PM-131-A	PUMP	87.4	12.10.2021
5	DCU	78-PM-112-A	PUMP	89.9	12.10.2021
6	DCU	78-PM-105-A	PUMP	89.9	12.10.2021
7	DCU	78-PM-113-B	PUMP	87.9	12.10.2021
3	DCU	78-PM-124-B	PUMP	86.9	
	DCU	78-PM-111-A	PUMP	88.3	12.10.2021
0	DCU	78-PM-161-B	PUMP	88	
1	DCU	78-PM-122-B	PUMP	89.4	12.10.2021
2	DCU	78-PM-109-A	PUMP	88.9	12.10.2021
3	DCU	78-PM-108-B	PUMP	89.4	12.10.2021
477	W 5.00	70 7 W-100-0	E-GWIF-	03.4	12 10 2021

15	DCU	78-PM-110-B	PUMP	88.8	12.10.2021
16	DCU	78-PM-125-A	PUMP	87	12.10.2021
17	DCU	78-PM-104-A	PUMP	86.3	12.10.2021
18	DCU	78-PM-116-B	PUMP	87.7	12.10.2021
19	DCU	78-PM-125-A	PUMP	86.7	12.10.2021
20	DCU	78-PM-127-B	PUMP	87.1	12.10.2021
21	DCU	78-P-134-A	PUMP	87.5	12.10.2021
22	DCU	78-FD-101-A	FD FAN	79.1	12.10.2021
23	DCU	78-FD-101-B	FD FAN	78.9	12.10.2021
24	DCU	78-FD-102-B	FD FAN	77.3	12.10.2021
25	DCU	78-FD-102-A	FD FAN	78.6	12.10.2021
26	DCU	78-ID-102	ID FAN	80.5	12.10.2021
27	DCU	78-ID-101	ID FAN	82.1	12.10.2021
28	DCU	78-PM-101-B	PUMP	89.9	12.10.2021
29	DCU	78-PM-114-A	PUMP	83.5	12.10.2021
30	DCU	78-PM-104-P1-A	PUMP	83.8	12.10.2021
31	DCU	78-P-118-B	PUMP	88.2	12.10.2021
	ERIC TO		A STATE OF THE STATE OF		
1	DHDS	FD-01-B	FD FAN	58.1	13.10.2021
2	DHD5	FD-01-A	FD FAN	68.5	13.10.2021
3	DHDS	52-PA-CF-107-B	PUMP	90	13.10.2021
4	DHDS	52-PA-CF-123-B	PUMP	85.2	13,10,2021
5	DHDS	52-PA-CF-101-A	PUMP	89.9	13.10.2021
6	DHDS	52-PM-CF-102-B	PUMP	87.4	13.10.2021
7	DHDS	52-KM-RP-101-B	COMPRESSOR	82.3	13.10.2021
8	DHDS	UNDER COMP, HOUSE	COMPRESSOR	81.1	13.10.2021

S.NO	Plant/Unit	Noise survey of Target units of I	Source	Sound Level(dB)	DATE
1	CPP	GTG-3	GENRATOR	97.3	03.09.2021
2	CPP	BURNER-4	BURNER-UBP	89.8	03.09.2021
3	CPP	9060-397D-PM-101 A-ID FAN-1A	ID FAN-1 A	89.5	03.09.2021
4	CPP	9060-39-ID-FD-FM-101-B-FD FAN 10	ID FAN-1 B	89.3	03.09.2021
5	CPP	9060-39-ID-FD-FM-101-8-FD FAN	FD FAN	88.6	03.09.2021
6	CPP	9060-89-FM-CF-1203-B-FD FAN	FD FAN	89.2	03.09,2021
7	CPP	9060-89-PM-CF-1203-A	ED FAN	92.6	03.09.2021
8	CPP	9060-89-PM-CF-508-A	FD FAN	88	03.09.2021
9	CPP	89-PM-CF-508-A	PUMP	88.5	03.09.2021
10	CPP	89-PM-CF - 808 -A	PUMP	88.5	03.09.2021
11	CPP	9060-39-DB-FM413-A	COMPRESURE	89.2	03.09.2021
12	CPP	9060-89-PA-CF9904-A	PUMP	87.4	03.09.2021
13	CPP	9060-39-PM-CF457-A	PUMP	86.4	03.09.2021
14	CPP	OLD CONTROL ROOM	GENRATOR	64.2	03.09.2021
15	CPP	NEAR OUTER CABIN CABIN	GENRATOR	88.2	03.09.2021
16	CPP	GT CABIN OUTER SIDE	GENRATOR	76.2	03.09.2021
17	CPP	GT CABIN INNER SIDE	GENRATOR	62.1	03.09.2021
18	CPP	CONTROL ROOM	GENRATOR	66.9	03.09.2021
19	CPP	OUTER UHP SIDE	EA CABIN	79.8	03.09.2021
20	CPP	RSG / BOP CABIN OUTER	EA CABIN	61.7	03.09.2021
21	CPP	STG / BOP CABIN INNER	EA CABIN	75.6	03.09.2021
22	CPP	MP HOUSE CABIN OUTER	EA CABIN	76.9	03.09.2021
23	CPP	UMP HOUSE CABIN OUTER	EA CABIN	81.5	03.09.2021
24	CPP	UMP HOUSE CABIN INNER	EA CABIN	61.6	03.09.2021
	1450	301-KM-201-A	COMPRESURE	79.1	21.09.2021
1	MSQ	301-KM-201-A	PUMP	80.5	21.09.2021
2	MSQ		PUMP	86.3	21.09.2021
3	MSQ	301-PM-101-A	PUMP	80.1	21.09.2021
4	MSQ	303-PM-206-B	51457.0.	81.8	21.09.2021
5	MSQ	303-PM-202-B	PUMP		21.09.202
6	MSO	303-PM-102-A	PUMP	84.3	E.L. O. J. L. O.

				Q1	
7	MSQ	303-PM-204-8	PUMP	86.3	21.09.202
8	MSQ	303-PM-201-A	PUMP	87.4	21.09.202
9	MSQ	303-PM-101-B	PUMP	87.4	21,09.202
10	MSQ	301-PM-210-B	PUMP	82.5	21.09.202
11	MSQ	301-PM-211-B	PUMP	84.6	21.09.202
12	MSQ	301-PM-213-B	PUMP	83.8	21.09.202
13	MSQ	301-PM-212-A	PUMP	86.8	21.09.202
14	MSQ	301-PM-203-A	PUMP	82.9	21.09.202
15	MSQ	301-PM-201-B	PUMP	85.3	21.09.202
16	MSQ	301-PM-215-B	PUMP	82.8	21.09.2021
17	MSQ	301-PM-254-B	PUMP	79.8	21.09.2021
18	MSQ	301-PM-253-B	PUMP	85.9	21.09.2021
1	HGU-(76)	75 ID - FAN	ID-FAN	88.5	23.09.2021
2	HGU (75)	76 P 002 A	PUMP	89.5	23.09.2021
3	HGU-(76)	76 - P -103-A	COMPRESURE	92.4	23.09.2021
4	HGU-(76)	76 - KM -001-A	COMPRESURE	84.8	23.09.2021
5	HGU-(76)	75 - KM -103-A	COMPRESURE	81.3	23.09.2021
6	HGU-(76)	UNDER COMPRESSURE HOUSE	COMPRESURE	80.4	23.09.2021
7	HGU-(76)	UPPER SIDE	COMPRESURE	85.2	23.09.2021
8	HGU-(76)	76 - F -114-B	DRUM HEAD	83.4	23.09.2021
9	HGU-(76)	76 - E -115	DRUM HEAD	81.3	23.09.2021
10		76 - E -114-A		79.5	23.09.2021
10	HGU-(76)	75-E-114-A	DRUM HEAD		23.03.2021
1	DHDT	72-FD-004-B	FD FAN	81.2	23.09.2021
2	DHDT	72-PM-004-A	PUMP	89.1	23.09.2021
3	DHDT	72-PM-007-B	PUMP	88.9	23.09.2021
4	DHDT	UNDER COMPRESSURE HOUSE	COMPRESURE	86.7	23.09.2021
5	DHDT	72-KM-002-B	COMPRESURE	89.8	23.09.2021
6	DHDT	72-KM-002-C	COMPRESURE	88.3	23.09.2021
7	DHDT	72-PM-001-A	PUMP	87.6	23.09.2021
8	DHDT	72-PM-003-A	PUMP	92.2	23.09.2021
9	DHDT	72-P-002-C	PUMP	85.5	23.09.2021
1	SRU-I	18-PA-CF-004-B	PUMP	81.1	28.09.2021
2	SRU-I	21-PA-CF-002-A	PUMP	87.1	28.09.2021
3	SRU-I	21-PA-CF-001-A	PUMP	90.4	28.09.2021
4	SRU-I	21-PA-CF-001-B	PUMP	90.7	28.09.2021
5	SRU-I	21-PM-CF-003-B	PUMP	93.1	28.09.2021
6	SRU-I	21-PM-CF-003-A	PUMP	94.7	28.09.2021
10000			SZO WINDOWSKI W	0 5 0 5	ESTREMENT AND EST
1	SRU-II	51-PM-104-B	PUMP	87.2	28.09.2021
2	SRU-II	51-PM-101-B	PUMP	89.7	28.09.2021
3	SRU-II	51-PM-102-A	PUMP	87.3	28.09.2021
4	SRU-II	53-PM-103-A	PUMP	89.4	28.09.2021
5	SRU-II	54-PM-103-A	PUMP	86.1	28.09.2021
6	SRU-II	54-PM-102-A	PUMP	88.1	28.09.2021
			PUMP	86.1	28.09.2021
7 1	SRU-II	53-PM-101-A			**********
7	SRU-II	53-PM-102-A	PUMP	90.1	28.09.2021
8	SRU-II			90.1 89.8	28.09.2021 28.09.2021
8	SRU-II SRU-II	53-PM-102-A 26-KM-101-8	PUMP	89.8	28.09.2021
8	SRU-II SRU-II SRU-II	53-PM-102-A 26-KM-101-B 57-KM-101-B	PUMP COMPRESSOR COMPRESSOR	89.8 90.9	28.09.2021 28.09.2021
B 0 1	SRU-II SRU-II SRU-II	53-PM-102-A 26-KM-101-8 57-KM-101-B 26-PM-104-A	PUMP COMPRESSOR COMPRESSOR PUMP	89.8 90.9 89.9	28.09.2021 28.09.2021 28.09.2021
B 0 1 2 2	SRU-II SRU-II SRU-II SRU-II	53-PM-102-A 26-KM-101-B 57-KM-101-B 26-PM-104-A 21-PM-102-A	PUMP COMPRESSOR COMPRESSOR PUMP PUMP	89.8 90.9 89.9 90.8	28.09.2021 28.09.2021 28.09.2021 28.09.2021
B D D D D D D D D D D D D D D D D D D D	SRU-II SRU-II SRU-II SRU-II SRU-II	53-PM-102-A 26-KM-101-B 57-KM-101-B 26-PM-104-A 21-PM-102-A 26-PM-103-B	PUMP COMPRESSOR COMPRESSOR PUMP PUMP PUMP	89.8 90.9 89.9 90.8 87.5	28.09.2021 28.09.2021 28.09.2021 28.09.2021 28.09.2021
8 9 0 1 2	SRU-II SRU-II SRU-II SRU-II SRU-II SRU-II	53-PM-102-A 26-KM-101-B 57-KM-101-B 26-PM-104-A 21-PM-102-A 26-PM-103-B 26-PM-101-A	PUMP COMPRESSOR COMPRESSOR PUMP PUMP PUMP PUMP	89.8 90.9 89.9 90.8 87.5 89.2	28.09.2021 28.09.2021 28.09.2021 28.09.2021 28.09.2021 28.09.2021
B D D D D D D D D D D D D D D D D D D D	SRU-II SRU-II SRU-II SRU-II SRU-II	53-PM-102-A 26-KM-101-B 57-KM-101-B 26-PM-104-A 21-PM-102-A 26-PM-103-B	PUMP COMPRESSOR COMPRESSOR PUMP PUMP PUMP	89.8 90.9 89.9 90.8 87.5	28.09.2021 28.09.2021 28.09.2021 28.09.2021 28.09.2021

30	AVU-1	03 PM - CF - 01 -B	PUMP	90	40.00
31	AVU-1	03 PM - CF - 1 -D	PUMP	87.6	18 08 202
1	DTA	WEST RESIDENCE OF STREET	CO CONTRACTOR		18.08.2021
2	PTA	21-P-125-B	PUMP	84.1	17.08.202
3	PIA	21-FN-164-B	FD FAN	85.7	17.08.202
4	PTA	21-FN-164-A	FD FAN	83.9	17.08.202
5	PTA	21-FN-165	FD FAN	86	17.08.202
	PTA	21-B1-0553	AIR BLOWER PUMP	90	17.08.202
7	PTA	21-P1-556-B	PUMP	88.1	
	PTA	21-P1-1/3-A	PUMP	89.1	17.08.2021
8	PTA	21-FN-1259-B	FD FAN	84.1	17.08.2021
9	PTA	21-FD-1259-A	FD FAN	83.6	17.08.2021
10	PTA	K1-1260	COMPRESSOR	84.3	17.08.2021
11	PTA	P1-1207-B	PUMP	90.1	17.08.2021
12	PTA	P1-1209-∧	PUMP	90.5	17.08.2021
13	PTA	P1-1209-B	PUMP	90.2	17.08.2021
14	PTA	P1-1209-D	PUMP	91.4	17.08.2021
15	PTA	21-P1-1251-C	PUMP	88.7	
16	PTA	21-1251-A	PUMP	89.8	17.08.2021
17	PTA	21P1-1420-B	PUMP	82.8	17.08.2021
18	PTA	P1-2301-A	PUMP	87.9	17.08.2021
19	PTA	P1-1816-B	PUMP	84.4	17.08.2021
20	PTA	21-P1-2210-B	PUMP	88.1	17.08.2021
21	PTA	21-P1-2202-8	PUMP	89	
22	PTA	21-P1-2203-A	PUMP	85.5	17.08.2021
23	PTA	P1-1410-A	PUMP	84.6	17.08.2021
24	PTA	21-P1-702-B	PUMP	86.7	17.08.2021
25	PTA	P1-507-B	PUMP	87	17.08.2021
26	PTA	21-P1-607-B	PUMP	89	17.08.2021
27	PTA	21-P1-606-B	PUMP	88	17.08.2021
28	PTA	21-P1-615-B	PUMP	88.9	17.08.2021
29	PTA	21-P1-632-A	PUMP	88	17.08.2021
30	PTA	21-P1-407-A	PUMP	87	17.08.2021
31	PTA	21-P1-4313-A	PUMP	89.8	17.08.2021
32	PTA	21-P1-1606-B	PUMP	87.4	17.08.2021
33	PTA	21-P1-0710-B	PUMP	82.8	17.08.2021
34	PTA	21-P1-2221-B	PUMP	81.7	17.08.2021
35	PTA	21-P1-2625-A	PUMP	90.1	17.08.2021
36	PTA	21-P1-2401-B	PUMP	82	17.08.2021
37	PTA	21-P1-2401-A	PUMP	83.5	200 S 100 S
38	PTA	Process Air Compressor	COMPRESSOR	102.4	17.08.2021
			E SAMP NESSON	102.4	17.08.2021
1	PX-1	203 - P -2 A	PUMP	80.4	00.00.000
2	PX-1	201 - P -08 - A	PUMP	86.6	09.08.2021
3	PX-1	201 - PM -01 - B	PUMP	170777	09.08.2021
4	PX-1	202 - P -03 - B	PUMP	88.3	09.08.2021
5	PX-1	202 - P - D1 - A	PUMP	83.2 85.2	09.08.2021
5	PX-1	202 - P -02 - A	10000000		09.08.2021
, +	PX-1	202 - PM -16 - A	PUMP	85.2	09.08.2021
	PX-1		PUMP	85.5	09.08.2021
		202 - K2 - B	COMPRESSURE	84.3	09.08.2021
\rightarrow	PX-1	201 - K - 1 -B	COMPRESSURE	89.2	09.08.2021
	PX-1	202 - KM -4	COMPRESSURE	83.7	09.08.2021
-	PX-1	209 - PM 05 -A	PUMP	84.7	09.08.2021
	PX-1	209 - PM -06 - A	PUMP	88.8	09.08.2021
	PX-1	204 - PM -06 -B	PUMP	83.2	09.08.2021
	PX-1	204 - PM -07 -B	PUMP	86.5	09.08.2021
	PX-1	206 - FM - 03	ID FAN	81.4	09.08.2021
	PX-1	206 - FM - 01	ID FAN	83.5	09.08.2021 -
	PX-1	206 - FM - 02	ID FAN	83.2	09.08.2021
	PX-1	207 - PM - 04 -A	PUMP	87.2	09.08.2021
	PX-1	207 - P - 03-A	PUMP	85.1	09.08.2021

20	PX-1	207 - P - 03 -B	PUMP	86.2	09.08.2021
		200 0 07	PUMP	83.1	09,08.2021
1	PX-II	208 - P - 03	PLIMP	85.5	09.08.2021
2	PX-II	208 P 02 - A		88.8	09.08.2021
3	PX-II	208 - P - 01 -A	PUMP		09.08.2021
4	PX-II	206 - P 013 - A	PUMP	83.2	09.08.2021
5	PX-II	205 - P- 02 -A	PUMP	90.1	
6	PX-II	205 - P -101 -B	PUMP	86.3	09.08.2021
7	PX-II	205 - PM - 02 -B	PUMP	84.8	09.08.2021
8	PX-II	205 - P -04- A	PUMP	85.1	09.08.2021
9	PX-II	207 -PM - 01- A	PUMP	89.4	09.08.2021
10	PX-II	206 - 07 - P	PUMP	90.1	09.08.2021
11	PX-II	205 - PM -07 -B	PUMP	86.1	09.08.2021
12	PX-II	205 - PM -D3 -B	PUMP	90.1	09.08.2021
13	PX-II	205 - P - 07 - A	PUMP	86.9	09.08.2021
	PX-II	205 - PM -03 -A	PUMP	90.2	09.08.2021
14	PX-II	205 - P - 05 - A	PUMP	87.6	09.08.2021
15	PX-II	206 -PM - 06 - B	PUMP	89.7	09.08.2021
16		206 - PM - 06 - A	PUMP	88.1	09.08.2021
17	PX-II	205 - PM - 05 - A	PUMP	89.5	09.08.2021
18	PX-II		PUMP	90.5	09.08.2021
19	PX-II	206 - PM -04 -C	PUMP	90.1	09.08.2021
20	PX-II	206 -PM 04 -A	PUMP	86	09.08.2021
21	PX-II	206 P 01 - A		86.7	09.08.2021
22	PX-II	206 - PM -02 -A	PUMP	90.7	

		Noise survey of Target u	Source	Sound Level(dB)	DATE
S.NO	Plant/Unit	Area	PUMP	85.5	21.07.2021
1	DHDS	52-PA-MT-120-8	PUMP	89.9	21.07.2021
2	DHDS	52-PA-CF-102-A	PUMP	90.5	21.07.2021
3	DHDS	52-PA-CF-107-B	PUMP	89.2	21.07.2021
4	DHDS	52-PA-CF-104-A	COMPRESSOR	83.2	21.07.2021
5	DHDS	UNDER COMPRESSOR	COMPRESSOR	83.5	21.07.2021
6	DHDS	52-KM-RP-101-B	CONTRESSOR	03.3	US THE PARTY
3 18		06-K-A-202	ID FAN	82.9	22.07.2021
1	HGU-06	06-P-202-B	PUMP	91.2	22.07.2021
2	HGU-06	06-P-203-B	PUMP	89.9	22.07.2021
3	HGU-06	06-F-203-B	PUMP	86.2	22.07.2021
4	HGU-06	06-K-A-203-A		No. of Contract of	
In Cont	AND IN	73-PM-024-B	PUMP	84.3	22.07.2021
1	AVU-II	73-PM-022-B	PUMP	84	22.07.2021
2	AVU-II	73-PM-021-B	PUMP	83.3	22.07.2021
3	AVU-II	73-PM-032-A	PUMP	87.4	22.07.2021
4	AVU-II	73-PM-03-B	PUMP	84.4	22.07.2021
5	AVU-II	73-PM-02-B	PUMP	86.1	22.07.2021
6	AVU-II	73-PM-02-C	PUMP	86.5	22.07.2021
7	AVU-II	73-PM-02-D	PUMP	86.5	22.07.2021
8	AVU-II	73-PM-14-B	PUMP	86.3	22.07.2021
9	AVU-II	73-PM-9-A	PUMP	85.4	22.07.2021
10	AVU-II	73-PM-13-B	PUMP	89.2	22.07.2021
11		73-PM-13-C	PUMP	89.6	22,07,2021
12	AVU-II	74-PM-02-A	PUMP	85.7	22.07.2021
13	AVU-II	74-PM-01-B	PUMP	84.6	22.07.2021
14	AVU-II	120711200000000000000000000000000000000	PUMP	84.7	22.07.2023
15	AVU-II	74-PM-03-C	PUMP	82.8	22.07.202
16	AVU-II	74-PM-03-A	1100000001	370,000	22.07.202
17	AVU-II	74-PM-07-A	PUMP	85.2	
18	AVU-II	74-PM-10-B	PUMP	84.7	22.07.202
19	AVU-II	73-PM-07-B	PUMP	87	22.07.202

20	AVU-II	73-PM-036-A	PUMP	86.8	22.07.202
21	AVU-II	73-PM-06-B	PUMP	88	22.07.202
22	AVU-II	73-PM-12-A	PUMP	85.1	22.07.202
23	AVU-II	59-PM-04-A	PUMP	86.6	22.07.202
24	AVU-II	73-PM-015-C	PUMP	88.8	22.07.202
25	AVU-II	73-PM-04-A	PUMP	86.8	22.07.202
26	AVU-II	73-PM-01-D	PUMP	87.5	22.07.202
27	AVU-II	73-PM-01-B	PUMP	87.9	22.07.202
28	AVU-II	74-PM-04-B	PUMP	88.9	22.07.2021
29	AVU-II	73-PM-10-B	PUMP	88.6	22.07.2021
30	AVU-II	73-PM-10-C	PUMP	89.5	22.07.2021
31	AVU-II	73-FN-001-A	FD FAN	83.3	22.07.2021
32	AVU-II	73-FN-001-B	FD FAN	90.7	22.07.2021
8 8	PARTY I		ECHINA OF U		
1	ОНСИ	05-PM-RC-07-E	PUMP	88.5	23.07.2021
2	OHCU	05-PM-CF-503-A	PUMP	88.7	23.07.2021
3	OHCU	05-PM-CF-513-A	PUMP	89.2	23.07.2021
4	OHCU	05-PM-CF-514-A	PUMP	89.3	23.07.2021
5	OHCU	05-PM-CF-511-A	PUMP	94.1	23.07.2021
6	OHCU	05-PM-CF-301-A	PUMP	93.7	23.07.2021
7	OHCU	05-PM-CF-504-A	PUMP	89.9	23.07.2021
8	OHCU	05-PM-CF-501-A	PUMP	92.2	23.07.2021
9	OHCU	05-PM-CF-505-A	PUMP	93.7	23.07.2021
10	OHCU	05-PM-CF-508-B	PUMP	90	23.07.2021
11	OHCU	05-PM-CF-502-C	PUMP	89.3	23.07.2021
12	OHCU	05-PM-CF-507-A	PUMP	89.4	23.07.2021
13	OHCU	05-PM-CF-506-A	PUMP	90.4	23.07.2021
14	DHCU	05-PM-CF-502-A	PUMP	90.7	23.07.2021
15	OHCU	05-PM-CF-516-A	PUMP	85.5	23.07.2021
16	OHCU	FF-FN-505	ID FAN	83.7	23.07.2021
17	OHCU	FF-FN-504-B	FD FAN	82.9	23.07.2021
18	OHCU	05-KA-RP-01-A	COMPRESSOR	87.4	23.07.2021
19	OHCU	05-KA-RP-01-C	COMPRESSOR	86	
20	OHCU	05-KA-RP-01-D	COMPRESSOR	87.7	23.07.2021
21	OHCU	UNDER COMPRESSOR	COMPRESSOR	87	23.07.2021
SPLES	BALL EW, LIE	TOTAL TOTAL STATE OF THE STATE OF			23.07.2021
1	DCU	78-PM-135-A	PUMP	88.6	26.07.2021
2	DCU	78-PM-148-8	PUMP	88.7	
3	DCU	78-PM-131-B	PUMP	87	26.07.2021
4	DCU	78-PM-105-B	PUMP	89.4	
5	DCU	78-PM-124-B	PUMP	89.6	26.07.2021
6	DCU	78-PM-161-B	PUMP	88.9	26.07.2021
7	DCU	78-PM-125-A	PUMP	90.7	26.07.2021
8	DCU	78-PM-104-A	PUMP	88.1	26.07.2021
9	DCU	78-PM-116-A	PUMP		26.07.2021
0	DCU	78-PM-122-B	PUMP	88.9	26.07.2021
1	DCU	78-PM-109-B	PUMP	91.3	26.07.2021
2	DCU	78-PM-108-B		89.7	26.07.2021
3	DCU	78-FD-101-8	PUMP	90.9	26.07.2021
	DCU	78-FD-101-A	FD FAN	83	26.07.2021
	DCU	78-FD-101-A	FD FAN	82.1	26.07.2021
	DCU		FD FAN	80	26.07.2021
	DCU	78-FD-102-A	FD FAN	82	26.07.2021
_		78-ID-101	ID FAN	83.1	26.07.2021
	DCU	78-ID-102	ID FAN	83.1	26.07.2021
	ucu	77 74114 402	HINTER STREET, ST	ENDATE OF THE PLANT	IESULA PLAN
-	HCU	75-FNM-102	PUMP	81	28.07.2021
-	HCU	75-FNM-101	PUMP	82.2	28.07.2021
-	HCU	75-PM-106-A	PUMP	85.6	28.07.2021
	HCU	75-PM-107-B	PUMP	88.1	28.07.2021
	11711	20 044 114 0	A		
	HCU HCU	75-PM-111-B 75-PM-104-B	PUMP	90	28.07.2021

7	HCU	75-PM-103-A	PUMP	89.3	28.07.2021
8	HCU	75-PM-113-B	PUMP	90.1	28.07.2021
9	HCU	75-PM-114-A	PUMP	88.9	28.07.2021
10	HCU	75-PM-112-B	PUMP	89.8	28.07.2021
11	HCU	75-PM-116-8	PUMP	91,3	28.07.2021
12	HCU	75-PM-117-B	PUMP	86.8	28.07.2021
13	HCU	75-PM-201-A	PUMP	88.9	28.07.2021
14	HCU	75-K-002-C	COMPRESSOR	89.1	28.07.2021
15	HCU	COMPRESSOR HOUSE	COMPRESSOR	88.4	28.07.2021
16	HCU	75-K-002-B	COMPRESSOR	90.2	28.07.2021
17	HCU	UNDER COMPRESSOR HOUSE	COMPRESSOR	84.8	28.07.2021

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OH Physician