



इंडियन ऑयल कॉर्पोरेशन लिमिटेड

पानीपत रिफाइनरी एंड पेट्रोकेमिकल कॉम्प्लेक्स
पानीपत, हरियाणा - 132140

Indian Oil Corporation Limited

Panipat Refinery & Petrochemical Complex

Panipat, Haryana - 132140

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IndianOil

रिफाइनरीज़ डिविज़न
Refineries Division

Ref No: PR/HSE/2023/EC Compliance/1

Date: 12.01.2023

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

Subject: Six Monthly Environmental Clearances (EC) Compliance Report (July'2022 to Dec'2022)- Panipat Refinery and Petrochemical Complex.

Dear Sir,

Enclosed please find herewith the Six Monthly Environmental Clearances (ECs) Compliance Report- Panipat Refinery and Petrochemical Complex for the period of July'2022 to Dec'2022 of the MoEF&CC 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 MMTPA.
3. EC Letter No. J.11011/52/2000-IA.II dated 30.04.2001 for Integrated Paraxylene and Purified Terephthalic 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 Limited.
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 XL per day Ethanol Production Plant by M/s Indian Oil Corporation Ltd. (IOCL) In Panipat Refinery & Petrochemical Complex at Panipat, Haryana.
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.

Thanking you,

Yours faithfully,

(P. V. RAMAKRISHNA)
General Manager (HS&E)

For and on behalf of IOCL,

Panipat Refinery & Petrochemical Complex

पानीपत रिफाइनरी एंड पेट्रोकेमिकल कॉम्प्लेक्स (आई.ओ.सी.एल.)
Panipat Refinery & Petrochemical Complex (IOCL)
पानीपत - Panipat-132140

Copy To:

1. The Regional Officer, HSPCB, Panipat
2. The Chairman, HSPCB, Panchkula

INDEX

S. No.	EC letter /Environmental monitoring reports	EC Compliance Status/Reports
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.	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	3EC 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.	Attached as Annexure-3
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.	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 Paraxylene 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 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 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 complex.	Attached as Annexure-10
11	Ambient Air quality data.	Attached as Annexure-11
12	Stack Emission data	Attached as Annexure-12
13	Effluent quality data	Attached as Annexure-13
14	Fugitive Emission data	Attached as Annexure-14
15	Noise Monitoring data	Attached as Annexure-15
16	Manifests (Form-10)	Attached as Annexure-16

Annexure-1**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.	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.	Complied
3.	Sulphur recovery unit with more than 90% Sulphur Recovery should be installed and commissioned before the project is completed, and measure for its continuous operation must be taken. Techno-economic feasibility study for additional standby sulphur recovery system may be initiated after the installation of first unit.	Complied 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. 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.	Complied Fuel with sulphur content $\leq 0.5\%$ is used in the boilers/furnaces if required.
5.	Low NO _x burners should be used to avoid excessive formation of NO _x .	Complied Low NO _x burners have been installed in the process heaters , Boilers , furnaces etc.
6.	Total emission of SO ₂ from the refinery should not exceed 1.Ton/hr.	Complied SO ₂ emission (actual SO ₂ emission, 800-900 kg/hr) 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.	Complied
8.	Adequate number (a minimum of 7) of air quality monitoring stations should be set up in the down-wind 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.	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. All the CAAQMS stations are connected to the CPCB AAQMS server. For all stacks: SO ₂ , NO _x , CO & PM analyzers are available and connected to CPCB/HSPCB server. Data on stack emission are submitted to HSPCB/MoEFCC as per frequency mentioned.

SN	Stipulation	Compliance
9.	Fugitive emissions of hydrocarbons from storage tanks etc. should be minimized by adopting necessary measures.	Complied Floating roof tanks are provided to store volatile hydrocarbons.
10.	Fugitive emission should be regularly monitored and record maintained.	Complied Fugitive emission monitoring for Hydrocarbon and Benzene is done quarterly through MoEFCC approved agency.
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.	No change in stack design shall be done without the approval of SPCB. Proper design and alternate Pollution control system is provided Complied to take care of excess emissions in case of failure in any system of the plant.
12.	The height of stacks attached to AVU, FCCU and TPS 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 12 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.	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 as mentioned is being monitored at various stages of Effluent Treatment Plant. Also final Treated Effluent Quality parameters (pH, BOD, COD & TSS) are connected online to CPCB/HSPCB server.
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.
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.	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 and maintained after consultation with State Forest Department.

SN	Stipulation	Compliance												
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 be provided. Where only restricted growth on nonpolluting industries may be allowed (Action – State Govt.)	Action by State Government. Letter sent from PR to DC, Panipat dated 16.05.2020 requesting enforcement of this condition.												
21.	No tree should be cut from the site without prior written order of the competent authority.	Complied												
22.	The industrial township should be located on the northern side of the refinery i.e. in the up-wind direction.	Complied												
23.	A detailed Rehabilitation Plan for the affected people should be prepared and submitted to this Ministry within 3 months.	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 zone' aspects.	Complied												
26.	Feasibility of using 20 tonner trucks may be studied / assessed wherever road transport is being envisaged and report submitted to this Ministry within three months.	Bulk Movement of Products is 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.	Complied												
28.	The State Govt. should prepare a Master Plan for the region to avoid haphazard growth of industries and human settlements 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 NABL approved laboratory is established within the refinery.												
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 protection measures should not be diverted for other purposes and year wise expenditure should be reported to this Ministry.	Implemented. Year-wise expenditure: <table border="1" data-bbox="911 1803 1394 1960"> <thead> <tr> <th colspan="2">FY:2020-21</th> <th colspan="2">FY:2021-22</th> </tr> <tr> <th>Recurring</th> <th>Non-recurring</th> <th>Recurring</th> <th>Non-recurring</th> </tr> </thead> <tbody> <tr> <td>1229.8</td> <td>3465.0</td> <td>701.7</td> <td>2849.7</td> </tr> </tbody> </table>	FY:2020-21		FY:2021-22		Recurring	Non-recurring	Recurring	Non-recurring	1229.8	3465.0	701.7	2849.7
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Annexure-2

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	Conditions stipulated in the EC letter	Status
1.	The company should strictly adhere to the stipulations made by MOE&F vide O.M. No. J.11011/76/96-IAII dated 5 th March,1997	Complied
2.	a) The total SO ₂ emission from the entire Refinery complex should not exceed 1000 kg/hr even after proposed expansion.	Complied
	b) The gaseous emissions (SO ₂ , NO _x , 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.	Complied
	c) At no time, the emission level should go beyond the stipulated standards.	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.	Complied
3.	Sulphur recovery units with more than 99% efficiency shall be provided.	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.	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. All CAAQMS are connected to the CPCB AAQMS server. 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 in place and used to monitor ambient air quality outside the refinery.
	d) Continuous on-line stack monitoring equipment should be installed for measurement of SO ₂ , NO _x , CO & PM.	For all stacks: SO ₂ , NO _x , 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.	Complied Fugitive emission monitoring for Hydrocarbon and Benzene is done quarterly through MoEF&CC approved agency.
	b) Sensors for detecting HC leakages should also be provided at strategic locations.	Hydrocarbon leak detectors installed at strategic locations.

S N	Conditions stipulated in the EC letter	Status
6.	<p>a) As per the commitment given, there will be no discharge of treated effluent into Thirana drain.</p> <p>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.</p> <p>c) The entire treated wastewater should be recycled for reuse in the plant operation and green belt development so as to maintain zero discharge.</p>	<p>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).</p> <p>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.</p> <p>Treated Effluent from PTA-ETP (ETP-3) meeting Petrochemical MINAS is discharged into THIRANA DRAIN as per permission granted by statutory bodies (MoEFCC & HSPCB).</p> <p>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).</p>
7.	<p>a) Guard ponds of sufficient holding capacity should be provided to contain the effluent during process disturbance and or ETP failure.</p> <p>b) The concerned units must be shut down in case of effluent quality exceeding the prescribed limits.</p>	<p>Complied.</p> <p>Complied.</p>
8.	<p>a) The company should adopt mounded storage for LPG.</p> <p>b) The recommendations made in the Rapid Risk Assessment Report must be incorporated while firming up the plant layout and equipment design.</p> <p>c) The company must prepare a comprehensive risk assessment/analysis of the Refinery and associated facilities once the engineering design and layout is frozen.</p> <p>d) Based on this, on-site and off-site emergency preparedness plan must be prepared.</p>	<p>Complied.</p> <p>Mounded storage is used for LPG storage.</p> <p>Complied.</p> <p>The recommendations of the Rapid Risk Assessment study have been incorporated in the plant layout and equipment design.</p> <p>Complied.</p> <p>Complied.</p> <p>Onsite and Offsite Emergency Preparedness plan have been prepared and certified thru' PNGRB approved agency for Panipat Refinery.</p>

S N	Conditions stipulated in the EC letter	Status
	e) Approval from the nodal agency must be obtained before commissioning the project.	Complied.
9.	The drawl of water from the Munak Head-works should not exceed 30 cusecs even after the proposed expansion.	Complied.
General conditions:		
S N	Conditions stipulated in the EC letter	Status
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 modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forest.	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.	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.	Complied. Mentioned reports are being submitted 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. Final Treated Effluent Quality parameters (pH, BOD, COD & TSS) are also connected online to CPCB/HSPCB server. Effluent monitoring reports are submitted to HSPCB on monthly basis.
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.	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.	Complied. Hazardous Waste Authorization (HWA) for collection, storage and disposal of hazardous wastes is obtained from the HSPCB.
8.	Occupational health surveillance program should be undertaken as regular exercise for all the employees, especially for those engaged in handling hazardous substances.	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)	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.

S N	Conditions stipulated in the EC letter	Status												
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.	Complied Social upliftment and community development has been properly taken care as per IOCL's Corporate Social Responsibility Policy through following CSR activities. <ul style="list-style-type: none"> - 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 												
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.	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.	Implemented. <table border="1" data-bbox="991 920 1453 1111" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" data-bbox="991 920 1222 954">FY:2020-21</th> <th colspan="2" data-bbox="1222 920 1453 954">FY:2021-22</th> </tr> <tr> <th data-bbox="991 954 1118 1077">Recurring, lakhs</th> <th data-bbox="1118 954 1222 1077">Non-recurring, lakhs</th> <th data-bbox="1222 954 1318 1077">Recurring, lakhs</th> <th data-bbox="1318 954 1453 1077">Non-recurring, lakhs</th> </tr> </thead> <tbody> <tr> <td data-bbox="991 1077 1118 1111" style="text-align: center;">1229.8</td> <td data-bbox="1118 1077 1222 1111" style="text-align: center;">3465.0</td> <td data-bbox="1222 1077 1318 1111" style="text-align: center;">701.70</td> <td data-bbox="1318 1077 1453 1111" style="text-align: center;">2849.7</td> </tr> </tbody> </table>	FY:2020-21		FY:2021-22		Recurring, lakhs	Non-recurring, lakhs	Recurring, lakhs	Non-recurring, lakhs	1229.8	3465.0	701.70	2849.7
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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.	Complied. Six monthly compliance reports along with monitoring data are being submitted as stated.												
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 _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.	Complied. Emission from the stack is being monitored online and from MoEF&CC approved lab on Bi-monthly basis. Stacks are connected online to CPCB/HSPCB server with parameters such as SO ₂ , NO _x , 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.	Complied.
2	a) Adequate ambient air quality monitoring stations (SPM, SO ₂ , NO _x , 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.	Complied. Out of 9, CAAQMS two Ambient Air Monitoring stations set up in PX-PTA plant area. The location of these is finalized after consultation with HSPCB. These CAAQMS stations are connected to the CPCB AAQMS server.
	b) Continuous on-line stack monitoring equipment should be installed for measurement of SO ₂ and NO _x .	Complied. PX-PTA stacks are connected online to CPCB/SPCB server with parameters such as SO ₂ , NO _x , CO & PM.
3	a) Fugitive emission of HC from product storage tank yard, crude oil tanks etc. must be regularly monitored.	Complied. Fugitive emission monitoring for Hydrocarbon and Benzene is done quarterly through approved agency.
	b) Sensors for detecting HC leakage should also be provided at strategic locations.	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 meets 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. PX-PTA has permission for discharge of 255m ³ /hr treated effluent from PTA-ETP to Thirana drain.

	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 m ³ /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 MOEF&CC authorized independent agency and report is being submitted to HSPCB (Monthly) and to RO 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.	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.	Noted
	General Conditions	
SN	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.	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.	Complied. Mentioned reports are being sent to MOEF&CC once in 6 months and to HSPCB on bi-monthly basis. Stack analyzers are connected online 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.	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 submitted 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.	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.	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).	Complied. Silencers are provided on compressor discharge, acoustic leggings on turbo generators & ejectors and acoustic chambers at the burners. The ambient noise level meets the standards.												
9	Occupational Health Surveillance of the workers should be done on regular basis and records maintained.	Complied												
10	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP and risk analysis report.	Complied												
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.	Complied Social upliftment and community development has been properly taken care as per IOCL's Corporate Social Responsibility Policy through following CSR activities: <ul style="list-style-type: none"> - 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 												
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.	Complied Separate environment management cell is in place.												
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												
14	The funds earmarked for the environmental protection measures should not be diverted for any other purpose and year-wise expenditure should be submitted to this Ministry (Regional Office, Chandigarh/CPCB/SPCB)	Implemented. Year-wise expenditure: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">FY:2020-21</th> <th colspan="2">FY:2021-22</th> </tr> <tr> <th>Recurring, lakhs</th> <th>Non-recurring, lakhs</th> <th>Recurring, lakhs</th> <th>Non-recurring, lakhs</th> </tr> </thead> <tbody> <tr> <td>1229.8</td> <td>3465.0</td> <td>701.70</td> <td>2849.7</td> </tr> </tbody> </table>	FY:2020-21		FY:2021-22		Recurring, lakhs	Non-recurring, lakhs	Recurring, lakhs	Non-recurring, lakhs	1229.8	3465.0	701.70	2849.7
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1229.8	3465.0	701.70	2849.7											
15	Six monthly status reports on the project vis-à-vis environmental measures should be submitted to this Ministry (Regional Office, Chandigarh/ CPCB/SPCB.	Complied. Six monthly compliance reports along with monitoring data are being submitted.												

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

~~FIA~~

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.	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.	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.	Complied. Six monthly compliance reports along with monitoring data are submitted as stated.
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.	Complied.

1-1-11

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) 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-11011/60/2000-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.	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/PPP Project.)	SO ₂ emission is well within the limit. (Actual SO ₂ emission from the refinery is in the range of 80-900 kg/hr and from PX-PTA is in the range of 150-200 kg/hr)
3	As per the commitment given, the total quantity of treated effluent shall not exceed 255m ³ /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.	Complied.
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.	Various elements of Safety Management System (SMS) 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.	Complied.

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

S N	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	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.	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 _x , CO & PM. Gaseous emission from various process units meets the prescribed standards.
3.	Adequate ambient air quality monitoring stations, (SPM, SO ₂ , NO _x 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 _x . 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. All CAAQMS are connected to CPCB AAQMS server. For all stacks: SO ₂ , CO, PM & NO _x 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 as stated.
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.

S N	EC Conditions	Compliance Status
5.	<p>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.</p>	<p>The total SO₂ emission of Panipat Refinery is within the limit i.e. 1000 kg/hr as mentioned.</p> <p>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:</p> <ul style="list-style-type: none"> • 1 no. SRU: 99% efficiency ,1X115 MT/day capacity • 4 no. SRUs: 99.9% efficiency ,4X225 MT/day capacity
6.	<p>As per the commitment given, there should be zero effluent discharge due to the proposed expansion.</p> <p>The company should ensure that there will be no discharge of treated effluent into Thirana Drain and the treated effluent from the refinery is not discharged along with the treated effluent from PX-PTA plant.</p> <p>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.</p>	<p>There is no discharge of treated effluent from Refinery operations.</p> <p>ETP-1 & ETP-2 treated effluent meets Refinery MINAS. These treated effluents are re-used as a feed to RO plant and makeup to Cooling Towers.</p> <p>PTA-ETP treated effluent meeting Petrochemical MINAS is discharged into Thirana Drain as per Consent-To-Operate /approvals from MOEFCC, HSPCB & Irrigation Department.</p>
7.	<p>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.</p>	<p>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.</p> <p>Process Licensor M/s INVISTA has confirmed that "Recycle and Reuse" of PTA treated effluent is not feasible.</p> <p>PX-PTA has permission for discharge of 255m³/hr treated effluent from PTA-ETP to Thirana drain.</p>
8.	<p>Additional water requirement shall not exceed 400 m³/hr. The total quantity of effluent generation should not exceed 1280 m³/hr. as indicated in the Environment Management Plan. The treated effluent should be reused/ recycled to achieve zero discharge.</p>	<p>The total allowable withdrawal of fresh water as per previous EC was 3058.21 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 3458.21 m³/hr. Presently, fresh water consumption of the Refinery is well below the above mentioned limits.</p> <p>Total quantity of effluent generation remains <1100 m³/hr.</p> <p>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.</p>

S N	EC Conditions	Compliance Status
		PTA-ETP treated effluent meeting Petrochemical MINAS is discharged into Thirana Drain as per approvals/ Consent to Operate from MOEFCC, HSPCB, and Irrigation Department.
9.	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 Dept. Bio-sludge from ETP is being used as manure after converting it into semi solid form.
10.	The IOCL shall make efforts to sell petroleum coke (0.9 MMTPA) to organized industries having consent from the concerned State Pollution Control Board. Further, the Pet-coke from the Delayed Coker Unit should be conveyed to storage area by pipe conveyer system. The company should ensure to prevent seepage in Pet-coke stockpile / storage area to prevent soil and ground water pollution.	The Refinery gives Pet-coke to a separate IOCL division called Marketing Division which sells the same to consented/registered industries. Pet-coke is conveyed to storage area by pipe conveyer system.
11.	The oily sludge generated from the refinery operation should be subjected to melting pit treatment for recovery of oil. The recovered oil should be recycled. The residual oily sludge should be disposed off in the HDPE lined pits.	The raw oily sludge generated from the Refinery is subjected to 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.	The Refinery has a full-fledged Occupational Health Centre (OHC) in operation. The OHC carries out health surveillance of the workers on a regular basis and records are maintained.
General 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.

S N	EC Conditions	Compliance Status												
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.	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 _x , 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 time).	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.	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.												
6.	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management & Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections / treatment / storage / disposal of hazardous waste.	Complied.												
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.	Implemented. <table border="1" data-bbox="869 1211 1374 1413"> <thead> <tr> <th colspan="2">FY:2020-21</th> <th colspan="2">FY:2021-22</th> </tr> <tr> <th>Recurring, lakhs</th> <th>Non-recurring, lakhs</th> <th>Recurring, lakhs</th> <th>Non-recurring, lakhs</th> </tr> </thead> <tbody> <tr> <td>1229.8</td> <td>3465.0</td> <td>701.70</td> <td>2849.7</td> </tr> </tbody> </table>	FY:2020-21		FY:2021-22		Recurring, lakhs	Non-recurring, lakhs	Recurring, lakhs	Non-recurring, lakhs	1229.8	3465.0	701.70	2849.7
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Recurring, lakhs	Non-recurring, lakhs	Recurring, lakhs	Non-recurring, lakhs											
1229.8	3465.0	701.70	2849.7											
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 reports on EC conditions are submitted along with various monitoring reports as stated.												

S N	EC Conditions	Compliance Status
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.	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.	Complied

2/14

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)

Sl. 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.	Consent to Operate for BS-VI facilities including Panipat Refinery & PX-PTA Petrochemical Complex has been received from HSPCB.
(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.	There is no discharge of treated effluent from Refinery operations. ETP-1 & ETP-2 treated effluent meets Refinery MINAS. These treated effluents are re-used as a feed to RO plant and makeup to Cooling Towers. PTA-ETP treated effluent meeting Petrochemical MINAS is discharged into Thirana Drain as per Consent-To-Operate/approvals from MOEFCC, HSPCB & 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 project.
(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.	Authorization under Hazardous and Other Wastes Management Rules, 2016 received from HSPCB on 16.06.2020 which is valid upto 30.09.2024.
(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 kg/hr.	SO ₂ emissions from the Refinery (including BS-VI Up-gradation project) is within 1100 kg/hr. SO ₂ emissions from the PX-PTA petrochemical project is well within 275 Kg/hr. PX-PTA expansion project is under implementation. Post commissioning, SO ₂ emission will be maintained below 375 Kg/hr.
(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.	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.	For BS-VI fuel quality up gradation project- Complied. Post commissioning of the PX-PTA capacity expansion project, same shall be ensured.

Sl. No.	EC Conditions	Compliance Status
(viii)	Total fresh water requirement shall not exceed 354 m ³ /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 through guard pond.	Complied
(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.	Complied. Being mixed fuel (Liquid +Gas) firing in the Boiler, there is no ash generation.
(xii)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	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	Complied

Sl. No.	EC Conditions	Compliance Status
	enclosure shall be provided to DG set for controlling the noise pollution.	
(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. 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.	Stack analyzers are installed and connected to CPCB/HSPCB server. Complied
(xx)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Complied
General 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. All CAAQMS are connected to CPCB AAQMS server.
(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	Complied Acoustic hoods, silencers and enclosures are provided on all sources of noise generation.

Sl. No.	EC Conditions	Compliance Status												
	time).													
(vi)	The Company shall harvest rainwater from the roof tops of the building and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	Complied. Rain water harvesting pits are provided to collect rain water from roof tops and storm water drains to recharge the ground water.												
(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.	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.	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 villages and administration.	Complied												
(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.	Implemented <table border="1"> <thead> <tr> <th colspan="2">FY:2020-21</th> <th colspan="2">FY:2021-22</th> </tr> <tr> <th>Recurring, lakhs</th> <th>Non-recurring, lakhs</th> <th>Recurring, lakhs</th> <th>Non-recurring, lakhs</th> </tr> </thead> <tbody> <tr> <td>1229.8</td> <td>3465.0</td> <td>701.7</td> <td>2849.7</td> </tr> </tbody> </table>	FY:2020-21		FY:2021-22		Recurring, lakhs	Non-recurring, lakhs	Recurring, lakhs	Non-recurring, lakhs	1229.8	3465.0	701.7	2849.7
FY:2020-21		FY:2021-22												
Recurring, lakhs	Non-recurring, lakhs	Recurring, lakhs	Non-recurring, lakhs											
1229.8	3465.0	701.7	2849.7											
(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.	Six monthly EC compliance report is submitted as stated. It is also posted on the website of the company.												

Sl. No.	EC Conditions	Compliance Status
(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.	Environment statement is submitted to the statutory bodies annually.
(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.	Complied and informed
(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.	Complied

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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
General 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.	Complied
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.	Approval of MoEF&CC will be obtained for future expansion, if any.
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.	Installation of 2 nos. Air Quality Monitoring Stations is in progress. Installation by Feb'23
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.	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 conform to the standards prescribed under the Environment (Protection) Act, 1986 and the rules made there under.	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.	Complied, 18 nos. rain water harvesting pits (RWHP) have been installed.
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.	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.	All the Recommendations given in the EIA report and Public Hearing have been implemented except piezometer installation which is under implementation. Target of installation: Jan'2023.

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.	7 Crores have been allocated for implementation of activities to improve socio economic conditions of surrounding area. Plan for implementation is under finalization.				
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.	Complied. Environmental Management Cell is available with full-fledged refinery laboratory to carry out the Environmental Management and Monitoring functions.				
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.	Complied. Following funds is earmarked for environment management/Pollution control measures: <table border="1" data-bbox="1137 936 1396 1064"> <thead> <tr> <th>Capital cost</th> <th>Recurring cost</th> </tr> </thead> <tbody> <tr> <td>3507 lakhs</td> <td>187 lakhs</td> </tr> </tbody> </table>	Capital cost	Recurring cost	3507 lakhs	187 lakhs
Capital cost	Recurring cost					
3507 lakhs	187 lakhs					
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.	Environment statement shall be submitted to RO MoEF&CC CHD of the FY 2022-23 before Sep'23 as per the guidelines of MoEF&CC.				
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				

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Specific Conditions		
1.	The project proponent shall install 10 TPD 2G Ethanol demo plant for R&D purpose.	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.	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.	Complied, CTO received on 21.07.2022
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.	Complied, ZLD is ensured and no treated water is discharged outside the premises.
5.	Sludge management plan shall be formulated and ensured.	Complied, Being non-hazardous, sludge from ETP is disposed off in landfilling.
6.	Ash management shall be ensured by utilizing for manufacturing bricks.	Complied, M/s Shree Cement and M/s Garg build solutions are lined up for utilization of Ash in cement and bricks manufacturing respectively.
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.	Application for authorization is made to HSPCB vide application no. 32568824.
8.	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.	Complied, Stack is provided as per CPCB/SPCB guidelines.
9.	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.	Complied, Permission for withdrawal of fresh water from Ministry of water resources, Haryana is taken and it is valid upto 01.04.2024.
10.	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.	Complied, Separate Storage of hazardous chemical drums is provided. Flame arrester is provided on ethanol tank farm.
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.	Complied, Being non-hazardous, sludge from ETP is disposed off in

		landfilling.
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.	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.	Complied
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.	Complied, Green belt more than 33% of total plant area is available.
15.	All the commitments made regarding issues raised during the public hearing / consultation meeting shall be satisfactorily implemented.	All the commitments made regarding issues raised during Public Hearing have been implemented except piezometer installation which is under implementation.
16.	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.	7 Crores have been allocated for implementation of activities to improve socio economic conditions of surrounding area. Plan for implementation is under finalization.
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.	No DG sets are installed in this project.
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.	Complied, Necessary firefighting equipments are provided as per recommendations made in the RRA report.
19.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	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.	Complied
21.	Storage of raw material shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.	Complied

22.	<p>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.</p>	<p>Stack is provided as per CPCB/SPCB guidelines. For online continuous monitoring of effluent and emission, analyzers connectivity to the CPCB and HSPCB server is under progress. Target of completion: May'23 Installation of web camera and flow meter is under progress. Target of completion: March'23</p>
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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
General 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.	Complied
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.	Approval of MoEF&CC will be obtained for future expansion, if any.
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.	Installation of 2 nos. Air Quality Monitoring Stations is in progress. Installation by Mar'23
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.	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 conform to the standards prescribed under the Environment (Protection) Act, 1986 and the rules made there under.	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.	Complied, Rain water harvesting pits are installed.
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.	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.	Complied, All the Recommendations given in the EIA report and Public Hearing have been implemented.
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.	4.3 Crores have been allocated for implementation of activities to improve socio economic conditions of surrounding area. Plan for implementation is under finalization.

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.	Environmental Management Cell is available with full-fledged refinery laboratory to carry out the Environmental Management and Monitoring functions.
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.	Complied
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.	Environment statement shall be submitted to RO MoEF&CC CHD of the FY 2022-23 before Sep'23 as per the guidelines of MoEF&CC.
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
Specific 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, CTO is received on 21.07.2022
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.	Complied
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.	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.	Complied, Adequate measures have been taken to control fugitive emissions. No furnace/boiler is installed in this project.
5.	Odour shall be prevented at the source and effective odour management scheme shall be implemented.	Complied, Monitoring of odour is done regularly and its control measures are implemented.
6.	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.	Complied. Permission for withdrawal of fresh water from Ministry of water resources, Haryana is taken and it is valid upto 01.04.2024.
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.	Complied, Separate Storage of hazardous chemical drums is provided. Flame arrester is provided on ethanol tank farm.
8.	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.	Complied
9.	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.	Complied
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.	Complied
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.	Complied, Green belt more than 33% of total plant area is available.
12.	All the commitments made regarding issues raised during the public hearing / consultation meeting shall be satisfactorily implemented.	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.	4.3 Crores have been allocated for implementation of activities to improve socio economic conditions of surrounding area. Plan for implementation is under finalization.
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.	No DG sets are installed in this project.
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.	Complied, Necessary firefighting equipments are provided as per recommendations made in the RRA report.
16.	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	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.	Complied
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.	No furnace/boiler is installed in this project
19.	The unit shall comply with NGT order and shall not damage environment any further including ground water.	Complied
20.	The unit shall take precautionary measures for control of VOCs and shall follow CPCB guideline and norms.	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
Specific Conditions		
(i).	The project shall conform to ZLD.	Noted and shall be complied
(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: - 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 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.	Will be complied
(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.	Will be complied
(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.	Will be complied
(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.	Complied
(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 will be complied
General Conditions		
(i).	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	Noted

	imposed and to add additional environmental protection measures required, if any.	
(ii).	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.	Will be complied
(iii).	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 the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Will be complied
(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.	No representations received/suggestions received from these mentioned authorities while processing the proposal.
(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 complied for existing refinery 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 complied for existing refinery 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 SPCB/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

~~EM~~

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

Test Report

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

Test Report No.: 202207040114, 202207070113, 202207110114, 202207140110
202207180110, 202207210114, 202207250121, 202207280114
Test Report Date: 09/09/2022

Sample Particulars

Nature of the Sample : Ambient Air Quality Monitoring
Sampling Location : Roof of Administration Building Annexe
Purpose of Monitoring : To Check the Pollution Load
Method of Sampling : IS 5182 (Part 14)
Monitoring Conducted By : Mr. Eishi Pal
Sampling Duration (Hrs.) : 24 Hrs.

Date of Sampling	Parameter											
	Particulate Matter (PM2.5) µg/m ³	Particulate Matter (PM10) µg/m ³	Sulphur Dioxide (as SO ₂) µg/m ³	Nitrogen Dioxide (as NO ₂) µg/m ³	Ozone (as O ₃) µg/m ³	Lead (as Pb ²⁺) µg/m ³	Carbon Monoxide (as CO) mg/m ³	Ammonia (as NH ₃) µg/m ³	Nickel (as Ni ²⁺) ng/m ³	Arsenic (as As ³⁺) ng/m ³	Benzo (a) pyrene (as BAP ³⁺) ng/m ³	Benzen e (C ₆ H ₆) µg/m ³
09/07/2022	34.62	84.47	22.10	20.26	23.60	ND	1.17	34.60	ND	ND	ND	ND
07/07/2022	31.92	84.14	26.42	32.68	26.20	ND	1.11	32.18	ND	ND	ND	ND
11/07/2022	20.14	86.62	24.23	34.10	24.42	ND	0.98	36.42	ND	ND	ND	ND
14/07/2022	38.18	94.18	21.82	30.14	21.82	ND	1.02	40.28	ND	ND	ND	ND
18/07/2022	34.62	90.12	26.24	32.82	22.14	ND	1.12	36.42	ND	ND	ND	ND
21/07/2022	36.14	86.42	20.18	28.42	25.10	ND	1.08	38.18	ND	ND	ND	ND
25/07/2022	30.94	84.14	22.66	32.48	21.78	ND	1.11	34.28	ND	ND	ND	ND
28/07/2022	36.42	92.18	20.82	28.60	24.82	ND	1.09	32.88	ND	ND	ND	ND
Minimum	31.92	84.14	20.18	28.42	21.62	-	0.98	32.18	-	-	-	-
Maximum	38.18	94.18	26.42	34.16	26.20	-	1.12	40.28	-	-	-	-
Average	34.62	88.52	23.08	31.19	23.69	-	1.07	35.69	-	-	-	-
NAAQM Standards	60	100	80	80	100	1	2	400	20	5	1	5
Test Method	40CFR Appendix L Part 53 CPMO Guideline *	IS:5182 (P-4)	IS:5182 (P-2)	IS:5182 (P-6)	IS:518 2 (P-9)	NL/50 P/AAQ-23	IS:5182 (P-10)	Method of Air Sampling & Analysis	NL/50 P/AAQ-13	NL/SOP /AAQ-12	IS:5182 (P-12)	IS:5182 (P-11)

Remark:

*NAAQS: National Ambient Air Quality Standards Schedule-VI: (Part 3) (III), Part II (see-3)(i) 16.11.2009
NI-NO_x (NO₂), Arsenic (As) (I)-0.5; BAP (As) (I)-0.5; Benzo (a) Pyrene (BaP) (I)-0.5; Lead (Pb) (I)-0.5; Nickel (Ni) (I)-1.0
*Sample analyzed within seven days from the date of sampling.


(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

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

Test Report

Issued To M/s Indian Oil Corporation Limited
(Refinery Division)
Faridkot Refinery, Distt. Patiala
Haryana, INDIA

ILR No: TC63662000000735F,641F, 647F, 715F, 762F, 837F
Test Report Date: 05/09/2022

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 Annex
- To Check the Pollution Load
- IS:5182 (Part 14)
- Mr. Rishi Pal
- 24 Hrs.

Analysis Report

Date of Sampling	Parameter									
	Particulate Matter (PM2.5) µg/m3	Particulate Matter (PM10) µg/m3	Sulphur Dioxide (as SO2) µg/m3	Nitrogen Dioxide (as NO2) µg/m3	Ozone (as O3) µg/m3	Lead (as Pb ²⁺) µg/m3	Carbon Monoxide (as CO) mg/m3	Ammonia (as NH3) µg/m3	Nickel (as Ni ²⁺) ng/m ³	Arsenic (as As ³⁺) ng/m3
08/08/2022	32.32	80.67	22.40	30.40	22.83	BDL	0.94	48.25	BDL	BDL
12/08/2022	40.34	84.21	20.21	34.91	25.65	BDL	0.93	40.71	BDL	BDL
16/08/2022	44.63	92.63	24.58	38.14	20.47	BDL	1.12	44.85	BDL	BDL
22/08/2022	36.32	82.09	26.21	38.67	22.60	BDL	1.00	56.65	BDL	BDL
26/08/2022	38.56	80.15	21.48	28.78	21.62	BDL	1.12	50.14	BDL	BDL
29/08/2022	43.58	88.67	23.85	31.23	24.72	BDL	1.21	47.27	BDL	BDL
Minimum	32.32	80.15	20.21	28.78	20.47	-	0.91	40.71	-	-
Maximum	44.63	92.63	26.21	38.14	26.85	-	1.21	50.14	-	-
Average	39.26	84.74	23.12	33.31	23.35	-	1.06	46.32	-	-
NAAQM Standards	60	100	80	80	100	1	2	400	20	6
Test Method	40CFR Appendix L Part 53 CFCR Guidelines	IS:5182 (P-23)	IS:5182 (P-2)	IS:5182 (P-6)	IS:5182 (P-9)	NL/SOP/A AQ-11	IS:5182 (P-10)	Method of Air Sampling & Analysis	NL/SOP/A AQ-13	NL/SOP/AAQ-12

Remarks:

*NAAQS: National Ambient Air Quality Standards Schedule VI (Part 3 (IV)), (Part II-Annex - K) IN-11-2009
SO₂-Baker's Dozen Limit, Arsenic-BDL (LOQ: 0.5), NH₃-HCL (LOQ: 0.5), Nitrogen-Di-oxide (LOQ: 0.5), Lead-BDL (LOQ: 1.0)
Sample Analyzed within seven days from the date of sampling.



TC-6366



(AUTHORISED SIGNATORY)

(RAVINDER MITTAL)

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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. : TC636622000000652F, TC636622000000855F, TC636622000000956F
TC636622000000981F, TC636622000000993F, TC636622000000995F
TC636622000001042F, TC636622000001078F
Test Report Date: 06/10/2022

Sample Particulars

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

- 1. **Ambient Air Quality Monitoring**
- 2. Roof of Administration Building Annex.
- 3. To Check the Pollution Load.
- 4. IS 5182 (Part 14)
- 5. Mr. Rishi Pal
- 6. 24 Hrs.

Date of Sampling	Parameter											
	Particulate Matter (PM2.5) $\mu\text{g}/\text{m}^3$	Particulate Matter (PM10) $\mu\text{g}/\text{m}^3$	Sulphur Dioxide (as SO2) $\mu\text{g}/\text{m}^3$	Nitrogen Dioxide (as NO2) $\mu\text{g}/\text{m}^3$	Ozone (as O3) $\mu\text{g}/\text{m}^3$	Lead (as Pb ²⁺) $\mu\text{g}/\text{m}^3$	Carbon Monoxide (as CO) mg/m^3	Ammonia (as NH3) $\mu\text{g}/\text{m}^3$	Nickel (as Ni ²⁺) ng/m^3	Arsenic (as As ³⁺) ng/m^3	Benzo (a) pyrene (as BAP*) ng/m^3	Benzene (Costh*) ng/m^3
02/09/2022	34.62	90.42	22.10	30.76	23.68	ND	1.12	34.68	ND	ND	ND	ND
05/09/2022	31.92	84.14	26.42	32.68	26.20	ND	1.11	32.18	ND	ND	ND	ND
08/09/2022	32.14	86.62	24.21	34.16	24.42	ND	0.98	36.42	ND	ND	ND	ND
12/09/2022	38.18	94.18	21.82	30.14	21.62	ND	1.02	40.26	ND	ND	ND	ND
15/09/2022	34.62	90.12	26.24	32.82	22.14	ND	1.12	36.42	ND	ND	ND	ND
19/09/2022	36.14	86.42	20.18	28.42	25.10	ND	1.08	38.18	ND	ND	ND	ND
22/09/2022	33.94	84.14	22.86	30.48	21.78	ND	1.11	34.28	ND	ND	ND	ND
27/09/2022	36.42	92.18	20.82	28.60	24.62	ND	1.09	32.80	ND	ND	ND	ND
Minimum	31.92	84.14	20.18	28.42	21.62	-	0.98	32.18	-	-	-	-
Maximum	38.90	94.18	26.42	34.16	26.20	-	1.12	40.26	-	-	-	-
Average	34.82	88.52	23.08	31.19	23.68	-	1.07	34.66	-	-	-	-
NAAQM Standards	50	100	80	80	100	1	2	400	20	5	1	5
Test Method	40CFR Appendix I Part 53 CPEE Guideline	IS:5182 (P-23)	IS:5182 (P-2)	IS:5182 (P-6)	IS:5182-2 (P-9)	NL/50 P/AAQ-11	IS:5182 (P-10)	Method of Air Sampling & Analysis	NL/50 P/AAQ-13	NL/50P /AAQ-12	IS:5182 (P-12)	IS:5182 (P-11)

Remarks:

*NAAQM: National Ambient Air Quality Standards Schedule VIII, Part 2 (III), Part 2 (Annex-3) to 12/2009
 (NI-104) Diesel, (NI-101) (DL-05), (NI-102) (DL-06), (NI-103) (DL-07), (NI-104) (DL-08), (NI-105) (DL-09), (NI-106) (DL-10), (NI-107) (DL-11)
 Sample Analyzed within Seven days from the date of sampling.



TC-6366



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TEST CERTIFICATE

Page 1 of 1

Issued To: M/s Indian Oil Corporation Limited
(Refineries Division)
Panipat Naphtha Cracker,
Panipat (Haryana)

Sample Description: Ambient Air Quality Monitoring

Sampling Method: IS:5182 (Part-14)-2000

Work order Item: Panipat Refinery

Sampling Location: Roof of Administration Building

Report No. AAL ENV-2022(231001)

Date of Receiving: 31/12/2022

Date of Starting: 31/12/2022

Date of Completion: 03/01/2023

Date of Reporting: 05/01/2023

Sampling Done By: AAL

Sampling Duration: 24 Hrs

TEST RESULT

Test Parameters→ Date of Sampling↓	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	C ₆ H ₆ (µg/m ³)	As (ng/m ³)	Ni (µg/m ³)	B(a)P (ng/m ³)
01/12/2022	67.4	142.5	19.3	32.2	1.15	28.5	42.6	ND	1.2	ND	ND	ND
05/12/2022	72.4	152.8	21.5	35.6	1.05	32.5	40.8	ND	0.5	ND	ND	ND
08/12/2022	65.2	141.8	17.5	35.3	1.24	31.6	45.5	ND	1.1	ND	ND	ND
12/12/2022	83.2	173.2	18.2	32.2	1.55	27.5	47.3	ND	ND	ND	ND	ND
15/12/2022	74.2	165.5	16.3	36.0	1.52	24.5	40.8	ND	1.4	ND	ND	ND
19/12/2022	70.9	124.5	17.5	34.3	1.16	37.6	44.6	ND	1.0	ND	ND	ND
22/12/2022	55.5	118.3	14.2	32.9	0.80	26.5	41.7	ND	1.1	ND	ND	ND
26/12/2022	50.4	94.3	16.8	35.5	0.95	24.3	40.5	ND	ND	ND	ND	ND
29/12/2022	58.6	92.2	17.2	34.2	1.10	22.2	35.5	ND	ND	ND	ND	ND
Minimum	50.4	92.2	14.2	32.2	0.8	22.2	35.5	-	0.5	-	-	-
Maximum	83.2	165.5	21.5	36.0	1.55	32.5	47.3	-	1.1	-	-	-
Average	65.2	127.7	17.6	34.1	1.16	26.7	42.1	-	-	-	-	-
NAAQ Standard	60	100	80	30	2	100	400	1	5	6	20	1

****End of Report****

Remarks: - (*) 24 Hour Average (**) 8 Hour Average (***) Annual Average
ND=Not Detected, DL= Detection Limit,

Test Method as Follows:-

Particulate Matter, PM_{2.5} - IS-5182(P-24)-2010, Particulate Matter, PM₁₀ - IS-5182(P-23)-2006, Sulphur Dioxide (as SO₂) - IS-5182 (P-2)-2001, Nitrogen Dioxide (as NO₂) - IS-5182(P-6)-2006, Carbon Monoxide (as CO) - IS-5182(P-10)-1999, Ozone (as O₃) - IS-5182(P-9)-1974, Ammonia (as NH₃) - IS-5182(P-25)-2018, Lead (as Pb) - IS-5182(P-22)-2004, Nickel (as Ni) - AAL/SOP/008, Arsenic (as As) - IS-5182(P-22)-2004, Benzene (as C₆H₆) - IS-5182(P-11)-2006, Benzo a-pyrene (BaP) - IS-5182(P-12)-2004

Detection Limit as Follows:-

Particulate Matter, PM_{2.5} - 5 µg/m³, Particulate Matter, PM₁₀ - 10 µg/m³, Sulphur Dioxide (as SO₂) - 5 µg/m³, Nitrogen Dioxide (as NO₂) - 4 µg/m³, Carbon Monoxide (as CO) - 0.5 mg/m³, Ozone (as O₃) - 20 µg/m³, Ammonia (as NH₃) - 20 µg/m³, Lead (as Pb) - 0.1 µg/m³, Nickel (as Ni) - 1.0 µg/m³, Arsenic (as As) - 1.0 ng/m³, Benzene (as C₆H₆) - 1.0 µg/m³, Benzo a-pyrene (BaP) - 0.5 ng/m³

Dr. D.R. SHARMA
Gen. Manager (O&T)
Authorised Signatory

- Note:**
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 - The non-weightable sample received shall be destroyed after one month and weighable sample shall be destroyed after one week from the date of issue of report unless specified.

Test Report

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

Test Report No.: 202207150150-153, 202207160110-115, 202207180116-122
202207190118-120

Test Report Date: 04/08/2022

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 (m/s)	Particulate Matters* (as PM)		Nickel & Vanadium* (as Ni & V)*		
								mg/Nm ³	Kg/hr	mg/Nm ³	Kg/hr	PPM
1	OHCU LP Section	15-07-2022	65	2.42	38	176	9.30	8.24	0.8	ND	-	-
2	OHCU RG Heater	15-07-2022	63	1.35	38	162	8.62	9.26	0.3	ND	-	-
3	HGU-06	15-07-2022	0	1.4	35	101	7.87	11.2	2.3	ND	-	-
4	AVU-1	15-07-2022	100	5.1	39	117	8.86	8.66	3.9	ND	-	-
5	UB-01	16-07-2022	100	3.04	37	118	8.35	10.18	1.7	ND	-	-
6	UB-02	16-07-2022	100	3.04	36	111	8.45	11.26	1.9	ND	-	-
7	OPP-VHP-1	16-07-2022	100	3.34	34	156	6.69	9.24	1.8	ND	-	-
8	OPP-VHP-2	16-07-2022	100	3.34	37	134	8.46	10.04	2.0	ND	-	-
9	HRSG-3	16-07-2022	70	3.3	33	138	8.63	10.24	2.0	ND	-	-
10	HRSG-1	16-07-2022	65	2.3	34	117	8.89	9.34	1.9	ND	-	-
11	HRSG-4	18-07-2022	70	5.3	51	161	9.45	11.18	2.2	ND	-	-
12	PKCCR	18-07-2022	100	1.9	42	233	9.78	9.20	0.5	ND	-	-
13	PX 181T	18-07-2022	30	1	41	271	10.07	9.86	0.2	ND	-	-
14	PX Isomer	18-07-2022	55	1.2	40	216	9.27	10.28	0.2	ND	-	-
15	PX Tatory	18-07-2022	55	1.2	36	214	9.49	11.1	0.3	ND	-	-
16	PX-Xylene	18-07-2022	75	2	37	211	9.12	10.21	0.6	ND	-	-
17	HRSG-6	18-07-2022	70	3.3	34	159	8.91	8.28	1.6	ND	-	-
18	MSQ-1	19-07-2022	50	1.64	32	172	8.81	9.16	0.4	ND	-	-
19	MSQ-2	19-07-2022	50	1.64	32	161	8.86	8.24	0.4	ND	-	-
20	MSQ-3	19-07-2022	50	1.64	28	158	8.86	9.1	0.4	ND	-	-
Permissible Limits (mg/Nm³)							Gas	10		-		
							Liquid	100		5		
Test Method							IS-11255 (P-1)		USEPA Method 29 By AAS			

Remark:

ND Below Detection Limit, * Permissible Limits (as PM) (IS: 11255 (P-1), * Nickel & Vanadium (as Ni & V) (IS: 11255 (P-1))
Sample Analyzed within six days from the date of sampling.


(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.: 202207190121-122, 202207250125-126, 202207260110-114
202207260116-111

Test Report Date: 04/08/2022

Sample Particulars

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

Stack Monitoring
To Check the Polluter 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)	Particulate Matters ¹ (as PM)		Nickel & Vanadium ² (as Ni & V) ³		
								mg/Nm ³	Kg/hr	mg/Nm ³	Kg/hr	PPM
21	DHDT BS-VI	19-07-2022	70	1.8	34	140	8.97	8.26	0.5	ND	-	-
22	HGU BS-VI	19-07-2022	0	3.4	35	149	9.37	9.28	2.0	ND	-	-
23	KUJ-II	23-07-2022	109	5.1	32	150	9.60	9.20	4.56	ND	-	-
24	HGU	23-07-2022	70	1.3	34	159	8.81	9.04	0.3	ND	-	-
25	HGU 77	23-07-2022	60	3.6	38	169	6.91	11.1	2.2	ND	-	-
26	HGU-PDS	23-07-2022	60	1.7	35	171	9.67	9.1	0.5	ND	-	-
27	DHDS	23-07-2022	60	1.25	31	145	9.53	8.38	0.2	ND	-	-
28	PTA/CPH	25-07-2022	60	2.35	32	148	8.80	9.20	0.9	ND	-	-
29	PTA/Hot Oil Heater	29-07-2022	60	2.35	36	139	9.06	11.2	1.1	ND	-	-
30	DHDT H-01	26-07-2022	70	1.8	32	172	9.86	9.16	0.6	ND	-	-
31	DHDT H-02	26-07-2022	70	1.8	34	182	9.08	9.14	0.5	ND	-	-
32	CCRU Reformar Heater-201, 202,203 FF	26-07-2022	80	1.64	33	158	9.05	6.16	0.4	ND	-	-
33	CCRU NHT Heater-FF 101	26-07-2022	70	2.34	29	147	8.86	0.46	0.8	ND	-	-
34	CCRU Reformar Heater-205-205	26-07-2022	90	2.34	31	162	9.46	6.56	0.9	ND	-	-
35	DMT Heater-1	27-07-2022	70	3	35	162	8.84	11.17	1.7	ND	-	-
36	RFCC Feed Changer	30-07-2022	67	0.1	34	293	11.77	8.9	0.7	ND	-	-
37	PTA/Thermal Oxidizer	30-07-2022	60	2.35	35	129	10.62	9.8	1.3	ND	-	-
Permissible Limits (mg/Nm³)								Gas	10			
Test Method								Liquid	100	5		
								IS-11255 (P-1)	USEPA Method 29 by AAS			

Remarks:
1) ND=Not Detected / LHM / Particulate Matters (As PM)¹ (CO, SO₂, NO_x & Vanadium (as Ni & V))² (CO, V)
2) Safety Analysis: Wt in per cent from the base of sample.


(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

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Test Report

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

Test Report No.: 202207150150-153, 202207160118-115, 202207180116-122

202207190118-120

Test Report Date: 04/08/2022

Sample Particulars

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

: **Stack Monitoring**
: To Check the Pollution Load
: IS: 11295 (Part 2)
: 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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/Nm ³	kg/hr	PPM	mg/Nm ³	kg/hr	PPM
1	OHCU LP Section	15-07-2022	65	2.42	38	176	9.30	3	0.3	1.1	62	6.34	32.65
2	OHCU RG Heater	15-07-2022	63	1.35	38	162	8.62	3	0.1	1.1	60	2.43	42.52
3	HGU-06	15-07-2022	0	3.4	35	101	7.87	3	0.6	1.1	10	2.05	5.32
4	AVU-1	15-07-2022	100	5.1	39	117	8.00	7	3.1	3.3	47	24.15	24.98
5	UB-01	16-07-2022	100	3.04	37	118	8.35	100	26.4	64.1	138	22.97	73.35
6	UB-02	16-07-2022	100	3.04	36	112	8.45	89	15.2	34.0	139	23.70	73.88
7	CPH-VHP-1	16-07-2022	100	3.34	34	156	8.69	11	2.1	4.2	308	56.64	163.71
8	CPH-VHP-2	16-07-2022	100	3.34	27	134	8.46	29	5.7	11.1	218	42.61	115.87
9	HRSG-3	16-07-2022	70	3.3	33	138	8.63	9	1.7	3.4	228	43.92	121.19
10	HRSG-1	16-07-2022	65	3.3	34	117	8.89	3	0.6	1.1	115	24.07	61.13
11	HRSG-4	18-07-2022	70	3.3	33	161	9.45	8	1.2	2.3	156	21.17	82.92
12	PxCCR	18-07-2022	100	1.6	42	265	9.78	3	0.2	1.1	70	3.94	37.21
13	Px NHT	18-07-2022	30	1	41	271	10.07	3	0.6	1.1	76	1.19	40.80
14	Px Isomer	18-07-2022	95	1.2	40	216	9.27	3	0.1	1.1	66	1.57	36.14
15	Px Tatory	18-07-2022	95	1.2	38	214	9.49	3	0.1	1.1	62	1.47	32.95
16	Px-Xyline	18-07-2022	78	2	37	211	9.12	6	0.4	2.3	78	4.96	41.46
17	HRSG-5	18-07-2022	70	3.3	34	159	8.51	9	1.7	3.4	298	56.40	158.39
18	MSQ-1	19-07-2022	60	1.64	32	172	8.81	3	0.1	1.1	74	2.32	39.33
19	MSQ-2	19-07-2022	60	1.64	32	161	8.86	3	0.1	1.1	37	1.71	19.67
20	MSQ-3	19-07-2022	60	1.64	28	158	8.96	32	1.5	12.2	46	2.17	24.45
Permissible Limits (mg/Nm³)							Gas	50			350		
							Liquid	1700			410		

Remarks:

MSDS for Oxidiser (acid), Oxides of Sulphur (as SO₂) (MSDS 3.2)
Sample Analyzed within 28 days from the date of sampling. All above Parameters are measured with Flow Gas Analyser.


(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

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Test Report

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

Test Report No.: 202207190121-122, 202207250125-126, 202207260110-114
202207300110-111

Test Report Date: 04/08/2022

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 Diamet. or (meter)	Ambie. Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity (m/s)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)			
								mg/Nm ³	Kg/hr	ppm	mg/Nm ³	Kg/hr	ppm	
21	DHDT BS-VI	19-07-2022	70	1.8	34	145	8.97	9	0.5	3.4	72	4.22	38.27	
22	HGU-BS-VI	19-07-2022	0	3.4	38	149	9.37	4	0.9	1.5	82	17.7	43.58	
23	AUJ-IT	23-07-2022	100	5.1	32	150	9.60	5	3.8	1.9	92	45.1	48.90	
24	HCU	23-07-2022	70	1.3	34	159	8.81	11	0.3	4.2	125	3.83	66.44	
25	HGU 77	23-07-2022	60	3.4	38	169	8.91	0	1.6	3.1	64	12.5	34.02	
26	HCU-MS	23-07-2022	60	1.7	35	171	9.67	4	0.2	1.8	67	3.50	35.84	
27	DHDS	23-07-2022	60	1.25	31	145	9.53	16	1.4	17.5	141	3.93	69.63	
28	PTA/MOM	23-07-2022	80	2.35	32	146	8.88	6	0.6	2.3	129	12.6	68.57	
29	PTA/Hot Oil Heater	25-07-2022	60	2.35	35	139	9.06	6	0.6	2.3	92	9.42	48.90	
30	DHDT H-01	26-07-2022	70	1.8	32	172	9.86	6	0.4	2.3	131	7.93	65.63	
31	DHDT H-02	26-07-2022	70	1.8	34	182	9.08	3	0.2	1.1	140	7.63	74.41	
32	CORU Reformer Heater-201, 202,203 FF	26-07-2022	60	1.64	33	158	9.05	7	0.3	2.7	132	6.28	70.16	
33	CCRU NHT Heater-FF 101	26-07-2022	70	2.34	29	147	8.66	9	0.9	3.4	84	7.99	44.65	
34	CCRU Reformer Heater-201 205	26-07-2022	70	2.34	31	162	9.46	13	1.3	5.0	68	6.92	36.68	
35	CCU Heater-1	27-07-2022	70	3	35	162	8.84	20	3.1	7.6	75	11.5	38.86	
36	HFCC Feed Changer	30-07-2022	67	2.1	34	291	11.77	8	0.6	3.1	87	6.75	46.24	
37	PTA/Thermal Cooler	30-07-2022	60	2.35	35	129	10.63	9	1.1	3.4	81	9.96	43.65	
Permissible Limits (mg/Nm ³)								Gas	30			350		
								Liquid	1300			400		

Remarks:

ND-Below Detector Limit, Oxides of Sulphur (as SO₂) (IS: 11255)
Sample Analyzed within six Days from the date of sampling. All above Particulars are measured with Fluor Gas Analyser.

(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.: 202207150150-153, 202207160110-115, 202207180116-122
202207190118-120

Test Report Date: 04/08/2022

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 (m/s)	Carbon Monoxide (as CO)		
								mg/Nm ³	kg/hr	PPM
1	OHCU LP Section	15-07-2022	65	2.42	38	176	9.70	21	2.13	18.33
2	OHCU RG Heater	15-07-2022	63	1.35	38	162	8.62	1	0.01	0.87
3	HGU-06	15-07-2022	0	3.4	35	101	7.87	1	0.21	0.87
4	AVU-1	15-07-2022	100	5.1	39	117	8.00	15	6.75	13.09
5	UR-01	16-07-2022	100	3.04	37	118	8.35	11	1.83	9.60
6	UR-02	16-07-2022	100	3.04	36	113	8.45	9	1.53	7.86
7	CPM-VIB-1	16-07-2022	100	1.34	34	156	8.69	7	1.33	6.11
8	CPM-VIB-2	16-07-2022	100	1.34	37	134	8.48	4	0.70	3.49
9	HRSG-3	16-07-2022	70	3.3	33	136	8.63	1	0.19	0.87
10	HRSG-1	16-07-2022	65	3.3	34	117	8.89	5	1.05	4.36
11	HRSG-4	18-07-2022	70	3.3	33	161	8.45	4	0.80	3.49
12	PCCR	18-07-2022	100	1.9	42	255	9.78	4	0.23	3.49
13	PX NIT	18-07-2022	30	1	41	271	10.07	36	0.56	31.42
14	PX Isomer	18-07-2022	55	1.2	40	214	9.27	60	1.38	52.37
15	PX Toluene	18-07-2022	55	1.2	36	214	9.40	4.6	0.11	4.02
16	PX-Xylene	18-07-2022	78	2	37	211	9.12	5	0.32	4.36
17	HRSG-5	18-07-2022	70	3.3	34	159	8.91	8	1.51	6.98
18	MSQ-1	19-07-2022	60	1.64	32	172	8.81	7	0.31	6.11
19	MSQ-2	19-07-2022	60	1.64	32	161	8.86	1	0.05	0.87
20	MSQ-3	19-07-2022	60	1.64	28	158	8.96	2	0.09	1.75
Permissible Limits (mg/Nm ³)							Gas	150		
							Liquid	200		
							PCCU	400		

Remark:

MR. RISHI PAL (Anal. Chemist) has signed the report. The report shall not be representative except in full, without written approval of the laboratory. This report is intended only for your guidance and not for legal purpose or for advertisement. This report shall not be reproduced except in full without the written approval of the organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to the amount only. If you have any complaint/feedback regarding the sample collection/testing/test report, please write an email at info@nityalab.com and call at +91-191-2465597, +91-9871624093.



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(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.: 202207190121-122, 202207290125-126, 202207290110-114
202207300110-111

Test Report Date: 04/08/2022

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. Richu 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)	Carbon Monoxide (as CO)		
								mg/Nm ³	Kg/hr	PPM
21	DHDT BS-VI	19-07-2022	70	1.8	34	145	8.97	10	0.59	8.73
22	HGU-BS-VI	19-07-2022	8	3.4	38	149	9.37	15	3.26	13.06
23	AVU-II	23-07-2022	100	5.1	32	156	9.50	9	4.41	7.88
24	HCU	23-07-2022	70	1.3	34	159	8.81	6	0.17	5.34
25	HGU 77	23-07-2022	60	3.4	38	169	8.91	5	0.98	4.36
26	HGU-PDS	23-07-2022	60	1.7	35	171	9.67	8	0.48	7.66
27	DHDS	23-07-2022	60	1.25	31	145	9.53	146	4.38	127.44
28	PTA/CPH	25-07-2022	60	2.35	32	148	8.86	16	1.67	13.97
29	PTA/Hot Oil Heater	23-07-2022	60	2.35	35	139	9.06	8	0.82	6.96
30	DHDT H-01	26-07-2022	70	1.8	32	172	9.36	29	1.51	21.82
31	DHDT H-02	26-07-2022	70	1.8	34	162	9.08	1	0.05	0.67
32	CCRU Reformer Heater-201, 202, 203 FF	26-07-2022	60	1.64	33	158	9.05	6	0.29	5.24
33	CCRU NHT Heater-FF 101	26-07-2022	70	2.34	29	147	8.66	11	1.95	9.60
34	CCRU Reformer Heater-205 205	26-07-2022	70	2.34	31	162	9.46	21	2.11	18.33
35	DCU Heater-1	27-07-2022	70	3	35	162	8.84	12	1.85	10.47
36	RFCC Feed Clarifier	30-07-2022	67	2.1	34	261	11.77	3	0.25	2.62
37	PTA/Thermal Oxidiser	30-07-2022	60	2.35	33	129	10.62	5	0.61	4.36
Permissible Limits (mg/Nm ³)								Gas	150	
								Liquid	200	
								FCCU	400	

Remarks:

ND-Below Detection Limit, Carbon Monoxide (as CO) ND (LDQ-LD)
Sample Analyzed within 28 days from the date of sampling. All above Parameters are measured with Flue Gas Analyser.

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(RAVINDER MITTAL)

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Test Report

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

Test Report No.: 202207250123-124
Test Report Date: 04/08/2022

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 (m/s)	Hydrogen Sulphide (as H ₂ S)		
								mg/Nm ³	Kg/hr	PPM
1	SRU-26	25-07-2022	70	1.9	20	30	9.04	NO	-	-
2	SRU-27	25-07-2022	70	1.9	32	31	9.93	NO	-	-
Permissible Limits (mg/Nm³)								15		
Test Method								IS:11255 (P-4)		

Remark:

NO detectable limit, Hydrogen sulphide (as H₂S) (LOQ: 0.1),
Sample Analyzed within six days from the date of sampling.


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(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.: 202207250123-124
Test Report Date: 04/08/2022

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. Rish 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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/N m ³	Kg/hr	PPM	mg/N m ³	Kg/hr	PPM
1	SRU-26	25-07-2022	70	1.9	28	30	9.04	22	1.4	6.4	54	3.45	28.70
2	SRU-57	25-07-2022	70	1.9	32	31	9.93	28	1.8	10.7	78	5.01	41.46
Permissible Limits (mg/Nm³)								-			350		

Remarks:

NOx by Develco (ppm) Oxides of Sulphur (as SO₂) by ZORO L 10
Sample Analyzed within six days from the date of sampling. All above Parameters are measured with Flow Q4 Analyser.

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Test Report

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

Test Report No.: 202207250123-124
Test Report Date: 04/08/2022

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. Ashi 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)	Carbon Monoxide (as CO)		
								mg/Nm ³	Kg/hr	PPM
1	SRI-26	25-07-2022	70	1.9	28	30	0.04	144	0.34	127.44
2	SRI-57	25-07-2022	70	1.9	32	31	9.93	138	8.92	121.32
Permissible Limits (mg/Nm³)								150		

Remark:

NO Sensor Detection Limit, Carbon Monoxide (as CO) (IS: 11255-1)

Samples analyzed within 48 hrs from the date of sampling. All above Parameters are measured with Flue Gas Analyser.


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(RAVINDER MITTAL)

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Test Report

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

U.R. No.: TC636620000007526-753F

Test Report Date: 29/08/2022

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)	Aveg. Gas Velocity (m/s)	Hydrogen Sulphide (as H ₂ S)		
								mg/Nm ³	Kg/hr	PPM
1	SRU-57	24-08-2022	70	1.9	30	213	10.43	BDL	-	-
2	SRU-26	24-08-2022	70	1.9	30	209	9.44	BDL	-	-
Permissible Limits (mg/Nm³)								15		
Test Method								IS:11255 (P-4)		

Remarks:

BDL Below Detectable Limit, Hydrogen Sulphide (as H₂S)-IS: 11255 (P-4)
Sample Analyzed within 64 days from the date of sampling.



TC-6366



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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.: 202208240118-119
Test Report Date: 29/08/2022

Sample Particulars

Nature of the Sample :

Purpose of Monitoring :

Method of Sampling :

Monitoring Conducted By :

Stack Monitoring
To Check the Pollutior 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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/N m ³	Kg/hr	PPM	mg/N m ³	Kg/hr	PPM
1	SRU-57	24-08-2022	70	1.9	30	213	10.43	35	2.3	13.4	10	0.67	5.32
2	SRU-26	24-08-2022	70	1.9	30	209	9.44	46	3.1	17.6	8	0.54	4.25
Permissible Limits (mg/Nm³)											350		

Remark:

SO₂, SO₃ Detector (Dry), Oxide of Sulphur (SO₂) IS: 11255-1.01. All above parameters are analyzed from the gas analyzer. Sample Analyzed within 24 days from the date of sampling. All above Permissible are measured with Fuel Gas Analyser.


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Test Report

Issued To M/s Indian Oil Corporation Limited
(Refinery Division)
Paripat Refinery, Dist. Panipat
Haryana, INDIA

Test Report No.: 202208240118-119
Test Report Date: 29/08/2022

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 1)
- 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)	Carbon Monoxide (as CO)		
								mg/Nm ³	Kg/hr	PPM
1	SRII-57	24-08-2022	70	1.9	30	213	10.43	145	9.73	127.44
2	SRII-25	24-08-2022	70	1.9	30	209	9.44	136	9.19	118.71
Permissible Limits (mg/Nm³)								150		

Remarks:

Nil. Below Detection Limit. Open at 20 (HCL) (4.55) (HCL) (1000) (H). All above parameters are analyzed from the gas analyser. Sample analysed within 24 hrs from the date of sampling. All above Particulars are in compliance with the Gas Analyser.

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(RAVINDER MITTAL)

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Test Report

Issued To M/s Indian Oil Corporation Limited
(Refinery Division)
Paripat Refinery, Distt Pampat
Haryana, INDIA

ULR No.: TC636622000000940F-946F, TC6366220000000953F-887F
Test Report Date: TC636622000001015F-1017F, TC636622000001024F-1026F
04/10/2022

Sample Particulars

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

- Stack Monitoring
- To Check the Pollution Load
- IS: 11255 (Part 7)
- Mr. Rajendra Pratap

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)	Particulate Matters ¹ (as PM)		Nickel & Vanadium ² (as Ni & V) ³		
								mg/Nm ³	Kg/hr	mg/Nm ³	Kg/hr	PPM
1	DHCU I.P Section	15-09-2022	95	2.42	29	140	9.10	7.24	5.2	ND	-	-
2	DHCU RO Heater	15-09-2022	83	1.35	29	170	9.54	8.14	0.3	ND	-	-
3	HGU-06	15-09-2022	0	3.4	31	140	8.83	9.1	1.9	ND	-	-
4	AVU-1	15-09-2022	100	5.1	29	135	8.90	9.26	4.3	ND	-	-
5	UB-02	15-09-2022	100	3.04	30	145	8.61	8.28	1.1	ND	-	-
6	HRSG-1	16-09-2022	85	3.3	29	165	9.58	9.12	1.8	ND	-	-
7	HRSG-2	16-09-2022	85	3.3	29	168	9.35	9.45	1.3	ND	-	-
8	HRSG-5	16-09-2022	70	3.3	33	160	9.13	8.99	1.0	ND	-	-
9	PTA/CPH	16-09-2022	60	2.35	35	160	9.44	8.46	0.3	ND	-	-
10	PTA/Hot Oil Heater	16-09-2022	50	2.35	35	148	9.23	8.99	0.9	ND	-	-
11	HRSG-3	16-09-2022	70	3.3	32	144	9.23	9.1	1.3	ND	-	-
12	HRSG-4	16-09-2022	70	3.3	33	165	9.36	7.16	1.4	ND	-	-
13	PXCCR	20-09-2022	100	1.9	39	250	10.56	9.48	0.6	ND	-	-
14	PX NHT	20-09-2022	30	1	40	275	10.24	8.40	0.1	ND	-	-
15	PX Isomer	20-09-2022	56	1.2	41	225	9.99	8.19	0.2	ND	-	-
16	PX Toluene	20-09-2022	56	1.2	37	221	9.58	8.26	0.2	ND	-	-
17	PX-Xylene	20-09-2022	78	2	36	227	10.38	7.72	0.9	ND	-	-
18	MSQ-Prime G_301-H-101	21-09-2022	60	1.84	27	272	9.83	9.02	0.4	ND	-	-
19	MSQ-Prime G_301-H-201	21-09-2022	60	1.84	33	169	9.13	8.25	0.4	ND	-	-
20	MSQ-Prime G_301-H-301	21-09-2022	60	1.84	33	154	9.37	8.22	0.4	ND	-	-
Permissible Limits (mg/Nm³)							Gas	10		-		
							Liquid	100		8		
Test Method							IS: 11255 (P.1)	ISIRI Method 29 By AAS				

Remark:
1) GC Detector Description (msd, fids, photo ionization) (as per ISIRI: 11255, 11256, 11257) 2) Nickel & Vanadium (as Ni & V) (ICP-OES) 3) Sample analyzed within 48 days from the date of sampling.



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Test Report

Issued To M/s Indian Oil Corporation Limited
(Refinery Division)
Panipat Refinery, Dist: Panipat
Haryana, INDIA

Test Report No. 202209150110-113, 202209160110-112, 202209190110-114
202209200110-114, 202209210110-112
Test Report Date: 04/10/2022

Sample Particulars

Nature of Sample
Purpose of Monitoring
Method of Sampling
Monitoring Conducted by

Stack Monitoring
To Check the Pollution Load
IS: 11955 (Part 7)
Mr. Rajendra Prasad

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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/Nm ³	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM
1	OHCU LP Section	15-09-2022	68	2.42	26	140	0.10	3	0.3	1.1	60	6.52	31.69
2	OHCU RD Heater	16-09-2022	65	1.95	29	170	0.54	3	0.1	1.1	43	1.42	22.88
3	HCU-08	15-09-2022	0	0.4	31	140	0.23	3	0.6	1.1	37	3.21	16.67
4	AMU-1	19-09-2022	100	3.1	29	136	0.66	3	1.4	1.1	37	17.02	16.87
5	US-02	16-09-2022	100	3.04	30	140	0.61	11	1.8	4.3	223	36.80	159.00
6	HRSG-1	16-09-2022	65	3.3	29	159	0.98	11	2.2	4.2	248	45.90	121.62
7	HRSG-2	16-09-2022	65	3.1	29	155	0.38	11	2.2	4.2	229	43.61	22.43
8	HRSG-3	16-09-2022	70	3.3	33	159	0.12	11	2.1	4.2	263	60.99	139.78
9	PTA/DCPH	19-09-2022	60	2.98	35	150	0.44	9	0.6	2.3	127	13.19	67.58
10	PTA/Hot Oil Heater	19-09-2022	80	2.38	35	149	0.23	9	0.6	2.3	66	10.08	63.63
11	HRSG-3	19-09-2022	70	3.3	32	144	0.23	9	1.8	3.4	271	36.27	144.04
12	HRSG-4	19-09-2022	70	3.3	33	165	0.06	11	2.1	4.2	224	42.54	119.56
13	PX/CCR	20-09-2022	100	1.9	36	259	10.56	3	0.3	1.6	80	4.83	42.82
14	PX/WT	20-09-2022	30	1	40	278	10.24	3	0.6	1.1	102	1.61	54.22
15	PX/Isomer	20-09-2022	56	1.2	41	223	0.98	7	0.2	2.7	72	1.75	38.27
16	PX/Taxy	20-09-2022	56	1.2	37	221	0.96	5	0.1	1.9	69	1.62	36.88
17	PX/Xylene	20-09-2022	78	2	38	227	10.35	3	0.2	1.1	60	3.29	42.62
18	MSQ-Prime G_301-H-101	21-09-2022	60	1.64	27	272	0.63	0	0.6	2.0	33	2.15	26.17
19	MSQ-Prime G_301-H-201	21-09-2022	60	1.64	33	165	0.13	3	0.1	1.1	42	1.96	22.32
20	MSQ-Prime G_301-H-301	21-09-2022	60	1.64	30	154	0.37	6	0.5	2.3	66	2.74	39.01
Permissible Limits (mg/Nm³)							Gas	50			100		
							Liquid	1700			480		

Remark:

ND Below Detection Limit, Oxides of Sulphur (as SO₂) ND (N.D.) (N/A)
Sample analysed within 7 days from the date of sampling. All above Parameters are measured with Flue Gas Analyser.



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Test Report

Issued To: **M/s Indian Oil Corporation Limited**
(Refinery Division)
Panipat Refinery, Dist: Panipat
Haryana, INDIA

Test Report No.: 202209210110-114, 202209240110-116, 202209260110-114;
202209270110-112
Test Report Date: 04/10/2022

Sample Particulars

Nature of Sample
Purpose of Monitoring
Method of Sampling
Monitoring Conducted by

Stack Monitoring
To Check the Pollution Load
IS: 11255 (Part 7)
Mr. Rajendra Pratap

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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)			
								mg/m ³	Kg/hr	PPM	mg/m ³	Kg/hr	PPM	
21	DHDT BS VI	21-09-2022	70	1.8	35	149	9.17	11	0.7	4.3	78	4.83	41.80	
22	HGU-BS-VI	21-09-2022	0	3.4	30	152	9.58	0	1.3	2.3	80	18.17	42.04	
23	AVU-II	24-09-2022	100	5.1	29	162	9.57	3	1.4	1.1	72	34.74	38.27	
24	HGU	24-09-2022	70	1.8	26	156	9.42	0	0.2	2.3	107	3.35	56.57	
25	HGU 70	24-09-2022	80	3.4	30	158	8.14	0	0.0	0.0	22	4.55	11.50	
26	HGU-HUS	24-09-2022	80	1.7	30	162	9.29	3	0.2	1.1	41	3.00	21.70	
27	DHDS-FF-01	24-09-2022	80	1.05	29	161	8.89	3	0.0	0.0	140	3.82	74.41	
28	DHDT H-01	24-09-2022	70	1.8	29	160	10.01	9	0.0	3.4	150	9.41	92.02	
29	DHDT H-02	24-09-2022	70	1.8	30	175	9.54	9	0.0	3.4	174	10.11	92.48	
30	RFCC Feed Heater	25-09-2022	67	2.1	36	170	8.54	6	0.5	2.0	88	7.04	46.77	
31	RFCC Co. Roller	25-09-2022	83	2.1	37	182	9.55	121	9.4	46.2	342	26.68	161.75	
32	CCRU Reformer Heater-201, 202,203 PF	26-09-2022	80	1.04	36	169	9.12	3	0.4	3.4	153	8.76	97.27	
33	CDKU NH7 Heater-FF 101	26-09-2022	70	2.34	33	152	8.17	9	0.9	2.4	92	5.16	48.90	
34	CCRU Reformer Heater-205 206	26-09-2022	70	2.34	37	167	9.88	3	0.2	1.1	101	10.45	53.88	
35	DGU Heater-1	27-09-2022	70	3	33	167	8.98	21	3.5	8.0	71	11.00	37.74	
36	OPR-VHP-1	27-09-2022	100	3.34	35	198	8.88	15	2.0	5.7	288	67.57	158.30	
37	OPR-VHP-2	27-09-2022	100	3.34	39	155	9.20	32	6.5	12.3	305	91.67	162.11	
Permissible Limits (mg/Nm ³)								Gas	50			350		
								Liquid	1700			400		

Remarks:

NO Oxides Division Limit, Oxides of Sulphur (as SO₂-NO_x) (5.00-1.0)
Sample Analyzed within 7 days from the date of sampling. All Above Parameters are measured with Fluor Gas Analyser



NOTE: The laboratory accepts no responsibility for content of report. The results mentioned in this test report should only be used as a guide. Test report shall not be reproduced except in full without the written approval of the laboratory. Samples will be destroyed after the report is issued. If you have any suggestions/feedback regarding the sample collection/report, please send an email at info@nityalab.com and call at +91-191-2465597, +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.: 202209210113-114, 202209240110-116, 202209260116-114

302209270110-112

Test Report Date: 04/10/2022

Sample Particulars

Nature of Sample:

Purpose of Monitoring:

Method of Sampling:

Monitoring Conducted By:

- : Stack Monitoring
- : To Check the Pollution Load
- : IS: 11253 (Part 7)
- : Mr. Rajendra Pratap

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)	Carbon Monoxide (as CO)		
								mg/Nm ³	Kg/hr	PPM
21	DHDT BS VI	21-09-2022	70	1.6	35	149	9.17	12	0.21	10.47
22	HGU RR-VI	21-09-2022	0	3.4	30	152	9.58	18	3.95	15.71
23	AVU-U	24-09-2022	100	6.1	30	160	9.57	0	0.00	0.00
24	HGU	24-09-2022	70	1.9	29	156	9.42	0	0.00	0.00
25	HGU (F)	24-09-2022	90	2.4	30	158	9.14	2	0.41	1.75
26	HGU-PDS	24-09-2022	60	1.7	30	162	9.09	0	0.00	0.00
27	DHDS-FF-01	24-09-2022	65	1.25	29	161	8.98	142	3.67	123.95
28	DHDT H-01	24-09-2022	70	1.8	29	160	10.01	0	0.00	0.00
29	DHDT H-02	24-09-2022	70	1.8	30	175	9.54	0	0.00	0.00
30	RFCC Feed Heater	26-09-2022	67	0.1	30	170	9.54	1	0.08	0.87
31	RFCC Ctl Boiler	26-09-2022	67	0.1	37	182	9.65	0	0.00	0.00
32	CCRU Reformer Heater-201, 202, 203 FF	26-09-2022	90	1.64	30	160	9.12	7	0.34	6.11
33	CCRU NHT Heater-FF 101	26-09-2022	70	2.34	33	162	9.17	19	1.89	16.59
34	CCRU Reformer Heater-205, 205	26-09-2022	70	2.34	37	167	9.86	14	1.45	12.22
35	DCU Heater-1	27-09-2022	70	2	33	167	9.59	12	1.86	10.47
36	CPP-VMP-1	27-09-2022	100	3.34	35	159	8.88	9	1.24	7.80
37	CPP-VMP-2	27-09-2022	100	3.34	30	155	8.20	2	0.40	1.75
							Gas	150		
							Liquid	300		
							FOGU	400		
Permissible Limits (mg/nm³)										

Remark:

ND Means (Detection Limit) Carbon Monoxide (as CO) ND (LOQ) 1.0
Sample Analyzed within 7 days from the date of sampling. All above Parameters are measured with Flow Gas Analyser.



NOTE: The laboratory accepts the responsibility for accuracy of report. The results covered in this report related only to the sample tested. The responsibility of sample collection, storage, handling and delivery of the sample to the laboratory is on the client. The client is requested to provide all the necessary details about the sample and the test. The results of the test shall be provided within 7 days of issue of the report. If the quality of Nitya Laboratories is found not to be as per the client's requirement, please write an email at info@nityyalab.com and call at +91-191-2465597, +91-9613552273.

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Test Report

Issued To: **M/s Indian Oil Corporation Limited**
(Refinery Division)
Panipat Refinery, Dist. Panipat
Haryana, INDIA

Test Report No: 202209260118-116
Test Report Date: 04/10/2022

Sample Particulars

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

Stack Monitoring
To Check the Pollution Load
IS- 11256 (Part 7)
Mr. Rajendra Prasad

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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/Nm ³	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM
1	SRU-35	26-09-2022	70	1.9	31	215	9.70	0	0.0	0.0	8	0.37	3.19
2	SRU-57	26-09-2022	70	1.9	30	208	10.51	3	0.2	1.1	8	0.53	4.26
Permissible Limits (mg/Nm ³)								-			360		

Remarks:

SD Below Detection Limit, Oxides of Sulphur (as SO₂)-ND (LOD-1.0)
Sample Analyzed within six days from the date of sampling. All above Parameters are measured with Fluor Gas Analyser



NOTE: This laboratory accepts the responsibility for accuracy of report. The results obtained by this test method depend only on the samples tested. Our report shall not be responsible except in so far as it is based on the information supplied by the customer. The report shall not be responsible except in so far as it is based on the written agreement of the customer. Samples will be analysed after 24 hours from the date of issue of test certificate unless otherwise specified. Any complaint about this report should be communicated to writing within 7 days of issue of the report. Your quality is Nitya Laboratories's (India) business priority only. If you have any complaints regarding the accuracy of the test results, please write us at info@nityalab.com and call us +91-191-2465597, +91-9013651273

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Test Report

Issued To: **ONG Indian Oil Corporation Limited**
(Refinery Division)
Panipal Refinery, Dist. Panipat
Haryana, INDIA

Test Report No.: 202209260115-116
Test Report Date: 04/10/2022

Sample Particulars

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

- Stack Monitoring
- To Check the Pollution Load
- IS-11288 (Part 7)
- Mr. Rajendra Pratap

Analysis Report

Sr. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambie. Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity (m/s)	Carbon Monoxide (as CO)		
								mgNm ⁻³	Kg/hr	PPM
1	SR11-38	28-09-2022	70	1.9	31	275	6.76	138	8.40	120.45
2	SR11-57	24-09-2022	70	1.9	30	230	10.31	142	8.27	123.65
Permissible Limits (mgNm⁻³)								100		

Remark:

NO Follow Detection Limit, Carbon Monoxide (as CO) (IS-11288)
Sample Analyzed within 14 days from the date of sampling. All other Parameters are within the Permissible Limit.


(AUTHORISED SIGNATORY)
(RAVINDER MITAL)

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Test Report

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

ULR No.: TC636622000001431F-1432F
Test Report Date: 27/10/2022

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)	Aveq. Gas Velocity (m/s)	Hydrogen Sulphide (as H ₂ S)		
								mg/Nm ³	Kg/hr	PPM
1	SRU-57	18/10/2022	70	1.9	29	206	0.80	BDL	-	-
2	SRU-26	18/10/2022	70	1.9	30	183	0.80	BDL	-	-
Permissible Limits (mg/Nm³)								18		
Test Method								IS:11255 (P-4)		

Remark:

BDL-Below Detection Limit, * Hydrogen Sulphide (as H₂S)-BDL (DDO- U. I.)
Sample Analyzed within six days from the date of sampling.



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Test Report

Issued To: **M/s Indian Oil Corporation Limited**
(Refinery Division)
Panipat Refinery, Dist. Panipat,
Haryana, INDIA

Test Report No.: 202210160132-133

Test Report Date: 27/10/2022

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. Rani 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)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/Nm ³	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM
1	SRU-57	18/10/2022	70	1.9	29	205	9.80	20	1.2	7.6	12	0.73	9.36
2	SRU-26	18/10/2022	70	1.9	30	193	9.80	28	1.8	10.7	10	0.65	5.32
Permissible Limits (mg/Nm³)											350		

Remark:

SD: Below Detection Limit, Oxides of Sulphur (as SO₂) 60, (LOQ 1.0). All stack parameters are analyzed from P.L.U. gas analyzer. Sample Analyzed within 7 days from the date of sampling. All above the values are measured with Flue Gas Analyzer.



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Test Report

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

Test Report No.: 202210100132-139

Test Report Date: 27/10/2022

Sample Particulars

Nature of the Sample: Stack Monitoring
Purpose of Monitoring: To Check the Pollution Load
Method of Sampling: IS-11255 (Part 7)
Monitoring Conducted By: 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)	Carbon Monoxide (as CO)		
								mg/Nm ³	Kg/hr	PPM
1	SRU-57	18/10/2022	70	1.0	29	208	9.80	134	0.04	119.97
2	SRU-26	18/10/2022	70	1.0	30	183	9.80	141	0.22	123.06
Permissible Limits (mg/Nm ³)								150		

Remarks:

NO (Noise Detector Limit) Limits of Sulphur (as SO₂-80), CO (10), NO above parameters are measured from Flue Gas Analyser sample analysed within 48 hours from the date of sampling. All above Parameters are measured with Flue Gas Analyser.


(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

ULR No.: TC636822000001608F-1609F, TC636822000001620F-1625F
TC636822000001639F-1641F
Test Report Date: 24/11/2022

Sample Particulars

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

Stack Monitoring
To Check the Pollution Load
IS: 11255 (Part 7)
Mr. Rajendra Pratap

Analysis Report

Sl. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity (m/s)	Particulate Matters ¹ (as PM)	
								mg/Nm ³	Kg/hr
1	HRSO-1	02-11-2022	55	3.3	28	153	5.48	8.34	1.7
2	HRSO-2	05-11-2022	55	3.3	27	160	5.47	8.15	1.7
3	HRSO-3	06-11-2022	70	3.3	26	168	9.40	7.34	1.4
4	HRSO-4	09-11-2022	70	3.3	29	218	9.63	9.46	1.7
5	HRSO-5	09-11-2022	70	3.3	28	178	6.99	8.24	1.9
6	CRP/WHP-1	09-11-2022	100	3.34	30	148	6.65	8.18	1.9
7	CRP/WHP-3	09-11-2022	100	3.34	28	148	6.88	8.24	1.7
8	OHCU LP Section	10-11-2022	65	2.42	28	107	9.01	7.48	0.8
9	OHCU RG Heater	10-11-2022	55	1.35	26	169	9.50	9.48	0.3
10	RFCC Feed Heater	10-11-2022	97	2.1	31	180	9.86	7.58	0.6
11	RFCC Co Heater	10-11-2022	67	2.1	29	200	10.18	0	0.0
12	MSO Furnace S_301-H-301	11-11-2022	60	1.64	28	214	16.29	9.24	0.4
13	MSO Furnace S_301-H-201	11-11-2022	60	1.64	26	208	10.34	9.09	0.4
14	MSO Furnace S_301-H-101	11-11-2022	60	1.64	26	203	9.68	7.68	0.3
15	HGU-77	11-11-2022	60	3.4	28	194	8.79	9.24	1.9
16	HGU-106	11-11-2022	60	1.7	27	118	9.22	7.24	0.4
17	AVU-II	11-11-2022	100	6.5	29	134	9.60	9.15	4.6
18	CCRU NHT Heater-FF 101	12-11-2022	60	1.64	25	244	9.68	9.56	0.4
19	CCRU NHT Heater-FF 201	12-11-2022	70	2.34	26	222	0.70	8.66	0.8
20	CCRU Reformer Heater-205-205	12-11-2022	70	2.34	27	252	10.58	6.48	0.6
Permissible Limits (mg/Nm³)							Gas	10	
Test Method							Liquid	100	
Test Method							IS-11255 (P-1)		

¹ ND Value Consider Limit, ² Particulate Matters (as PM) (COC) IS: 11255 (Part 7) Method 7 (conversion as per IS: 11255 (Part 7))
Sample Analyzed within 48 hours from the date of sampling.



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Test Report

Issued To M/s Indian Oil Corporation Limited
(Refinery Division)
Panipat Refinery, Dist. Panipat
Haryana, INDIA.

U/R No. TC63662200001842F-1843F, TC63662200001858F-1862F
Test Report Date TC63662200001876F-1878F, TC63662200001886F-1887F
24/11/2022

Sample Particulars

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

Stack Monitoring
To Check the Pollution Load
IS-11255 (Part 7)
Mr. Rajendra Pratap

Analysis Report

Sl. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity (m/s)	Particulate Matters (as PM)	
								mg/m ³	Ng/hr
21	DHDS-FE-001	12-11-2022	60	1.25	31	268	10.82	8.88	0.2
22	HOU-06	13-11-2022	0	3.4	29	154	8.60	8.64	1.0
23	PXCCR	14-11-2022	100	1.8	29	218	10.33	8.89	0.4
24	PX NHT	14-11-2022	30	1	28	238	10.28	5.78	0.2
25	PX HDPM	14-11-2022	68	1.2	28	229	10.08	9.82	0.2
26	PX Tnbry	14-11-2022	56	1.2	31	188	9.17	8.1	0.2
27	PX-Xylene	14-11-2022	78	2	27	183	9.83	7.94	0.6
28	PTA/CPH	15-11-2022	60	2.35	25	127	9.38	8.14	0.9
29	PTA/Hot Oil Heater	15-11-2022	80	2.35	25	130	9.19	6.68	0.7
30	PTA/Thermal	15-11-2022	80	2.35	28	121	8.43	7.68	0.8
31	UG-02	16-11-2022	100	3.04	29	147	8.94	6.12	1.5
32	NCHOT-097/H	16-11-2022	72	1.8	30	151	9.37	8.88	0.5
Permissible Limits (mg/m³)							Gas	10	
							Liquid	100	
Test Method								IS-11255 (P-1)	

Remarks:
Method used: Gravimetric, Direct Gravimetric Method (as per IS-11255 (P-1), Method A) and Indirect (as per IS-11255 (P-1), Method B)
Sample Analyzed within 48 days from the date of sampling.



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Test Report

Issued To: M/s Indian Oil Corporation Limited
(Refinery Division)
Panpat Refinery, Dist. Panpat
Haryana, INDIA

Test Report No.: 202211090110-120, 202211110110-115, 202211120110-112
Test Report Date: 24/11/2022

Sample Particulars

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

- 1. Stack Monitoring
- 2. To Check the Pollution Load
- 3. IS: 11205 (Part 7)
- 4. Mr. Rajender Prasad

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)	Oxides of Sulphur (as SO _x)			Oxides of Nitrogen (as NO _x)			
								mg/Nm ³	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM	
1	HRSG-1	02-11-2022	55	3.3	25	153	9.49	8	1.2	2.3	273	56.75	146.11	
2	HRSG-2	09-11-2022	55	3.3	27	150	9.47	8	1.2	2.3	267	54.86	141.02	
3	HRSG-3	09-11-2022	70	3.3	25	166	9.46	11	2.0	4.2	361	66.33	149.36	
4	HRSG-4	09-11-2022	70	3.3	29	215	9.83	9	1.6	3.4	318	57.60	159.02	
5	HRSG-5	09-11-2022	70	3.3	29	129	9.96	6	1.2	2.3	304	52.06	133.01	
6	GPP-VHP-1	09-11-2022	100	3.34	30	140	9.60	6	1.2	2.8	290	47.73	130.70	
7	GPP-VHP-2	09-11-2022	100	3.34	29	149	9.99	14	2.8	6.3	324	64.95	172.21	
8	CHCU LP Section	10-11-2022	65	2.42	28	127	9.01	3	0.3	1.1	64	7.12	34.02	
9	CHCU RC Heater	10-11-2022	63	1.35	29	189	9.90	3	0.1	1.1	84	3.77	44.85	
10	RFCC Feed Heater	10-11-2022	67	2.1	31	180	9.85	9	0.7	3.4	90	7.28	47.84	
11	RFCC Co Boiler	10-11-2022	67	2.1	29	210	10.18	9	0.7	3.4	100	12.54	65.04	
12	MSG Purms G-301-H-305	11-11-2022	80	1.84	26	214	10.29	3	0.1	1.1	64	3.06	34.02	
13	MSG Purms G-301-H-201	11-11-2022	60	1.84	25	208	10.24	3	0.1	1.1	224	6.62	116.66	
14	MSG Purms G-301-H-101	11-11-2022	80	1.84	26	223	9.98	3	0.1	1.1	80	3.60	42.52	
15	HGU 77	11-11-2022	60	3.4	26	154	8.78	6	1.2	2.3	133	26.68	70.66	
16	HGU 106	11-11-2022	80	3.3	27	158	9.52	5	0.2	1.1	88	0.09	48.77	
17	AVU-II	11-11-2022	100	5.1	29	134	9.40	3	1.8	1.1	68	34.44	38.14	
18	CCRU WHT Heater-FF 101	12-11-2022	60	1.84	25	244	9.88	3	0.1	1.1	80	3.47	42.52	
19	CCRU WHT Heater-FF 201	12-11-2022	70	2.34	26	222	9.70	3	0.3	1.1	62	6.61	32.86	
20	CCRU Reformer Heater-205 205	12-11-2022	70	2.34	27	242	10.05	3	0.3	1.1	72	6.70	36.27	
Permissible Limits (mg/Nm³)								Gas	50			350		
								Liquid	1700			450		

Remark: All above Data are Lys. Oxides of Sulphur (as SO_x) NO (as NO_x) (L)
Sample Analyzed Within Six days from the date of sampling. All above Particulars are measured with Flue Gas Analyser.



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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, Dist. Panipat
Haryana, INDIA

Test Report No. 20221120113-114, 20221140110-114, 20221150110-112

20221160110-111

Test Report Date: 24/11/2022

Sample Particulars

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

Stack Monitoring
To Check the Pollution Load
is. 11203 (Part 7)
Mr. Rajendra Pratap

Analysis Report

Sl. No.	Stack Particulars	Date of Sampling	Stack Height (meter)	Stack Diameter (meter)	Ambient Temp. (°C)	Stack Temp. (°C)	Average Gas Velocity (m/s)	Oxides of Sulphur (as SO ₂)			Oxides of Nitrogen (as NO _x)		
								mg/N m ³	Kg/hr	PPM	mg/N m ³	Kg/hr	PPM
21	DHOS FF-001	12-11-2022	80	1.25	31	288	12.82	9	0.2	3.4	148	0.81	28.67
22	HGU-06	12-11-2022	8	3.4	29	154	8.60	3	0.8	1.1	70	13.74	37.23
23	PACOR	14-11-2022	100	1.9	25	218	18.33	8	0.4	2.3	105	8.72	55.81
24	PX NHT	14-11-2022	30	1	28	238	10.28	8	0.1	2.5	96	1.63	61.03
26	PX Isomer	14-11-2022	98	1.2	28	229	10.08	30	0.8	7.6	69	2.43	82.83
26	PX Toluene	14-11-2022	98	1.2	31	188	9.17	8	0.1	2.3	88	3.08	49.71
27	PX-Xylene	14-11-2022	78	2	27	183	9.83	8	0.4	2.3	168	12.07	98.23
28	PIA/PIPH	15-11-2022	80	2.35	28	127	9.58	8	0.7	2.3	115	12.55	61.13
29	PTA/Hot Oil Heater	15-11-2022	80	2.95	28	130	9.19	43	4.8	16.4	0	0.00	0.00
30	PTA/Normal	15-11-2022	80	2.35	28	121	8.42	5	0.5	1.9	8	0.80	4.25
31	UB-02	16-11-2022	100	3.04	29	147	8.94	12	2.0	4.8	212	38.13	112.68
32	NDHOT-107-H	16-11-2022	70	1.8	30	161	9.57	14	0.8	6.0	60	4.80	43.63
Permissible Limits (mg/Nm³)							Gas	50			350		
							Liquid	1700			450		

Remarks:

ND-Below Detection Limit, Oxides of Sulphur (as SO₂) and (as NO_x)
Sample analysed within six days from the date of sampling. All above Parameters are measured with Flue Gas Analyser.



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Test Report

Issued To: **M/s Indian Oil Corporation Limited**
(Refinery Division)
Haryana, INDIA

Test Report No.: 202211090110-120, 202211110110-115, 202211120110-112
Test Report Date: 04/11/2022

Sample Particulars

Nature of Sample: Stack Monitoring
Purpose of Monitoring: To Check the Pollution Load
Method of Sampling: IS: 11205 (Part 7)
Monitoring Conducted by: Mr. Rajendra Pratap

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)	Carbon Monoxide (as CO)			Nickel & Vanadium* (as Ni & V)†			
								mg/Nm ³	Kg/hr	PPM	mg/M m ³	Kg/hr	PPM	
1	HRSO-1	02-11-2022	65	3.3	25	153	9.48	ND	-	-	ND	-	-	
2	HRSO-2	08-11-2022	65	3.3	27	150	9.47	ND	-	-	ND	-	-	
3	HRSO-3	09-11-2022	70	3.3	29	159	9.46	ND	-	-	ND	-	-	
4	HRSO-4	09-11-2022	70	3.3	29	215	9.63	ND	-	-	ND	-	-	
5	HRSO-5	08-11-2022	70	3.3	26	120	8.68	ND	-	-	ND	-	-	
6	CPP-VAP-1	09-11-2022	135	3.34	30	146	8.95	4	18.63	9.78	ND	-	-	
7	CPP-VAP-2	09-11-2022	100	3.34	29	140	8.95	ND	-	-	ND	-	-	
8	OHCU LP Section	10-11-2022	65	2.42	29	127	9.01	25	66.72	2.78	ND	-	-	
9	OHCU RG Heater	10-11-2022	65	1.30	28	189	9.50	34	30.92	1.28	ND	-	-	
10	RFCC Feed Heater	10-11-2022	67	2.1	31	180	9.88	6	11.65	0.45	ND	-	-	
11	RFCC Co. Heater	10-11-2022	67	2.1	29	210	12.18	143	11.25	78.51	ND	-	-	
12	MSO-Prime G_301-H-301	11-11-2022	60	1.84	26	214	10.28	ND	-	-	ND	-	-	
13	MSO-Prime G_301-H-201	11-11-2022	60	1.84	25	268	10.24	62	63.87	2.60	ND	-	-	
14	MSO-Prime G_301-H-101	11-11-2022	60	1.84	30	223	9.78	1	1.09	0.04	ND	-	-	
15	HOU-77	11-11-2022	60	3.4	28	154	8.78	ND	-	-	ND	-	-	
16	HOU-105	11-11-2022	60	1.7	27	118	9.22	ND	-	-	ND	-	-	
17	AVU-II	11-11-2022	100	6.1	28	134	9.40	ND	-	-	ND	-	-	
18	CCRU NHT Heater-FF-101	12-11-2022	60	1.84	25	244	8.80	21	21.83	0.81	ND	-	-	
19	CCRU NHT Heater-FF-201	12-11-2022	70	2.34	25	222	9.70	17	36.80	1.54	ND	-	-	
20	CCRU Reformer Heater-208/206	12-11-2022	70	2.34	27	252	10.98	24	53.60	2.23	ND	-	-	
Permissible Limits (mg/Nm ³)								Gas	180			-		
								Liquid	200			5		
								FCCU	400			USEPA Method 20 By AAS		

Remarks:

ND-None Detectable Limit, Carbon Monoxide (as CO) ND (LDO-11)
Sample Analyzed within 48 days from the date of sampling. All Above Parameters are measured with FTIR Gas Analyser



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Test Report

Issued To M/s Indian Oil Corporation Limited
(Refinery Division)
Panipat Refinery, Dist. Panipat,
Haryana, INDIA

Test Report No.: 20221120113-114, 202211140110-114, 202211150110-112
Test Report Date: 202211150110-111

Sample Particulars

Nature of Sample

Purpose of Monitoring

Method of Sampling

Monitoring Conducted By

- Stack Monitoring
- To Check the Pollution Load
- IS- 11295 (Part 7)
- Mr. Rajendra Pratap

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)	Carbon Monoxide (as CO)			Nickel & Vanadium (as Ni & V)†		
								mg/Nm ³	Kg/hr	PPM	mg/Nm ³	Kg/hr	PPM
21	DHDS-FF-001	12-11-2022	60	1.25	31	263	10.62	1	0.01	0.63	ND	-	-
22	HOU-06	10-11-2022	0	3.4	25	164	6.60	ND	-	-	ND	-	-
23	PKOGR	14-11-2022	102	1.8	25	213	10.23	ND	-	-	ND	-	-
24	PX-HEAT	14-11-2022	50	1	26	238	10.28	ND	-	-	ND	-	-
25	PA-Boiler	14-11-2022	55	1.2	26	229	10.08	ND	-	-	ND	-	-
26	PX-Tatory	14-11-2022	58	1.3	31	188	9.17	ND	-	-	ND	-	-
27	PX-Xylene	14-11-2022	78	2	27	183	9.53	ND	-	-	ND	-	-
28	PTA-FCPH	15-11-2022	50	2.35	26	127	9.38	ND	-	-	ND	-	-
29	PTA-Hot Oil Heater	15-11-2022	50	2.55	26	130	8.19	ND	-	-	ND	-	-
30	PTA-Thermal	15-11-2022	60	2.55	26	121	8.42	1	0.10	0.53	ND	-	-
31	UB-09	16-11-2022	102	3.04	29	147	9.94	ND	-	-	ND	-	-
32	NDI-07-107-11	10-11-2022	70	1.8	30	181	9.27	12	0.75	3.91	ND	-	-
Permissible Limits (mg/Nm³)								Gas	100		-		
								Liquid	200		5		
								FCCU	400		USEPA Method 29 By AAS		

Remark:

ND: Below Detection Limit; Carbon Monoxide (as CO); ND: (CO) L.C.
Sample Analyzed within one hour from the date of sampling. All stack Particulars are measured with FDS Gas Analyser


(AUTHORIZED SIGNATORY)
(RAVINDER MITAL)

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TEST CERTIFICATE

Page 1 of 1

Issued To: M/s Indian Oil Corporation Limited
(Refineries Division)
Panipat Naphtha Cracker,
Panipat (Haryana)

Sample Description: Stack Emission

Sampling Method: IS:11255

Work order Item: Panipat Refinery

Report No. AAL ENV-20221231004

Date of Receiving: 31/12/2022

Date of Starting: 31/12/2022

Date of Completion: 05/01/2023

Date of Reporting: 05/01/2023

Sampling Done By: AAL

STACK DETAILS

S/N	Date of Sampling	Detail of Stack	Ambient Temp. (°C)	Stack Temp. (°C)	Stack Dia. (m)	Stack Height (m)	Flue Gas Velocity (m/sec)
1	30/12/2022	SRU-26	17	136	1.9	70.0	8.92
2	30/12/2022	SRU-37	17	142	1.9	70.0	8.15

TEST RESULT

S/N	Date of Sampling	Detail of Stack	Sulphur Dioxide (SO ₂)			Oxide of Nitrogen (NO _x)			Carbon Monoxide (as CO)			Hydrogen Sulphide (as H ₂ S)			
			Unit →	mg/m ³	µm	kg/hr	mg/m ³	µm	kg/hr	mg/m ³	µm	kg/hr	mg/m ³	µm	kg/hr
1	30/12/2022	SRU-26		2.5	0.87	0.22	9.5	4.63	0.84	135.5	108.4	11.93	ND	ND	ND
2	30/12/2022	SRU-37		3.3	1.16	0.31	7.5	3.65	0.71	138.4	110.7	13.16	ND	ND	ND
Permissible limits (mg/Nm ³)				NS			150			150			15		

NS=Not Detected, ND=Not Specified

****End of Report****

Remark:

Test Method: Sulphur Dioxide (as SO₂) IS 11255(P-2)-1982, Oxide of Nitrogen (as NO_x) IS 11255(P-7)-2005, Carbon Monoxide (as CO) IS 11276-1992, Hydrogen Sulphide (H₂S) IS 11255(P-4)-2005.

Dr. D.R. SHARMA
Gen. Manager (Q&T)
Authorised Signatory

- Notes:**
1. This Result indicated above refer to the tested sample and listed test parameters only, endorsement of products is neither inferred nor implied.
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 4. This report shall not be used in any advertising media or as evidence in the court of law without prior written consent of the laboratory.
 5. The non-perishable sample received shall be destroyed after one month and perishable sample shall be destroyed after one week from the date of issue of report unless specified.

Test Report

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

Test Report No.: 202207290121
Test Report Date: 06/08/2022

Sample Particulars

Nature of Sample : Wastewater
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 28/07/2022
Sampling Conducted By : Mr. Rishi P.
Sample Description : ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	7.64	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	110	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 37°C) (BOD)	mg/L	12	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	4.6	5.0	IS:3025 (P-39)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.30	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.20	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (TKN)	mg/L	ND (DL:0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	1.86	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL:0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL: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	ND (DL:0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	2.8	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.48	1.0	APHA-23 rd Ed.

Remark:

ND-Below Detection Limit, DL-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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Test Report

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

Test Report No.: 202207280121
Test Report Date: 06/08/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/R/O-3
Date of Sampling : 28/07/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	5.8	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

ND-NOT DETECTED, DL-LEVEL OF QUANTIFICATION, THE LOWEST CONCENTRATION OF A SUBSTANCE THAT CAN BE ACCURATELY MEASURED UNDER SPECIFIED EXPERIMENTAL CONDITIONS.


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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.: 202207280122
Test Report Date: 06/08/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Liter. Pet Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 28/07/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	7.46	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/L	90	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 22°C) (BOD)	mg/L	10.0	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2.4	5.0	IS:3025 (P-39)
6	Phenols (C ₆ H ₅ OH)	mg/L	0.26	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.4	0.5	IS:3025 (P-26)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	1.8	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL-0.1)	1.0	APHA-23 rd Ed.
12	Lead (Pb)	mg/L	0.06	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	ND (DL-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	2.82	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.40	1.0	APHA-23 rd Ed.

Remark:

ND-Not Below Detection Limit, DL, 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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Test Report

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

Test Report No.: 202207200122

Test Report Date: 06/08/2022

Sample Particulars

Nature of Sample
Sample Quantity & Packaging
Test Started on
Test Completed
Method of Sampling
Date of Sampling
Sampling Conducted By
Sample Description

Waste Water
1.0 Liter, Pet Bottle
29/07/2022
05/08/2022
SOI/R/O-3
28/07/2022
Mr. Rishi Pal
ETP-2 C/A (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	6.8	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

Notes:

ND-Not Detectable Limit, DL-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.



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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.: 202207280123
Test Report Date: 05/08/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Liter, Pot Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/R/D-3
Date of Sampling : 28/07/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	7.16	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	86.0	100	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	230	250	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	20.0	30	IS:3025 (P-44)
5	Phenols (C ₆ H ₅ OH)	mg/L	0.82	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.6	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	3.0	<5	IS:3025 (P-60)
8	Chromium Hexavalent (Cr ⁺⁶)	mg/L	ND(DL-0.05)	0.1	IS:3025 (P-52)

Remark:

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



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Test Report

Issued To **M/s Indian Oil Corporation Limited** **Test Report No.:** 202207280123
(Refinery Division) **Test Report Date:** 06/08/2022
Panipat Refinery, Distt. Panipat
Haryana, INDIA

Sample Particulars

Nature of Sample : **Waste Water**
Sample Quantity & Packaging : 1.0 Liter, Fcl Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/R/O-3
Date of Sampling : 28/07/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : ETP-3 (PTA-ETP)

Test Report

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

Remark:

ND-Not Detectable Limit, DL-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental 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.: TC636622000000754F

Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample : **Waste Water**

Sample Quantity & Packaging : 1.0 Litre, Pet Bottle

Sample Received at Lab : 25/08/2022

Test Started on : 25/08/2022

Test Completed : 31/08/2022

Method of Sampling : SOP/B/D-3

Date of Sampling : 24/08/2022

Sampling Conducted By : Mr. Rishi Pal

Sample Description : ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	...	7.50	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	18.0	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	105	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	2.9	5.0	IS:3025 (P-39)
6	Phenols (C ₆ H ₅ OH)	mg/L	0.33	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.25	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	1.70	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL-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	ND (DL-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	4.0	5.0	API(A)-23 rd Ed.
15	Nickel (Ni)	mg/L	0.77	1.0	APHA-23 rd Ed.

Remark: ND-Below Detection Limit, DL-Limit of Quantification, ND (DL-0.2) means that you are currently measuring under detection limit (DL) 0.2mg/L.



TC-6366

(AUTHORISED SIGNATORY)

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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.: 202208240110
Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Litre, Pet Bottle
Sample Received at Lab : 25/08/2022
Test Started on : 25/08/2022
Test Completed : 31/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 24/08/2022
Sampling Conducted By: : Mr. Rishi Pal
Sample Description : ETP-1 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	6.7	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

Remark: ND-Below Detection Limit, DL-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.


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(RAVINDER MITTAL)

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Test Report

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

ILR No.: TC636622000000755F
Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample: Waste Water
Sample Quantity & Packaging: 1.0 Litre, Pet Bottle
Sample Received at Lab: 25/08/2022
Test Started on: 25/08/2022
Test Completed: 31/08/2022
Method of Sampling: SOP/B/D-3
Date of Sampling: 24/08/2022
Sampling Conducted By: Mr. Rishi Pal
Sample Description: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	7.30	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	15	20.0	IS-3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	58	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	9.0	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2.4	5.0	IS:3025 (P-39)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.30	0.35	IS:3025 (P-43)
7	Sulphides (S)	mg/L	0.18	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	1.20	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL-0.1)	1.0	APHA-23 rd Ed.
12	Lead (Pb)	mg/L	0.03	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	ND (DL-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	1.94	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.82	1.0	APHA-23 rd Ed.

Remark: ND-Not Detectable Limit, DL-Limit of Quantitation, the level of concentration of a substance that can be accurately measured under specified experimental conditions.



(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.: 202208240111
Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Litre, Pet Bottle
Sample Received at Lab : 25/08/2022
Test Started on : 25/08/2022
Test Completed : 31/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 24/08/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : ETP-2 C/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	4.1	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

Report

ND Below Detection Limit, DL-Limit of Quantitation, the lowest concentration of a substance that can be accurately measured under specified measurement conditions

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Test Report

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

URL No.: TC53662200000756F
Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Litre, Pet Bottle
Sample Received at Lab : 25/08/2022
Test Started on : 25/08/2022
Test Completed : 31/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 24/08/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	...	7.90	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	84	100	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	200	250	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BCD)	mg/L	10.0	30	IS:3025 (P-44)
5	Phenols (C ₆ H ₅ OH)	mg/L	0.76	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.50	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	3.88	<5	IS:3025 (P-60)
8	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND(DL-0.05)	0.1	IS:3025 (P-52)

Note: ND (Not Detectable) Limit, DL (Limit of Quantification), the lowest concentration of a substance that can be accurately measured under specified experimental conditions.



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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.: 202208240112
Test Report Date: 01/09/2022

Sample Particulars:

Nature of Sample: Waste Water
Sample Quantity & Packaging: 1.0 Litre, Pet Bottle
Sample Received at Lab: 25/08/2022
Test Started on: 25/08/2022
Test Completed: 31/08/2022
Method of Sampling: SOP/SD-3
Date of Sampling: 24/08/2022
Sampling Conducted By: Mr. Rishi Pat
Sample Description: ETP-3 (PTA:ETP)

Test Report

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

Remark:

ND-Below Detection Limit, DL-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental 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.: **TC636622000009H1F**
Test Report Date: **27/09/2022**

Sample Particulars

Nature of Sample : **Wastewater**
Sample Quantity & Packaging : **1.0 Liter, Pet Bottle**
Sample Received at Lab : **19/09/2022**
Test Started on : **19/09/2022**
Test Completed : **26/09/2022**
Method of Sampling : **SOP/B/D-3**
Date of Sampling : **17/09/2022**
Sampling Conducted By : **Mr. Rajendra Pratap**
Sample Description : **ETP-1 O/L (PR)**

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH		7.84	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	10.0	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	110	125.0	IS:3025 (P-56)
4	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	4.8	5.0	IS:3025 (P-30)
6	Phenols (C ₆ H ₅ OH)	mg/L	0.30	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.20	0.5	IS:3025 (P-38)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	1.88	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL-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	ND (DL-0.005)	0.01	APHA-23 rd Ed
14	Zinc (Zn)	mg/L	2.8	5.0	APHA-23 rd Ed
15	Nickel (Ni)	mg/L	0.48	1.0	APHA-23 rd Ed

ND Below Detection Limit, DL Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified test conditions



TC-6366



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0191-2465865, 0191-2465866, 0191-2465867, 0191-2465868, 0191-2465869, 0191-2465870, 0191-2465871, 0191-2465872, 0191-2465873, 0191-2465874, 0191-2465875, 0191-2465876, 0191-2465877, 0191-2465878, 0191-2465879, 0191-2465880, 0191-2465881, 0191-2465882, 0191-2465883, 0191-2465884, 0191-2465885, 0191-2465886, 0191-2465887, 0191-2465888, 0191-2465889, 0191-2465890, 0191-2465891, 0191-2465892, 0191-2465893, 0191-2465894, 0191-2465895, 0191-2465896, 0191-2465897, 0191-2465898, 0191-2465899, 0191-2465900, 0191-2465901, 0191-2465902, 0191-2465903, 0191-2465904, 0191-2465905, 0191-2465906, 0191-2465907, 0191-2465908, 0191-2465909, 0191-2465910, 0191-2465911, 0191-2465912, 0191-2465913, 0191-2465914, 0191-2465915, 0191-2465916, 0191-2465917, 0191-2465918, 0191-2465919, 0191-2465920, 0191-2465921, 0191-2465922, 0191-2465923, 0191-2465924, 0191-2465925, 0191-2465926, 0191-2465927, 0191-2465928, 0191-2465929, 0191-2465930, 0191-2465931, 0191-2465932, 0191-2465933, 0191-2465934, 0191-2465935, 0191-2465936, 0191-2465937, 0191-2465938, 0191-2465939, 0191-2465940, 0191-2465941, 0191-2465942, 0191-2465943, 0191-2465944, 0191-2465945, 0191-2465946, 0191-2465947, 0191-2465948, 0191-2465949, 0191-2465950, 0191-2465951, 0191-2465952, 0191-2465953, 0191-2465954, 0191-2465955, 0191-2465956, 0191-2465957, 0191-2465958, 0191-2465959, 0191-2465960, 0191-2465961, 0191-2465962, 0191-2465963, 0191-2465964, 0191-2465965, 0191-2465966, 0191-2465967, 0191-2465968, 0191-2465969, 0191-2465970, 0191-2465971, 0191-2465972, 0191-2465973, 0191-2465974, 0191-2465975, 0191-2465976, 0191-2465977, 0191-2465978, 0191-2465979, 0191-2465980, 0191-2465981, 0191-2465982, 0191-2465983, 0191-2465984, 0191-2465985, 0191-2465986, 0191-2465987, 0191-2465988, 0191-2465989, 0191-2465990, 0191-2465991, 0191-2465992, 0191-2465993, 0191-2465994, 0191-2465995, 0191-2465996, 0191-2465997, 0191-2465998, 0191-2465999, 0191-2466000, 0191-2466001, 0

Test Report

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

Test Report No. 202209170118

Test Report Date 27/09/2022

Sample Particulars

Nature of Sample	Wastewater
Sample Quantity & Packaging	1.0 Liter, Pet Bottle
Sample Received at Lab	19/09/2022
Test Started on	19/09/2022
Test Completed	26/09/2022
Method of Sampling	SOP/BD-3
Date of Sampling	17/09/2022
Sampling Conducted By	Mr. Rajendra Pratap
Sample Description	ETP-1 OIL (RR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	5.8	15.0	IS 3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS 3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

ND:ND

ND-Below Detection Limit, DL- Limit of Quantitation, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.

(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

ULR No.: TC636622000000982F

Test Report Date: 27/09/2022

Sample Particulars

Nature of Sample: Waste Water

Sample Quantity & Packaging: 1.0 Liter, Pet Bottle

Sample Received at Lab: 19/09/2022

Test Started on: 19/09/2022

Test Completed: 28/09/2022

Method of Sampling: SOP/IS/D-3

Date of Sampling: 17/09/2022

Sampling Conducted By: Mr. Rajendra Pratap

Sample Description: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	-	7.46	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	14	30.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	80	125.0	IS:3025 (P-59)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	10.0	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2.4	5.0	IS:3025 (P-39)
6	Phenols (C ₆ H ₅ OH)	mg/L	0.26	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/l	0.4	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	1.8	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-62)
11	Copper (Cu)	mg/L	ND (DL-0.1)	1.0	APHA-23 rd Ed.
12	Lead (Pb)	mg/L	0.06	0.1	APHA-23 rd Ed.
13	Mercury (Hg)	mg/L	ND (DL-0.005)	0.01	APHA-23 rd Ed.
14	Zinc (Zn)	mg/L	2.82	5.0	APHA-23 rd Ed.
15	Nickel (Ni)	mg/L	0.40	1.0	APHA-23 rd Ed.

ND-None (Detection Limit), DL-Limit of Quantitation, the lowest concentration of a substance that can be accurately measured (indicated by the detection limit).



TC-6366



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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.: 202209170119
Test Report Date: 27/09/2022

Sample Particulars

Nature of Sample	: Waste Water
Sample Quantity & Packaging	: 1.0 Liter, Pet Bottle
Sample Received at Lab	: 19/09/2022
Test Started on	: 19/09/2022
Test Completed	: 26/09/2022
Method of Sampling	: SOP/6/D-3
Date of Sampling	: 17/09/2022
Sampling Conducted By	: Mr. Rajendra Pratap
Sample Description	: ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	0.0	15.0	IS-3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS 3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)-Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

Notes:

ND=Below Detection Limit, DL=Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified environmental conditions.

(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

ULR No.: **TC63662200000983F**
Test Report Date: **27/09/2022**

Sample Particulars

Nature of Sample : **Waste Water**
Sample Quantity & Packaging : **1.0 Liter, Pet Bottle**
Sample Received at Lab : **19/08/2022**
Test Started on : **19/09/2022**
Test Completed : **26/09/2022**
Method of Sampling : **SOP/B/D-3**
Date of Sampling : **17/09/2022**
Sampling Conducted By : **Mr. Rajendra Pratap**
Sample Description : **ETP-3 (PTA-ETP)**

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	—	7.10	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	88.0	100	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	230	250	IS:3025 (P-69)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	25.0	30	IS:3025 (P-44)
5	Phenols (C ₆ H ₅ OH)	mg/L	0.82	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.6	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	3.0	<5	IS:3025 (P-80)
8	Chromium Hexavalent (Cr ^{VI})	mg/L	ND(DL-0.05)	0.1	IS:3025 (P-52)

Remark:

ND-Below Detection Limit. DL-Limit of Quantitation, the lowest concentration of a substance that can be routinely measured under specific experimental conditions.



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Test Report

Issued To: **M/s Indian Oil Corporation Limited**
(Refinery Division)
Panipat Refinery, Dist: Panipat
Haryana, INDIA

Test Report No: 202209170120
Test Report Date: 27/09/2022

Sample Particulars

Nature of Sample: Wastewater
Sample Quantity & Packaging: 1.0 Liter, Pet-Bottle
Sample Received at Lab: 19/09/2022
Test Started on: 19/09/2022
Test Completed: 20/09/2022
Method of Sampling: SOP/B/D-3
Date of Sampling: 17/09/2022
Sampling Conducted By: Mr. Rajendra Pratap
Sample Description: ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-231-EG
2	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS:3025 (P-82)

Remarks:

ND-Below Detection Limit, DL-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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Test Report

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

ULR No.: TC838622000001426F

Test Report Date: 28/10/2022

Sample Particulars

Nature of Sample	Waste Water (Effluent)
Sample Quantity & Packaging:	1.0 Liter, Pet Bottle
Sample Received at Lab	18/10/2022
Test Started on	19/10/2022
Test Completed	27/10/2022
Method of Sampling	SOP/B/D-3
Date of Sampling	18/10/2022
Sampling Conducted By	Mr. Rajendra Phatap
Sample Description	ETP-1 OVL (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	8.05	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	18	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	100	125.0	IS:3025 (P-56)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	13	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2.9	5.0	IS:3025 (P-39)
6	Phenols (C ₆ H ₅ OH)	mg/L	0.10	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.4	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	2.45	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL-0.1)	1.0	APHA-23 rd Ed
12	Lead (Pb)	mg/L	0.07	0.1	APHA-23 rd Ed
13	Mercury (Hg)	mg/L	ND (DL-0.005)	0.01	APHA-23 rd Ed
14	Zinc (Zn)	mg/L	3.1	5.0	APHA-23 rd Ed
15	Nickel (Ni)	mg/L	0.50	1.0	APHA-23 rd Ed

Remarks:

ND-Below Detection Limit, DL-Limit of Quantification, N/A-Not available due to a substance that can't accurately measured under specific experimental conditions



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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. 202210180111
Test Report Date 26/10/2022

Sample Particulars:

Nature of Sample : Waste Water (Effluent)
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Sample Received at Lab : 19/10/2022
Test Started on : 19/10/2022
Test Completed : 27/10/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 18/10/2022
Sampling Conducted By : Mr. Rajendra Pratap
Sample Description : ETP-1 Q/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	0.9	15.0	IS:3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS:3025 (P-52)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

Remark:
ND) Below Detection Limit, DL is limit of Quantitation, the lowest concentration of a substance that can be accurately measured (either specified experimentally or statistically).

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(RAVINDER MITTAL)

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Test Report

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

ULR No. TC836822000001427F

Test Report Date: 25/10/2022

Sample Particulars

Nature of Sample : Waste Water (Effluent)
Sample Quantity & Packaging : 1.0 Liter, Pet. Bottle
Sample Received at Lab: : 19/10/2022
Test Started on : 19/10/2022
Test Completed : 27/10/2022
Method of Sampling : SQM/BL-3
Date of Sampling : 18/10/2022
Sampling Conducted By : Mr. Rajendra Pratap
Sample Description : ETP-2 O/L (FR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	--	7.80	6.0-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	16	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	120	125.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	13	15.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	3.4	5.0	IS:3025 (P-39)
6	Phenols (C ₆ H ₅ OH)	mg/L	0.30	0.35	IS:3025 (P-43)
7	Sulphide (S)	mg/L	0.25	0.5	IS:3025 (P-29)
8	Total Kjeldahl Nitrogen (NH ₃)	mg/L	ND (DL-0.2)	40	IS:3025 (P-34)
9	Phosphate	mg/L	2.4	3.0	IS:3025 (P-31)
10	Chromium Hexavalent (Cr ⁶⁺)	mg/L	ND (DL-0.05)	0.1	IS:3025 (P-52)
11	Copper (Cu)	mg/L	ND (DL-0.1)	1.0	APHA-23 rd Ed
12	Lead (Pb)	mg/L	0.02	0.1	APHA-23 rd Ed
13	Mercury (Hg)	mg/L	ND (DL-0.005)	0.01	APHA-23 rd Ed
14	Zinc (Zn)	mg/L	3.4	5.0	APHA-29 th Ed
15	Nickel (Ni)	mg/L	0.6	1.0	APHA-29 th Ed

Remark: ND-Nilise Detection Limit, DL-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.



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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. 202210180112
Test Report Date: 28/10/2022

Sample Particulars

Nature of Sample : Waste Water (Effluent)
Sample Quantity & Packaging: : 1.0 Liter, Pet Bottle
Sample Received at Lab : 19/10/2022
Test Started on : 19/10/2022
Test Completed : 27/10/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 18/10/2022
Sampling Conducted By : Mr. Rajendra Pratap
Sample Description : ETP-2 O/L (PR)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Ammonia (N)	mg/L	8.94	15.0	IS-3025 (P-34)
2	Cyanide (CN)	mg/L	ND (DL-0.1)	0.20	APHA-23 rd Ed.
3	Total Chromium	mg/L	ND(DL-0.05)	2.0	IS-3025 (P-62)
4	Vanadium (V)	mg/L	ND(DL-0.1)	0.2	APHA-23 rd Ed.
5	Benzene	mg/L	ND(DL-0.01)	0.1	APHA-23 rd Ed.
6	Benzo(a)Pyrene	mg/L	ND(DL-0.02)	0.2	APHA-23 rd Ed.

Remark:

ND Below Detection Limit (DL-Limit of Quantitation), the precise concentration of a substance that can be accurately measured under specified experimental conditions.


(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

U.R. No. TC636622000001426F
Test Report Date: 25/10/2022

Sample Particulars

Nature of Sample : Waste Water (Effluent)
Sample Quantity & Packaging: : 1.0 Liter, Pet Bottle
Sample Received at Lab : 19/10/2022
Test Started on : 19/10/2022
Test Completed : 27/10/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 16/10/2022
Sampling Conducted By : Mr Rajendra Pratap
Sample Description : ETP-3 (PTA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH		7.50	6.5-8.5	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	90	100	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	210	250	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	26	30	IS:3025 (P-44)
5	Phenols(C ₆ H ₅ OH)	mg/L	0.60	<1	IS:3025 (P-43)
6	Sulphide (S)	mg/L	1.3	2.0	IS:3025 (P-29)
7	Fluoride	mg/L	3.2	<5	IS:3025 (P-50)
8	Chromium Hexavalent (Cr ^{VI})	mg/L	ND(DL:0.05)	0.1	IS:3025 (P-52)

Remark: ND-Blank/Detectable Limit; DL-List of Quantitation, the lowest concentration of a substance that can be accurately measured under specified operating conditions.



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Test Report

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

Test Report No: 202210180113
Test Report Date: 28/10/2022

Sample Particulars

Nature of Sample: Waste Water (Effluent)
Sample Quantity & Packaging: 1.0 Liter, Pet Bottle
Sample Received at Lab: 15/10/2022
Test Started on: 19/10/2022
Test Completed: 27/10/2022
Method of Sampling: SOP/B/D-3
Date of Sampling: 18/10/2022
Sampling Conducted By: Mr. Rajendra Pratap
Sample Description: ETP-3 (PIA-ETP)

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Cyanide (CN)	mg/L	ND (DL:0.1)	0.20	APHA, 23rd Ed.
2	Total Chromium	mg/L	NO(DL:0.05)	2.0	IS:3025 (P-62)

Remarks:

ND: Below Detectable Limit, DL: Limit of Quantitation, PH: Lowest concentration of a substance that can be accurately measured under specified experimental conditions.


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(RAVINDER MITTAL)

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Issued To: M/s Indira Oil Corporation Limited
(Refineries Division)
Panipat Naphtha Cracker,
Panipat (Haryana)

Report No.: AAL WQT-20221123055

Date of Receiving: 23/11/2022

Date of Starting: 23/11/2022

Date of Completion: 28/11/2022

Date of Reporting: 28/11/2022

Sample Description: Effluent Water Sample

Work order Item: Panipat Refinery

Sample Quantity: 2 Litre

Sample Collection Date: 22/11/2022

Sample Packing Condition: Plastic Can

Sample ID: ETP1- Guard Pond

Sample Collected By: AAL

TEST RESULT

S. No.	Test parameters	Unit	Results	Permissible Limits as per CPCB Guideline (Petroleum Oil Refinery)	Testing Method
1	pH Value	-	7.54	6.0 – 8.5	IS 3025(P-11)-1983
2	Oil & Grease	mg/l	2.0	5.0 Max.	IS 3025 (P-39)-2021
3	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	13.5	15 Max.	IS 3025(P-44)-1993
4	Chemical Oxygen Demand (COD)	mg/l	76.0	125 Max.	IS 3025(P-58)-2006
5	Total Suspended Solids	mg/l	17.6	20 Max.	IS 3025 (P-17)-1984
6	Phenols	mg/l	0.13	0.35 Max.	IS 3025(P-43)-1992
7	Sulphide (as S)	mg/l	ND (0.1-0.1)	0.5 Max.	IS 3025(P-29)-1986
8	Cyanide (as CN)	mg/l	ND (0.1-0.01)	0.20 Max.	IS 3025(P-27)-1986
9	Ammonia (as N)	mg/l	6.0	15 Max.	IS 3023(P-34)-1988
10	Total Kjeldahl Nitrogen (as N)	mg/l	11.6	40 Max.	IS 3025(P-34)-1988
11	P	mg/l	1.16	3.0 Max.	IS 3025(P-31)-1988
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/l	ND (0.1-0.01)	0.1 Max.	IS 3025(P-52)-2003
13	Total Chromium (as Cr)	mg/l	ND (0.1-0.1)	2.0 Max.	IS 3025(P-52)-2003
14	Lead (as Pb)	mg/l	ND (0.1-0.01)	0.1 Max.	IS 3025(P-47)-1994
15	Mercury (as Hg)	mg/l	ND (0.1-0.001)	0.01 Max.	IS 3025(P-48)-1994
16	Zinc (as Zn)	mg/l	0.14	5.0 Max.	IS 3025(P-49)-1994
17	Nickel (as Ni)	mg/l	ND (0.1-0.1)	1.0 Max.	IS 3025(P-54)-2003
18	Copper (as Cu)	mg/l	ND (0.1-0.01)	1.0 Max.	IS 3025(P-42)-1992
19	Vanadium (as V)	mg/l	ND (0.1-0.01)	0.2 Max.	APHA (23 rd Edition), 2017, 3111D
20	Benzene (as C ₆ H ₆)	mg/l	ND (0.1-0.01)	0.1 Max.	APHA (23 rd Edition), 2017, 6208B
21	Banzo a-pyrene (BaP)	mg/l	ND (0.1-0.01)	0.2 Max.	APHA (23 rd Edition), 2017, 6208B

ND=Not Detected, (L)-Detection Limit

****End of Report****

DHEER BHARMA
Gen. Manager (Q&T)
Authorised Signatory

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Issued To:	M/s Indian Oil Corporation Limited (Refineries Division) Panipat Naphtha Cracker, Panipat (Haryana)	Report No.	AAL WQT-20221123056
Sample Description:	Effluent Water Sample	Date of Receiving:	23/11/2022
Work order Item:	Panipat Refinery	Date of Starting:	23/11/2022
Sample Collection Date:	22/11/2022	Date of Completion:	28/11/2022
Sample ID:	ETP2-Guard Pond	Date of Reporting:	28/11/2022
		Sample Quantity:	2 Litre
		Sample Packing Condition:	Plastic Can
		Sample Collected By:	AAL

TEST RESULT

S. No.	Test parameters	Unit	Results	Permissible Limits as per CPCB Guideline (Petroleum Oil Refinery)	Testing Method
1	pH Value	-	7.48	6.0 - 8.5	IS 3025(P-11)-1983
2	Oil & Grease	mg/l	2.4	5.0 Max.	IS 3025 (P-39)-2001
3	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	14.0	15 Max.	IS 3025(P-44)-1993
4	Chemical Oxygen Demand (COD)	mg/l	83.5	125 Max.	IS 3025(P-58)-2006
5	Total Suspended Solids	mg/l	18.4	20 Max.	IS 3025 (P-17)-1984
6	Phenols	mg/l	0.15	0.35 Max.	IS 3025(P-43)-1992
7	Sulphide (as S)	mg/l	ND (0.5-0.1)	0.5 Max.	IS 3025(P-29)-1986
8	Cyanide (as CN)	mg/l	ND (0.1-0.05)	0.20 Max.	IS 3025(P-27)-1986
9	Ammonia (as N)	mg/l	7.2	15 Max.	IS 3025(P-34)-1988
10	Total Kjeldahl Nitrogen (as N)	mg/l	13.5	40 Max.	IS 3025(P-34)-1988
11	P	mg/l	1.20	3.0 Max.	IS 3025(P-31)-1988
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/l	ND (0.4-0.05)	0.1 Max.	IS 3025(P-52)-2003
13	Total Chromium (as Cr)	mg/l	ND (0.1-0.1)	2.0 Max.	IS 3025(P-52)-2003
14	Lead (as Pb)	mg/l	ND (0.1-0.05)	0.1 Max.	IS 3025(P-47)-1994
15	Mercury (as Hg)	mg/l	ND (0.1-0.001)	0.01 Max.	IS 3025(P-48)-1994
16	Zinc (as Zn)	mg/l	0.19	5.0 Max.	IS 3025(P-49)-1994
17	Nickel (as Ni)	mg/l	ND (0.1-0.1)	1.0 Max.	IS 3025(P-54)-2003
18	Copper (as Cu)	mg/l	ND (0.1-0.01)	1.0 Max.	IS 3025(P-42)-1992
19	Vanadium (as V)	mg/l	ND (0.1-0.05)	0.2 Max.	APHA (23 rd Edition), 2017, 3111D
20	Benzene (as C ₆ H ₆)	mg/l	ND (0.1-0.025)	0.1 Max.	APHA (23 rd Edition), 2017, 6208B
21	Benzo a-pyrene (BaP)	mg/l	ND (0.1-0.01)	0.2 Max.	APHA (23 rd Edition), 2017, 6208B

(H-194) (Revised, 01-01-2008) (Unit)

End of Report

Dr. D. R. SHARMA,
Gen. Manager (Q&T)
Authorized Signatory

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Issued To: M/s Indian Oil Corporation Limited
(Refineries Division)
Panipat Naphtha Cracker,
Panipat (Haryana)

Report No.: AAL WQT-20221126001

Date of Receiving: 26/11/2022

Date of Starting: 26/11/2022

Date of Completion: 30/11/2022

Date of Reporting: 30/11/2022

Sample Quantity: 2 Litre

Sample Packing Condition: Plastic Can

Sample Collected By: AAL

Sample Description: Effluent Water Sample

Work order Item: PX-PTA

Sample Collection Date: 25/11/2022

Sample ID: PTA-ETP- Guard Pond

TEST RESULT

S. No.	Test parameters	Unit	Results	Permissible Limits	Testing Method
1	pH Value	-	7.76	6.5 - 8.5	IS 3025(P-11)-1983
2	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	14.4	30 Max.	IS 3025(P-44)-1993
3	Phenol	mg/l	0.12	1 Max.	IS 3025(P-43)-1992
4	Sulphide (as S)	mg/l	ND (0.1)	2 Max.	IS 3025(P-29)-1986
5	Chemical Oxygen Demand (COD)	mg/l	91.0	250 Max.	IS 3025(P-58)-2006
6	Cyanide (as CN)	mg/l	ND (0.005)	0.20 Max.	IS 3025(P-27)-1986
7	Fluoride (as F)	mg/l	1.28	5 Max.	APHA 23rd Ed. 4500FD
8	Total Suspended Solids	mg/l	19.3	100 Max.	IS 3025 (P-17)-1984
9	Hexavalent Chromium (as Cr ⁶⁺)	mg/l	ND (0.02)	0.1 Max.	IS 3025(P-52)-2003
10	Total Chromium (as Cr)	mg/l	ND (0.02)	2.0 Max.	IS 3025(P-52)-2003

ND-Not Detected, 0.0-Detection Limit

****End of Report****


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Issued To:	M/s Indian Oil Corporation Limited (Refineries Division) Panipat Naphtha Complex, Panipat (Haryana)	Report No.:	AAL WQT-20221228007
Sample Description:	Effluent Water Sample	Date of Receiving:	28/12/2022
Work order Item:	Panipat Refinery	Date of Starting:	28/12/2022
Sample Collection Date:	27/12/2022	Date of Completion:	02/01/2023
Sample ID:	ETPI-Guard Pond	Date of Reporting:	02/01/2023
		Sample Quantity:	2 Litre
		Sample Packing Condition:	Plastic Can
		Sample Collected By:	AAL

TEST RESULT

S. No.	Test parameters	Unit	Results	Permissible Limits as per CPCB Guideline (Petroleum Oil Refinery)	Testing Method
1	pH Value	-	7.62	6.0 - 8.5	IS 3025(P-11)-1983
2	Oil & Grease	mg/l	2.4	5.0 Max.	IS 3025 (P-19)-2021
3	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	12.6	15 Max.	IS 3025(P-44)-1993
4	Chemical Oxygen Demand (COD)	mg/l	81.0	125 Max.	IS 3025(P-58)-2006
5	Total Suspended Solids	mg/l	15.0	20 Max.	IS 3025 (P-17)-1984
6	Phenols	mg/l	0.11	0.35 Max.	IS 3025(P-43)-1992
7	Sulphide (as S)	mg/l	0.2	0.5 Max.	IS 3025(P-29)-1980
8	Cyanide (as CN)	mg/l	ND	0.20 Max.	IS 3025(P-27)-1986
9	Amonia (as N)	mg/l	4.6	15 Max.	IS 3025(P-34)-1988
10	Total Kjeldahl Nitrogen (as N)	mg/l	12.4	40 Max.	IS 3025(P-54)-1988
11	P	mg/l	1.26	3.0 Max.	IS 3025(P-31)-1988
12	Hexavalent Chromium (as Cr ⁶⁺)	mg/l	ND	0.1 Max.	IS 3025(P-52)-2003
13	Total Chromium (as Cr)	mg/l	ND	2.0 Max.	IS 3025(P-52)-2003
14	Lead (as Pb)	mg/l	ND	0.1 Max.	IS 3025(P-47)-1994
15	Mercury (as Hg)	mg/l	ND	0.01 Max.	IS 3025(P-48)-1994
16	Zinc (as Zn)	mg/l	0.17	5.0 Max.	IS 3025(P-40)-1994
17	Nickel (as Ni)	mg/l	ND	1.0 Max.	IS 3025(P-54)-2003
18	Copper (as Cu)	mg/l	ND	1.0 Max.	IS 3025(P-42)-1992
19	Vanadium (as V)	mg/l	ND	0.2 Max.	APHA (23 rd Edition), 2017, 3111D
20	Benzene (as C ₆ H ₆)	mg/l	ND	0.1 Max.	APHA (23 rd Edition), 2017, 6200B
21	Banxy a-pyrene (BaP)	mg/l	ND	0.2 Max.	APHA (23 rd Edition), 2017, 6210A

ND=Not Detected (L=Oxidation Link)

****End of Report****

Dr. S.P. Sharma
Gen. Manager (O&T)
Authorised Signatory

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Issued To:	M/s Indian Oil Corporation Limited (Refineries Division) Punjab Naphtha Cracker, Panipat (Haryana)	Report No.:	AAL WQT-20221228008
Sample Description:	Effluent Water Sample	Date of Receiving:	28/12/2022
Work order Item:	Punipat Refinery	Date of Starting:	28/12/2022
Sample Collection Date:	27/12/2022	Date of Completion:	02/01/2023
Sample ID:	ETP2- Guard Pond	Date of Reporting:	02/01/2023
		Sample Quantity:	2-Litre
		Sample Packing Condition:	Plastic Can
		Sample Collected By:	AAL

TEST RESULT

S. No.	Test parameters	Unit	Results	Permissible Limits as per CPCB Guideline (Petroleum Oil Refinery)	Testing Method
1	pH Value	-	7.56	6.0 - 8.5	IS 3025(P-11)-1983
2	Oil & Grease	mg/l	1.6	5.0 Max.	IS 3025 (P-39)-2021
3	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	13.0	15 Max.	IS 3025(P-44)-1993
4	Chemical Oxygen Demand (COD)	mg/l	87.0	125 Max.	IS 3025(P-58)-2006
5	Total Suspended Solids	mg/l	17.0	20 Max.	IS 3025 (P-17)-1984
6	Phenols	mg/l	0.13	0.15 Max.	IS 3025(P-43)-1992
7	Sulphide (as S)	mg/l	0.3	0.5 Max.	IS 3025(P-29)-1986
8	Cyanide (as CN)	mg/l	ND (DL-005)	0.20 Max.	IS 3025(P-27)-1986
9	Ammonia (as N)	mg/l	6.5	15 Max.	IS 3025(P-34)-1988
10	Total Kjeldahl Nitrogen (as N)	mg/l	14.5	40 Max.	IS 3025(P-34)-1988
11	P	mg/l	1.31	3.0 Max.	IS 3025(P-31)-1988
12	Hexavalent Chromium (as Cr ^{VI})	mg/l	ND (DL-006)	0.1 Max.	IS 3025(P-52)-2003
13	Total Chromium (as Cr)	mg/l	ND (DL-01)	2.0 Max.	IS 3025(P-82)-2003
14	Lead (as Pb)	mg/l	ND (DL-007)	0.1 Max.	IS 3025(P-47)-1994
15	Mercury (as Hg)	mg/l	ND (DL-008)	0.01 Max.	IS 3025(P-48)-1994
16	Zinc (as Zn)	mg/l	0.23	5.0 Max.	IS 3025(P-49)-1994
17	Nickel (as Ni)	mg/l	ND (DL-01)	1.0 Max.	IS 3025(P-54)-2003
18	Copper (as Cu)	mg/l	ND (DL-001)	1.0 Max.	IS 3025(P-42)-1992
19	Vanadium (as V)	mg/l	ND (DL-001)	0.2 Max.	APHA (23 rd Edition), 2017, 3111D
20	Benzene (as C ₆ H ₆)	mg/l	ND (DL-002)	0.1 Max.	APHA (23 rd Edition), 2017, 6200B
21	Banzo a-pyrene (BaP)	mg/l	ND (DL-001)	0.2 Max.	APHA (23 rd Edition), 2017, 6200B

WQ-28/Dec/2022-02/01/2023

****End of Report****

Dr. D.K. GILL
Gen. Manager (Q&T)
Authorized Signatory

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TEST CERTIFICATE

Page 1 of 1

Issued To: M/s Indian Oil Corporation Limited
(Refineries Division)
Panipat Naphtha Cracker,
Panipat (Haryana)

Report No. XAL WQT-20221228012

Date of Receiving: 28/12/2022

Date of Starting: 28/12/2022

Date of Completion: 02/01/2023

Date of Reporting: 02/01/2023

Sample Description: Effluent Water Sample

Sample Quantity: 2 Litre

Work order Item: PX-PTA

Sample Packing Condition: Plastic Can

Sample Collection Date: 27/12/2022

Sample Collected By: AAL

Sample ID: PTA-EFP- Guard Pond

TEST RESULT

S. No.	Test parameters	Unit	Results	Permissible Limits	Testing Method
1	pH Value	-	7.63	6.5 - 8.5	IS 3025(P-11)-1983
2	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	19.9	30 Max.	IS 3025(P-44)-1993
3	Phenol	mg/l	0.16	1 Max.	IS 3025(P-43)-1993
4	Sulphide (as S)	mg/l	0.30	2 Max.	IS 3025(P-29)-1986
5	Chemical Oxygen Demand (COD)	mg/l	117.0	250 Max.	IS 3025(P-38)-2006
6	Cyanide (as CN)	mg/l	ND <small>(0.4 mg/l)</small>	0.20 Max.	IS 3025(P-27)-1986
7	Fluoride (as F)	mg/l	1.40	5 Max.	APHA 23rd Ed. 4500FD
8	Total Suspended Solids	mg/l	79.0	100 Max.	IS 3025 (P-17)-1984
9	Hexavalent Chromium (as Cr ⁶⁺)	mg/l	ND <small>(0.4 mg/l)</small>	0.1 Max.	IS 3025(P-52)-2003
10	Total Chromium (as Cr)	mg/l	ND <small>(0.4 mg/l)</small>	2.0 Max.	IS 3025(P-52)-2003

DD-NA-Demand-Dr./Month/Year

****End of Report****


Dr. D.R. SHARMA
Gen. Manager (Q&T)
Authorised Signatory

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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.: 202207280138
Test Report Date: 06/08/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 26/07/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : STP-Q/L Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	6.42	5.5-9.0	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	40.0	50.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	6.0	10.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	1.6	-	IS:3025 (P-39)
6	Phenols(CaH ₅ OH)	mg/L	0.88	-	IS:3025 (P-43)
7	Sulphide (S)	mg/L	1.6	-	IS:3025 (P-20)
8	Odour	-	Agreeable	-	IS:3025 (P-5)
9	Total Residual Free Chlorine	mg/L	6.8	-	IS:3025 (P-26)
10	Phosphate	mg/L	0.40	-	IS:3025 (P-31)
11	Electrical Conductivity	µs/cm	1214	-	IS:3025 (P-14)
12	Ammonical Nitrogen	mg/L	4.82	-	IS:3025 (P-34)
13	MLSS	mg/L	12.0	-	APHA 23rd

Remark:

LO:Lower Detection Limit, QL:Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.


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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.: 202207280130
Test Report Date: 06/08/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Test Started on : 29/07/2022
Test Completed : 05/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 28/07/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : STP-Oil Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Colour	Hazen	<5	-	IS:3025 (P-4)
2	Total Nitrogen	mg/L	6.4	10	IS:3025 (P-34)
3	Sodium Adsorption Ratio	-	4.0	-	In House NI/SOP/W&WW/S2
4	Fluoride as F	mg/L	1.6	-	IS:3025 (P-60)
5	Residual Sodium Carbonate (RSC)	mg/L	1.4	-	IS 11624
6	Faecal Coliform	No./100 ml	Less than 2	Less than 100	IS 1622

ND: Below Detection Limit, DL: Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified experimental 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.: TC63662200000760F
Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample : Waste Water
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Sample Received at Lab : 25/08/2022
Test Started on : 25/08/2022
Test Completed : 31/08/2022
Method of Sampling : SOP/B/D-3
Date of Sampling : 24/08/2022
Sampling Conducted By : Mr. Rishi Pal
Sample Description : STP-O/L Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	---	7.85	5.5-9.0	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	15.0	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	46.0	50.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	6.0	10.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	0.95	-	IS:3025 (P-39)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.39	-	IS:3025 (P-43)
7	Sulphide (S)	mg/L	1.02	-	IS:3025 (P-29)
8	Odour	-	Agresable	-	IS:3025 (P-5)
9	Total Residual Free Chlorine	mg/L	1.88	-	IS:3025 (P-26)
10	Phosphate	mg/l	0.22	-	IS:3025 (P-31)
11	Electrical Conductivity	µs/cm	775	-	IS:3025 (P-14)
12	Ammonical Nitrogen	mg/l	2.45	-	IS:3025 (P-34)
13	MLSS	mg/L	15.0	-	APHA 23rd
14	Faecal Coliform	MPN/100 ml	Less than 2	Less than 100	IS 1622

Remark: MPN-Biomethanation Limit & Limit of Quantification, log base concentration of bacteria can be accurately measured under specific experimental conditions

(AUTHORISED SIGNATORY)
(RHYTHM BASSON)



(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

LIR No.: TCG36622000000760F

Test Report Date: 01/09/2022

Sample Particulars

Nature of Sample : Waste Water

Sample Quantity & Packaging : 1.0 Liter, Pet Bottle

Sample Received at Lab : 25/08/2022

Test Started on : 25/08/2022

Test Completed : 31/08/2022

Method of Sampling : SOP/B/D-3

Date of Sampling : 24/08/2022

Sampling Conducted By : Mr. Rishi Pal

Sample Description : STP-O/L Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	-	7.85	5.5-9.0	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	15.0	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	46.0	50.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	6.0	10.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	0.95	-	IS:3025 (P-39)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.39	-	IS:3025 (P-43)
7	Sulphide (S)	mg/L	1.02	-	IS:3025 (P-29)
8	Odour	-	Agreeable	-	IS:3025 (P-5)
9	Total Residual Free Chlorine	mg/L	1.80	-	IS:3025 (P-26)
10	Phosphate	mg/L	0.22	-	IS:3025 (P-31)
11	Electrical Conductivity	us/cm	775	-	IS:3025 (P-14)
12	Ammonical Nitrogen	mg/l	2.45	-	IS:3025 (P-34)
13	MLSS	mg/l	15.0	-	APHA 23rd
14	Faecal Coliform	MPN/100 ml	Less than 2	Less than 100	IS 1622

Remark:

No-Below Detection Limit, CL-Limit of Quantification. The lowest concentration of a substance that can be accurately measured under specified experimental conditions

(AUTHORISED SIGNATORY)

(RHYTHM BASSON)



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Test Report

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

U/LR No.: **TC53662200000654F**
Test Report Date: **27/09/2022**

Sample Particulars

Nature of Sample	Waste Water
Sample Quantity & Packaging	1.0 Liter, Pet Bottle
Sample Received at Lab	19/09/2022
Test Started on	19/09/2022
Test Completed	26/09/2022
Method of Sampling	SOP/B/D-3
Date of Sampling	16/09/2022
Sampling Conducted By	Mr. Rajendra Pratap
Sample Description	STP-O/L Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	-	6.42	5.5-9.0	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	40.0	60.0	IS:3025 (P-60)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	6.0	10.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	1.6	-	IS:3025 (P-38)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.88	-	IS:3025 (P-43)
7	Sulphide (S)	mg/L	1.6	-	IS:3025 (P-29)
8	Odour	-	Agreeable	-	IS:3025 (P-6)
9	Total Residual Free-Chlorine	mg/L	5.8	-	IS:3025 (P-26)
10	Phosphate	mg/L	0.40	-	IS:3025 (P-31)
11	Electrical Conductivity	us/cm	1214	-	IS:3025 (P-14)
12	Ammonical Nitrogen	mg/L	4.82	-	IS:3025 (P-34)
13	MLSS	mg/L	12.0	-	APHA 2310
14	Faecal Coliform*	No /100 ml	Less than 2	Less than 100	IS:1622

*ND-Not in Detectable Limit; OL-Limit of Quantitation; The lowest concentration of a substance that can be accurately measured under standard operational conditions.


(AUTHORISED SIGNATORY)
(RHYTHM BASSON)



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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.: 2022091601116
Test Report Date: 27/09/2022

Sample Particulars

Nature of Sample: Waste Water
Sample Quantity & Packaging: 1.0 Liter/ Pet Bottle
Sample Received at Lab: 19/09/2022
Test Started on: 19/09/2022
Test Completed: 26/09/2022
Method of Sampling: SOP/BI-D-3
Date of Sampling: 16/09/2022
Sampling Conducted By: Mr. Rajendra Pratap
Sample Description: STP-Oil Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1.	Colour	Hazen	<5	-	IS:3025 (P-4)
2.	Total Nitrogen	mg/L	5.4	10	IS:3025 (P-34)
3.	Sodium Adsorption Ratio	-	4.0	-	In House NL/SOP/WW/WW/52
4.	Fluoride as F	mg/L	1.6	-	IS:3025 (P-60)
5.	Residual Sodium Carbonate (RSC)	mg/L	1.4	-	IS 11624

MD-Noise Collection Limit/ DL-Limit of Quantification, the lowest concentration of a substance that can be accurately measured under specified operational conditions.



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Test Report

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

LILR No.: TC836622000001328F

Test Report Date: 28/10/2022

Sample Particulars

Nature of Sample: Waste Water (STP)

Sample Quantity & Packaging: 1.0 Liter, Pet Bottle

Sample Received at Lab: 15/10/2022

Test Started on: 15/10/2022

Test Completed: 22/10/2022

Method of Sampling: SOP/B/D-3

Date of Sampling: 14/10/2022

Sampling Conducted By: Mr. Rajendra Pratap

Sample Description: STP-O/L Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	pH	...	6.98	5.5-9.0	IS:3025 (P-11)
2	Total Suspended Solids (TSS)	mg/L	18	20.0	IS:3025 (P-17)
3	Chemical Oxygen Demand (COD)	mg/L	46	50.0	IS:3025 (P-58)
4	Bio-Chemical Oxygen Demand (3 days at 27°C) (BOD)	mg/L	8	10.0	IS:3025 (P-44)
5	Oil & Grease (O&G)	mg/L	2	-	IS:3025 (P-30)
6	Phenols(C ₆ H ₅ OH)	mg/L	0.23	-	IS:3025 (P-43)
7	Sulphide (S)	mg/L	1.2	-	IS:3025 (P-29)
8	Odour	-	Agreeable	-	IS:3025 (P-5)
9	Total Residual Free Chlorine	mg/L	5.2	-	IS:3025 (P-26)
10	Phosphate	mg/L	0.60	-	IS:3025 (P-31)
11	Electrical Conductivity	us/cm	1345	-	IS:3025 (P-14)
12	Ammonical Nitrogen	mg/l	6.45	-	IS:3025 (P-34)
13	MLSS	mg/L	10	-	APHA 23rd
14	Faecal Coliform*	No./100 ml	Less than 2	Less than 100	IS 1622

Remark: ND-Not above Detectable Limit, D- Limit of Quantitation, the lowest concentration of a substance that can be accurately measured under specified experimental conditions.

(AUTHORISED SIGNATORY)
(RHYTHM BASSON*)



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Test Report

Issued To : **M/s Indian Oil Corporation Limited**
(Refinery Division)
Panipat Refinery, Dist. Panipat
Haryana, INDIA

Test Report No.: 202210180110
Test Report Date: 28/10/2022

Sample Particulars

Nature of Sample : **Waste Water (STP)**
Sample Quantity & Packaging : 1.0 Liter, Pet Bottle
Sample Received at Lab : 19/10/2022
Test Started on : 18/10/2022
Test Completed : 27/10/2022
Method of Sampling : SCP/B/D-3
Date of Sampling : 18/10/2022
Sampling Conducted By : Mr. Rajendra Pratap
Sample Description : STP-O/- Township

Test Report

Sr. No.	Parameter	Unit	Result	Permissible Limits	Protocol
1	Colour	Hazen	<5	-	IS:3025 (P-4)
2	Total Nitrogen	mg/L	7.23	10	IS:3025 (P-34)
3	Sodium Adsorption Ratio	-	2.9	-	In House NL/SOP/W&WW/52
4	Fluoride as F	mg/L	1.2	-	IS:3025 (P-60)
5	Residual Sodium Carbonate (RSC)	mg/L	1.0	-	IS:11624

Remark: ND-Not Detectable Limit; DL-Limit of Quantification; the lowest concentration of a substance that can be accurately measured under specified experimental conditions


(AUTHORISED SIGNATORY)
(RAVINDER MITTAL)

NOTE: The laboratory accepts the responsibility for content of report. The results (available) in this test report issued only to the concerned client. Test results report not be retransmitted except in the written approval of the laboratory. This report is intended only for your personal use and not for legal purposes or for advertisement. This report shall not be reproduced, stored in a retrieval system or disseminated without the written approval of the organization. Samples will be destroyed after 30 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability of Nitya Laboratories is limited to actual amount only. If you have any complaint/feedback regarding the sample collection/testing/report, please send an email at info@nityalab.com and call at +91-191-2465597, +91-9872034001

CORPORATE OFFICE & CENTRAL LABORATORIES :-

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ARIHANT ANALYTICAL LABORATORY PVT. LTD.

AN ISO 9001:2015, ISO 14001:2004, OHSAS 18001:2007 CERTIFIED LABORATORY

272, Phase-IV, Sec-57, HSIDC, Kundli, Sonapat-131028 (Haryana)

Ph : 7082301442, 9250014551 Email : aalkundli@gmail.com

Website : www.aalkundli.com

TEST CERTIFICATE

Page 1 of 1

Issued To:	M/s Indian Oil Corporation Limited (Refineries Division) Panipat Naphtha Cracker, Panipat (Haryana)	Report No.:	AAL WQT-20221126002
Sample Description:	Effluent Water Sample	Date of Receiving:	26/11/2022
Work order Item:	PX-PTA	Date of Starting:	26/11/2022
Sample Collection Date:	25/11/2022	Date of Completion:	30/11/2022
Sample ID:	STP Outlet Water (Township)	Date of Reporting:	30/11/2022
		Sample Quantity:	2 Litre
		Sample Packing Condition:	Plastic Can
		Sample Collected By:	AAL

TEST RESULT

S. No.	Test parameters	Unit	Results	Limits as per Environment (Protection) Rules, 1986 Schedule-VI General Standards for Discharge inland Surface Water	Testing Method
1	pH Value	-	7.55	5.5 - 9.0	IS 3025(P-11)-1983
2	Biochemical Oxygen Demand (BOD - 5 days at 20°C)	mg/l	17.0	30 Max.	IS 3025(P-44)-1993
3	Chemical Oxygen Demand (COD)	mg/l	82.0	250 Max.	IS 3025(P-58)-2006
4	Total Suspended Solids	mg/l	26.0	100 Max.	IS 3025(P-17)-1984
5	Faecal Coliform	MPN/100ml	90	-	IS:1622-1981
6	Phosphate (as PO ₄)	mg/l	1.36	5.0 Max.	IS 3025(P-31)-1988
7	Ammonical Nitrogen (as N)	mg/l	7.3	50 Max.	IS 3025(P-34)-1988
8	Total Kjeldahl Nitrogen (as NH ₃)	mg/l	12.4	100 Max.	IS 3025(P-34)-1988
9	Sodium Absorption Ratio	-	1.87	-	By Calculation
10	Conductivity at 25 °C	µmhos/cm	1140	-	IS 3025(P-14)-1984
11	Residual Sodium Carbonate (RSC)	me/l	1.20	-	By Calculation
12	Colour, Hazen	Hazen	<5.0	All efforts should be made to remove colour as far as practicable	IS 3025(P-4)-2021
13	Odour	-	Agreeable	All efforts should be made to remove unpleasant odour as far as practicable	IS 3025(P-5)-2018
14	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
15	Total Residual Chlorine	mg/l	<0.1	1.0 Max.	IS 3025(P-26)-2021
16	Fluoride (as F)	mg/l	1.10	2.0 Max.	APHA 23rd Ed. 4500FD
17	Phenol	mg/l	<0.1	1.0 Max.	IS 3025(P-43)-1992
18	Sulphide (as S)	mg/l	<0.1	2.0 Max.	IS 3025(P-29)-1986
19	Mix Liquor Suspended Solid (MLSS)	mg/l	25.4	-	APHA 23rd Ed.

End of Report

Dr. D. R. SHARMA
Gen. Manager (Q&T)
Authorised Signatory

- Note:**
- The Result Indicated above refer to the tested sample and listed test parameters only, endorsement of products is neither inferred nor implied.
 - Total liability of our laboratory is limited to the invoice amount.
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 - The non-perishable sample received shall be destroyed after one month and perishable sample shall be destroyed after one week from the date of issue of report unless specified.



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Website : www.aalkundli.com

TEST CERTIFICATE

Page 1 of 1

Issued To:	M/s Indian Oil Corporation Limited (Refineries Division) Pacipat Naphtha Cracker, Pacipat (Haryana)	Report No.	AAL WQT-20221230004
Sample Description:	Effluent Water Sample	Date of Receiving:	30/12/2022
Work order Item:	FX-PTA	Date of Starting:	30/12/2022
Sample Collection Date:	29/12/2022	Date of Completion:	04/01/2023
Sample ID:	STP Outlet Water (Township)	Date of Reporting:	04/01/2023
		Sample Quantity:	2 Litre
		Sample Packing Condition:	Plastic Can
		Sample Collected By:	AAL

TEST RESULT

S. No.	Test parameters	Unit	Results	Limits as per Environment (Protection) Rules, 1986 Schedule-VI General Standards for Discharge Inland Surface Water	Testing Method
1	pH Value	-	7.45	5.5 - 9.0	IS 3025(P-11)-1983
2	Biochemical Oxygen Demand (BOD - 5 days @ 20°C)	mg/l	21.0	30 Max.	IS 3025(P-44)-1993
3	Chemical Oxygen Demand (COD)	mg/l	107.0	250 Max.	IS 3025(P-58)-2006
4	Total Suspended Solids	mg/l	37.0	100 Max.	IS 3025(P-17)-1984
5	Faecal Coliform	MPN/100ml	130	-	IS:1622-1981
6	Phosphate (as PO ₄)	mg/l	1.22	5.0 Max.	IS 3025(P-31)-1988
7	Ammonical Nitrogen (as N)	mg/l	8.5	50 Max.	IS 3025(P-34)-1988
8	Total Kjeldahl Nitrogen (as NH ₃)	mg/l	14.6	100 Max.	IS 3025(P-34)-1988
9	Sodium Absorption Ratio	-	1.93	-	By Calculation
10	Conductivity at 25 °C	µmhos/cm	1310	-	IS 3025(P-14)-1984
11	Residual Sodium Carbonate (RSC)	me/l	1.16	-	By Calculation
12	Colour, Hazen	Hazen	<5.0	All efforts should be made to remove colour as far as practicable	IS 3025(P-4)-2021
13	Odour	-	Agreeable	All efforts should be made to remove unpleasant odour as far as practicable	IS 3025(P-5)-2018
14	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
15	Total Residual Chlorine	mg/l	<0.1	1.0 Max.	IS 3025(P-26)-2021
16	Fluoride (as F)	mg/l	1.24	2.0 Max.	APHA 23rd Ed. 4500FD
17	Phenol	mg/l	<0.1	1.0 Max.	IS 3025(P-43)-1992
18	Sulphide (as S)	mg/l	0.10	2.0 Max.	IS 3025(P-29)-1986
19	Mix Liquor Suspended Solid (MLSS)	mg/l	36.5	-	APHA 23rd Ed.

****End of Report****

Dr. D. R. SHARMA
Gen. Manager (O&T)
Authorised Signatory

- Notes:**
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LDAR (VOC) Monitoring Report for IOCL, Panipat Refinery

Name of client: M/s Indian Oil Corporation Limited
P.O. Panipat Refinery
Panipat-132140
HARYANA

Name of Contractor: NETEL (INDIA) LIMITED
Environment Management Services
W-40B, Rabale MIDC,
TTC Industrial Area, Nan Mumbai -400701

Nature of job: LDAR (VOC) Monitoring Report for IOCL, Panipat Refinery

Report Period: 3 Months from April,2022 to June,2022.

For NETEL (INDIA) LIMITED

A handwritten signature in black ink, appearing to read 'Chetan Kadam'.



Chetan Kadam
Operation Manager-EMS



LEAK DETECTION AND REPAIR (LDAR) PROGRAM

VOC QUARTERLY REPORT : FROM APRIL, 2022 TO JUNE, 2022

PLANTWISE SUMMARY

Sr.No.	Name of the Unit	Date of Monitoring	Total No of Points Monitored	Page No.	No. of Points Where leaks found beyond standard limits	Total Leak (kg/day)
1	RFCC	21/06/2022	251	1 to 8	8	5.295
2	OHCU	21/06/2022	287	9 to 18	6	3.061
3	HGU (PR)	21/06/2022	124	18 to 21	5	2.391
4	AVU-I	21/06/2022	438	22 to 35	7	4.755
5	DHDS	22/06/2022	289	35 to 44	3	1.047
6	CCRU	22/06/2022	191	44 to 50	5	2.824
7	DHDT	22/06/2022	263	50 to 58	4	2.145
8	AVU-II	22/06/2022	300	58 to 67	5	2.598
9	MSQ	23/06/2022	225	67 to 74	4	2.000
10	HCU	23/06/2022	397	74 to 87	4	1.768
11	HGU(76&77)	23/06/2022	245	87 to 95	3	1.905
12	HGU (BS-6)	23/06/2022	85	95 to 97	0	0.055
13	DHDT (BS-6)	23/06/2022	429	97 to 111	0	0.063
14	DCU	24/06/2022	333	111 to 121	5	2.909
15	ETP-1	24/06/2022	57	121 to 123	0	0.039
16	ETP-2	24/06/2022	58	123 to 125	0	0.018
17	DM&S	24/06/2022	450	125 to 139	8	5.465
18	SRU-NEW	27/06/2022	52	139 to 141	0	0.018
19	SRU (BS-6)	27/06/2022	30	141 to 142	0	0.017
Total in Kg/day			4484		67	38.37
Total in MT/Annum						14.004

Verified by

Surokha
Surokha Jamdar
Technical Manager



Checked by

Shraddha
Shraddha Kere
Quality Manager



LDAR (Benzene) Monitoring Report for IOCL , Panipat Refinery

Name of client M/s Indian Oil Corporation Limited
P.O. Panipat Refinery
Panipat-132 140
HARYANA

Name of Contractor NETEL (INDIA) LIMITED
Environment Management Services
W-408, Rabale MIDC,
TTC Industrial Area, Navi Mumbai - 400 701

Nature of job LDAR (Benzene) Monitoring Report for IOCL , Panipat Refinery

Report Period 3 Months from April,2022 to June,2022

For NETEL (INDIA) LIMITED

A handwritten signature in black ink, appearing to read "Chetan Kadam".

Chetan Kadam
Operation Manager-EMS





LEAK DETECTION AND REPAIR (LDAR) PROGRAM
BENZENE QUARTERLY REPORT : FROM APRIL,2022 TO JUNE,2022

PLANTWISE SUMMARY

Sr.No.	Name of the Unit	Date of Monitoring	Total No of Points Monitored	Page No.	No. of Points Where leaks found beyond standard limits	Total Leak (kg/day)
1	CCRU	22/06/2022	230	1 to 7	0	0.044
2	MBO	23/06/2022	52	7 to 8	0	0.013
Total in kg/day						0.057
Total in MT/Annum						0.021

Verified by


 Surekha Jandhar
 Technical Manager



Checked by


 Shraddha Kere
 Quality Manager



LDAR (VOC) Monitoring Report for IOCL PX-PTA, Panipat Refinery

Name of client: M/s Indian Oil Corporation Limited
P.O. Panipat Refinery
Panipat-132 140
HARYANA

Name of Contractor: NETEL (INDIA) LIMITED
Environment Management Services
W-408, Rabale MIDC,
TTC Industrial Area, Navi Mumbai - 400 781

Nature of job: LDAR (VOC) Monitoring Report for IOCL PX-PTA, Panipat Refinery

Report Period: 3 Months From April, 2022 to June, 2022

For NETEL (INDIA) LIMITED

A handwritten signature in black ink, appearing to read 'Chetan Kadam'.



Chetan Kadam
Operation Manager-EMS



LEAK DETECTION AND REPAIR (LDAR) PROGRAM
VOC QUARTERLY REPORT : FROM APRIL,2022 TO JUNE,2022

PLANTWISE SUMMARY

Sl.No.	Name of the Unit	Date of Monitoring	Total No of Points Monitored	Page No.	No. of Points Where leaks found beyond standard limits	Total Leak (kg/day)
1	PX-I	26/06/2022	260	1 to 9	4	3.417
2	PX-II	25/06/2022	257	9 to 17	0	0.360
3	PTA	27/06/2022	200	17 to 23	3	0.063
4	PTA-ETP	27/06/2022	45	23 to 24	0	0.019
Total in Kg/day			762		5	3.859
Total in MT/Annure						1.409

Verified by


 Surekha Jamdar
 Technical Manager



Checked by


 Shradha Kere
 Quality Manager



LDAR Benzene Monitoring Report for IOCL, PX- PTA Panipat Refinery

Name of client M/s Indian Oil Corporation Limited
P.O. Panipat Refinery
Panipat-132 140
HARYANA

Name of Contractor NETEL (INDIA) LIMITED
Environment Management Services
W-408, Pipe line Road, Rabale MIDC,
TTC Industrial Area, Navi Mumbai - 400 701

Nature of job LDAR (Benzene) Monitoring Report for IOCL, PX-PTA Panipat Refinery.

Report Period 3 Months From April,2022 to June,2022

For NETEL (INDIA) LIMITED

A handwritten signature in black ink, appearing to read 'Chetan Kadam'.



Chetan Kadam
Operation Manager-EMS



LEAK DETECTION AND REPAIR (LDAR) PROGRAM
BENZENE QUARTERLY REPORT FROM APRIL, 2022 TO JUNE, 2022
PLANTWISE SUMMARY

Sr.No.	Name of the Unit	Date of Monitoring	Total No of Points Monitored	Page No.	No. of Points Where leaks found beyond standard limits	Total Leak (kg/day)
1.	PX-1	25/06/2022	158	1 to 7	0	0.028
2.	PX-2	25/06/2022	80	7 to 9	0	0.019
3.	PTA	27/06/2022	64	9 to 11	0	0.003
Total in Kg/day			342		0	0.051
Total in MT/Annum						0.018

Verified by


 Suresha Jandhar
 Technical Manager



Checked by


 Shradha Kere
 Quality Manager

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

Exposure Time (In hours)	TLV (in dB)
8	90
4	95
2	100
1	105
1/2 hrs.	110

SOUND LEVEL METER MODEL NO. :- RT-5001

METER SR. NO.:- 111102404

MAKE:- REYTHON TECHNOLOGY

CALIBRATION ON:- 10.01.2022

NEXT DUE DATE OF CLIBRATION:-09.01.2023

Noise survey of Target units of PR & PREP June- 2022

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	SRU-II	51-PM-104-A	PUMP	89.9	03.06.2022
2	SRU-II	51-PM-109-A	PUMP	88.7	03.06.2022
3	SRU-II	53-PM-103-A	PUMP	89.7	03.06.2022
4	SRU-II	53-PM-101-B	PUMP	88.3	03.06.2022
5	SRU-II	54-PM-103-B	PUMP	85.3	03.06.2022
6	SRU-II	54-PM-102-B	PUMP	86.1	03.06.2022
7	SRU-II	53-PM-102-A	PUMP	85.2	03.06.2022
8	SRU-II	57-PM-102-B	PUMP	89.5	03.06.2022
9	SRU-II	57-PM-103-A	PUMP	90	03.06.2022
10	SRU-II	57-PM-103-B	PUMP	90	03.06.2022
11	SRU-II	57-PM-101-B	PUMP	87	03.06.2022
12	SRU-II	55-K-101-	AIR BLOWER	88.5	03.06.2022
13	SRU-II	57-KM-101-A	COMPRESSOR	90	03.06.2022
14	SRU-II	57-KM-101-B	COMPRESSOR	89.9	03.06.2022
15	SRU-II	26-KM-101-A	COMPRESSOR	86.1	03.06.2022
16	SRU-II	20-PM-103-A	PUMP	89.6	03.06.2022
17	SRU-II	20-PM-109-A	PUMP	88.6	03.06.2022
18	SRU-II	25-PM-109-A	PUMP	88.6	03.06.2022
19	SRU-II	25-PM-108-B	PUMP	88	03.06.2022
20	SRU-II	26-PM-101-A	PUMP	89.6	03.06.2022
21	SRU-II	26-PM-103-A	PUMP	88.8	03.06.2022
22	SRU-II	26-PM-102-A	PUMP	90	03.06.2022
1	SRU-I	21-PA-CF-002-A	PUMP	86	03.06.2022
2	SRU-I	21-PA-CF-001-C	PUMP	88	03.06.2022
3	SRU-I	21-PM-CF-003-C	PUMP	90	03.06.2022
4	SRU-I	21-PM-CF-007-A	PUMP	89.1	03.06.2022
1	DHDT	72-PM-003-A	PUMP	90	04.06.2022
2	DHDT	72-P-02-C	PUMP	87	04.06.2022
3	DHDT	72-PM-001-B	PUMP	89	04.06.2022
4	DHDT	72-PM-004-B	PUMP	88.5	04.06.2022
5	DHDT	72-PM-005-B	PUMP	89.8	04.06.2022
6	DHDT	72-PM-006-B	PUMP	86	04.06.2022
7	DHDT	72-PM-007-A	PUMP	89	04.06.2022
8	DHDT	72-KM-002-B	COMPRESSOR	88.6	04.06.2022

9	DHDT	72-KM-002-C	COMPRESSOR	85.6	04.06.2022
10	DHDT	UNDER COMP. HOUSE	COMPRESSOR	83.8	04.06.2022
1	HGU-II	76-P-103-A	PUMP	85.3	04.06.2022
2	HGU-II	76-P-001-A	PUMP	85.1	04.06.2022
3	HGU-II	76-PM-004-A	PUMP	83.3	04.06.2022
4	HGU-II	76-PM-401-A	PUMP	84	04.06.2022
5	HGU-II	76-PM-401-B	PUMP	85.5	04.06.2022
6	HGU-II	76-KM-001-B	COMPRESSOR	79	04.06.2022
7	HGU-II	76-KM-103-A	COMPRESSOR	80.1	04.06.2022
8	HGU-II	UNDER COMP. HOUSE	COMPRESSOR	80.2	04.06.2022
9	HGU-II	76-P-002-A	PUMP	89.5	04.06.2022
10	HGU-II	76-P-101-A	PUMP	89.9	04.06.2022
1	MSQ	301-PM-215-A	PUMP	84.1	06.06.2022
2	MSQ	301-PM-203-B	PUMP	85.7	06.06.2022
3	MSQ	301-PM-203-A	PUMP	85.8	06.06.2022
4	MSQ	301-PM-201-B	PUMP	86.7	06.06.2022
5	MSQ	301-PM-212-B	PUMP	88.4	06.06.2022
6	MSQ	301-PM-214-A	PUMP	86.5	06.06.2022
7	MSQ	301-PM-213-B	PUMP	87.2	06.06.2022
8	MSQ	301-PM-211-A	PUMP	85.1	06.06.2022
9	MSQ	301-PM-210-A	PUMP	88.4	06.06.2022
10	MSQ	301-KM-101-A	COMPRESSOR	77.1	06.06.2022
11	MSQ	301-KM-201-A	COMPRESSOR	78	06.06.2022
12	MSQ	UNDER COMP. HOUSE	COMPRESSOR	77.2	06.06.2022
13	MSQ	303-PM-101-A	PUMP	89.1	06.06.2022
14	MSQ	303-PM-201-B	PUMP	88.4	06.06.2022
15	MSQ	303-PM-204-A	PUMP	87.1	06.06.2022
16	MSQ	301-PM-103-A	PUMP	82	06.06.2022
17	MSQ	301-PM-101-A	PUMP	89.4	06.06.2022
18	MSQ	301-PM-102-A	PUMP	83.2	06.06.2022
19	MSQ	303-PM-206-A	PUMP	82.1	06.06.2022
20	MSQ	303-PM-202-A	PUMP	89	06.06.2022
21	MSQ	303-K-201-B	COMPRESSOR	88	06.06.2022
22	MSQ	UNDER COMP. HOUSE	COMPRESSOR	80	06.06.2022
23	MSQ	303-K-301-A	COMPRESSOR	86	06.06.2022
24	MSQ	303-P-303-A	PUMP	82	06.06.2022
25	MSQ	303-P-304-A	PUMP	81	06.06.2022
26	MSQ	303-P-301-B	PUMP	87	06.06.2022
27	MSQ	303-P-111-A	PUMP	82.5	06.06.2022
28	MSQ	301-PM-253-A	PUMP	88.5	06.06.2022
29	MSQ	301-PM-254-B	PUMP	87	06.06.2022
30	MSQ	301-PM-251-A	PUMP	81.9	06.06.2022
1	CPP/TPS	CONTROL ROOM NO 1	CONTROL ROOM	58.7	08.06.2022
2	CPP/TPS	CONTROL ROOM NO 2	CONTROL ROOM	66.4	08.06.2022
3	CPP/TPS	GTG-2	GENERATOR	87.5	08.06.2022
4	CPP/TPS	BOILER NO. 1	BOILER	83.9	08.06.2022
5	CPP/TPS	BOILER NO. 2	BOILER	89.7	08.06.2022

6	CPP/TPS	9060-39-FD-FM-101-A	FD FAN	90	08.06.2022
7	CPP/TPS	9060-39-FD-FM-101-B	FD FAN	89.9	08.06.2022
8	CPP/TPS	9060-39-ID-PM-101-B	ID FAN	89.3	08.06.2022
9	CPP/TPS	9060-39-ID-PM-101-A	ID FAN	87.1	08.06.2022
10	CPP/TPS	9060-89-PA-CF-9915-A	PUMP	86.3	08.06.2022
11	CPP/TPS	9060-89-PA-CF-9902-A	PUMP	89.9	08.06.2022
12	CPP/TPS	9060-89-PA-CF-9904-B	PUMP	90	08.06.2022
13	CPP/TPS	9060-89-PA-CF-9904-A	PUMP	89.9	08.06.2022
14	CPP/TPS	9060-89-PA-CF-9905-B	PUMP	90	08.06.2022
15	CPP/TPS	9060-89-PA-CF-9905-A	PUMP	89.8	08.06.2022
16	CPP/TPS	9060-89-FD-FM-1103-B	FD FAN	89.8	08.06.2022
17	CPP/TPS	9060-89-FD-FM-1103-A	FD FAN	85.1	08.06.2022
18	CPP/TPS	89-PM-CF-808-A	PUMP	86.1	08.06.2022

Noise survey of Target units of PR & PREP July- 2022

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	HCU	75-FN-103	ID FAN	80	04.07.2022
2	HCU	75-FN-102	FD FAN	79.3	04.07.2022
3	HCU	75-FN-101	FD FAN	81.5	04.07.2022
4	HCU	75-P-106-B	PUMP	84.8	04.07.2022
5	HCU	75-PM-107-B	PUMP	86.7	04.07.2022
6	HCU	75-PM-111-A	PUMP	89.9	04.07.2022
7	HCU	75-PM-104-B	PUMP	90	04.07.2022
8	HCU	75-PM-103-B	PUMP	89.6	04.07.2022
9	HCU	75-P-001-A	PUMP	90	04.07.2022
10	HCU	75-P-201-B	PUMP	89.9	04.07.2022
11	HCU	75-P-123-A	PUMP	84.5	04.07.2022
12	HCU	75-K-002-B	COMPRESSOR	89.6	04.07.2022
13	HCU	75-K-002-C	COMPRESSOR	90	04.07.2022
14	HCU	UNDER COMP. HOUSE	COMPRESSOR	87.2	04.07.2022
15	HCU	75-PM-117-A	PUMP	88.2	04.07.2022
16	HCU	75-PM-115-B	PUMP	88	04.07.2022
17	HCU	75-PM-116-A	PUMP	89.7	04.07.2022
18	HCU	75-PM-112-B	PUMP	88	04.07.2022
19	HCU	75-PM-114-B	PUMP	89	04.07.2022
20	HCU	75-PM-113-B	PUMP	88.9	04.07.2022
21	HCU	75-PM-109-A	PUMP	88.9	04.07.2022
1	AVU-II	73-PM-05-A	PUMP	85.7	06.07.2022
2	AVU-II	73-PM-020-A	PUMP	86.2	06.07.2022
3	AVU-II	73-FN-002	ID FAN	85.2	06.07.2022
4	AVU-II	73-FN-001-B	FD FAN	88.6	06.07.2022
5	AVU-II	73-FN-001-A	FD FAN	86.1	06.07.2022
6	AVU-II	73-PM-10-C	PUMP	89.2	06.07.2022
7	AVU-II	73-PM-10-B	PUMP	88.6	06.07.2022
8	AVU-II	74-PM-01-B	PUMP	84.3	06.07.2022
9	AVU-II	74-PM-03-B	PUMP	85.3	06.07.2022
10	AVU-II	74-PM-03-A	PUMP	84.8	06.07.2022
11	AVU-II	74-PM-07-A	PUMP	86.8	06.07.2022
12	AVU-II	74-PM-10-B	PUMP	85.7	06.07.2022
13	AVU-II	73-PM-07-B	PUMP	87.1	06.07.2022

14	AVU-II	73-PM-036-B	PUMP	86.6	06.07.2022
15	AVU-II	73-PM-06-A	PUMP	88	06.07.2022
16	AVU-II	73-PM-12-B	PUMP	86.2	06.07.2022
17	AVU-II	73-PM-015-C	PUMP	88.2	06.07.2022
18	AVU-II	73-PM-04-B	PUMP	89.5	06.07.2022
19	AVU-II	73-PM-01-C	PUMP	89.6	06.07.2022
20	AVU-II	73-PM-01-D	PUMP	87.5	06.07.2022
21	AVU-II	74-PM-04-A	PUMP	87.5	06.07.2022
22	AVU-II	73-PM-811-B	PUMP	82.8	06.07.2022
23	AVU-II	73-PM-042-B	PUMP	81.9	06.07.2022
24	AVU-II	73-PM-041-B	PUMP	80	06.07.2022
25	AVU-II	73-PM-032-B	PUMP	86.9	06.07.2022
26	AVU-II	73-PM-003-A	PUMP	81.5	06.07.2022
27	AVU-II	73-PM-02-A	PUMP	85.8	06.07.2022
28	AVU-II	73-PM-02-C	PUMP	87.2	06.07.2022
29	AVU-II	73-PM-02-D	PUMP	87.6	06.07.2022
30	AVU-II	74-PM-14-A	PUMP	89	06.07.2022
31	AVU-II	73-PM-09-B	PUMP	88.2	06.07.2022
32	AVU-II	73-PM-13-A	PUMP	88.3	06.07.2022
33	AVU-II	73-PM-013-B	PUMP	88.6	06.07.2022
34	AVU-II	74-PM-02-B	PUMP	87.7	06.07.2022
35	AVU-II	73-PM-08-B	PUMP	88.8	06.07.2022
36	AVU-II	74-PM-06-A	PUMP	89.8	06.07.2022
37	AVU-II	74-PM-06-C	PUMP	90	06.07.2022
38	AVU-II	59-PM-01-B	PUMP	89.3	06.07.2022
39	AVU-II	59-PM-02-B	PUMP	86.2	06.07.2022
1	DCU	78-PM-114-N1	PUMP	83.3	08.07.2022
2	DCU	78-PM-135-A	PUMP	89.9	08.07.2022
3	DCU	78-PM-148-B	PUMP	90	08.07.2022
4	DCU	78-PM-131-A	PUMP	88.1	08.07.2022
5	DCU	78-PM-112-B	PUMP	89.9	08.07.2022
6	DCU	78-PM-105-A	PUMP	88.1	08.07.2022
7	DCU	78-PM-134-A	PUMP	85.1	08.07.2022
8	DCU	78-PM-113-A	PUMP	88.8	08.07.2022
9	DCU	78-PM-124-B	PUMP	88	08.07.2022
10	DCU	78-PM-111-A	PUMP	87.3	08.07.2022
11	DCU	78-PM-161-A	PUMP	85.8	08.07.2022
12	DCU	78-PM-122-A	PUMP	89.3	08.07.2022
13	DCU	78-PM-104-A	PUMP	88	08.07.2022
14	DCU	78-PM-108-A	PUMP	90	08.07.2022
15	DCU	78-PM-107-B	PUMP	89.7	08.07.2022
16	DCU	78-PM-110-B	PUMP	89.9	08.07.2022
17	DCU	78-FD-101-B	FD FAN	75.1	08.07.2022
18	DCU	78-FD-101-A	FD FAN	76.2	08.07.2022
19	DCU	78-ID -101	ID FAN	78	08.07.2022
20	DCU	78-ID-102	ID FAN	78.2	08.07.2022
21	DCU	78-FD-102-A	FD FAN	77.4	08.07.2022
22	DCU	78-FD-102-B	FD FAN	75.1	08.07.2022
23	DCU	78-PM-123-B	PUMP	85.5	08.07.2022

24	DCU	78-PM-125-A	PUMP	87.2	08.07.2022
25	DCU	78-PM-104-B	PUMP	85.1	08.07.2022
26	DCU	78-PM-116-B	PUMP	87.1	08.07.2022
27	DCU	78-PM-127-A	PUMP	89.1	08.07.2022
28	DCU	78-PM-126-B	PUMP	90	08.07.2022
29	DCU	78-PM-115-D	PUMP	86.3	08.07.2022
30	DCU	78-PM-114-A	PUMP	82	08.07.2022
31	DCU	78-P-118-B	PUMP	86.2	08.07.2022
1	HGU-I	06-KA-202	ID FAN	83	16.07.2022
2	HGU-I	06-KA-201	FD FAN	84.3	16.07.2022
3	HGU-I	06-P-202-A	PUMP	82.1	16.07.2022
4	HGU-I	06-P-203-B	PUMP	88.7	16.07.2022
5	HGU-I	06-KA-203-B	PUMP	86.2	16.07.2022
1	DHDS	FD-01-B	FD FAN	73.1	16.07.2022
2	DHDS	FD-01-A	FD FAN	72.1	16.07.2022
3	DHDS	52-PA-CF-104-A	PUMP	87.2	16.07.2022
4	DHDS	52-PA-CF-107-A	PUMP	89.1	16.07.2022
5	DHDS	52-PA-CF-123-B	PUMP	87.4	16.07.2022
6	DHDS	52-PA-CF-101-B	PUMP	84.4	16.07.2022
7	DHDS	52-PA-CF-132-A	PUMP	83.1	16.07.2022
8	DHDS	52-KM-RP-101-A	COMPRESSOR	84.9	16.07.2022
9	DHDS	UNDER COMP. HOUSE	COMPRESSOR	83.1	16.07.2022
1	OHCU	05-KM-RP-001-D	COMPRESSOR	85.9	14.07.2022
2	OHCU	05-KM-RP-001-C	COMPRESSOR	88.4	14.07.2022
3	OHCU	05-KM-RP-001-B	COMPRESSOR	86.5	14.07.2022
4	OHCU	05-KM-RP-001-A	COMPRESSOR	85.9	14.07.2022
5	OHCU	UNDER COMP.HOUSE	COMPRESSOR	83.7	14.07.2022
6	OHCU	05-PM-RC-007-C	PUMP	83.6	14.07.2022
7	OHCU	05-PM-CF-503-A	PUMP	89.6	14.07.2022
8	OHCU	05-PM-CF-513-B	PUMP	88.6	14.07.2022
9	OHCU	05-PM-CF-511-B	PUMP	85.1	14.07.2022
10	OHCU	05-PM-CF-514-B	PUMP	84.1	14.07.2022
11	OHCU	05-PM-CF-515-A	PUMP	83.9	14.07.2022
12	OHCU	05-PM-CF-301-A	PUMP	85.6	14.07.2022
13	OHCU	05-PM-CF-501-B	PUMP	87.3	14.07.2022
14	OHCU	05-PM-CF-504-A	PUMP	90	14.07.2022
15	OHCU	05-PM-CF-508-B	PUMP	89.6	14.07.2022
16	OHCU	05-PM-CF-505-A	PUMP	90	14.07.2022
17	OHCU	05-PM-CF-502-C	PUMP	89.9	14.07.2022
18	OHCU	05-PM-CF-507-B	PUMP	89.6	14.07.2022
19	OHCU	05-PM-CF-506-A	PUMP	88.9	14.07.2022
20	OHCU	05-PM-CF-502-A	PUMP	89.4	14.07.2022
21	OHCU	05-PM-CF-510-A	PUMP	89.9	14.07.2022
22	OHCU	05-PM-CF-509-A	PUMP	87	14.07.2022
23	OHCU	05-PM-CF-516-A	PUMP	85	14.07.2022
24	OHCU	05-PM-CF-401-A	PUMP	84.1	14.07.2022
25	OHCU	FF-FN-505	ID FAN	86.5	14.07.2022

26	OHCU	FF-FN-504-A	FD FAN	80.4	14.07.2022
27	OHCU	05-PM-CF-529-B	PUMP	89.3	14.07.2022
28	OHCU	P-001-A	PUMP	87	14.07.2022
Noise survey of Target units of PR & PREP August- 2022					
S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	RFCCU	33-PM-CF-001-B	PUMP	89.9	03.08.2022
2	RFCCU	33-PM-CF-1001-A	PUMP	90	03.08.2022
3	RFCCU	33-PM-CF-003-A	PUMP	87.4	03.08.2022
4	RFCCU	33-PM-CF-1005-B	PUMP	89.6	03.08.2022
5	RFCCU	07-PM-210-A	PUMP	89.6	03.08.2022
6	RFCCU	07-PM-CF-312-A	PUMP	89.9	03.08.2022
7	RFCCU	07-PM-CF-350-B	PUMP	90	03.08.2022
8	RFCCU	07-PM-CF-305-B	PUMP	89.6	03.08.2022
9	RFCCU	07-PM-CF-311-B	PUMP	90	03.08.2022
10	RFCCU	07-PM-CF-203-B	PUMP	88.6	03.08.2022
11	RFCCU	07-PM-CF-304-B	PUMP	89.1	03.08.2022
12	RFCCU	07-PM-CF-205-B	PUMP	85.2	03.08.2022
13	RFCCU	07-PM-CF-303-B	PUMP	88	03.08.2022
14	RFCCU	07-PM-CF-204-B	PUMP	89	03.08.2022
15	RFCCU	07-PM-CF-303-A	PUMP	84.5	03.08.2022
16	RFCCU	07-PM-CF-202-B	PUMP	90	03.08.2022
17	RFCCU	07-PM-CF-207-B	PUMP	89.9	03.08.2022
18	RFCCU	07-PM-CF-212-A	PUMP	89.8	03.08.2022
19	RFCCU	07-PM-CF-209-A	PUMP	84.8	03.08.2022
20	RFCCU	07-PM-CF-202-C	PUMP	90	03.08.2022
21	RFCCU	07-PM-CF-302-A	PUMP	89.5	03.08.2022
22	RFCCU	07-PM-CF-02-B	PUMP	90	03.08.2022
23	RFCCU	07-FD-FN-941	FD FAN	89.6	03.08.2022
24	RFCCU	07-PM-CF-01-A	PUMP	86.9	03.08.2022
1	PX-I	202-PM-10-B	PUMP	82.7	04.08.2022
2	PX-I	202-PM-16-A	PUMP	84	04.08.2022
3	PX-I	202-P-02-A	PUMP	85.2	04.08.2022
4	PX-I	202-P-01-A	PUMP	84.4	04.08.2022
5	PX-I	202-P-03-B	PUMP	83.6	04.08.2022
6	PX-I	202-PM-04-A	PUMP	86.3	04.08.2022
7	PX-I	201-PM-01-A	PUMP	88.1	04.08.2022
8	PX-I	201-PM-08-A	PUMP	86.1	04.08.2022
9	PX-I	201-P-02-A	PUMP	85.5	04.08.2022
10	PX-I	202-K2-B	COMPRESSOR	88.2	04.08.2022
11	PX-I	UNDER COMP.HOUSE	COMPRESSOR	84.2	04.08.2022
12	PX-I	202-KM-4	COMPRESSOR	86.1	04.08.2022
13	PX-I	201-K-1-A	COMPRESSOR	88.9	04.08.2022
14	PX-I	209-PM-01-B	COMPRESSOR	81.2	04.08.2022
1	PX-II	206-PM-013-A	PUMP	82.8	06.08.2022
2	PX-II	205-PM-02-A	PUMP	87	06.08.2022
3	PX-II	205-PM-101-A	PUMP	85.2	06.08.2022

4	PX-II	205-PM-02-B	PUMP	84.6	06.08.2022
5	PX-II	205-PM-04-B	PUMP	82.7	06.08.2022
6	PX-II	205-P-08-A	PUMP	86	06.08.2022
7	PX-II	206-PM-07-B	PUMP	87.2	06.08.2022
8	PX-II	207-PM-01-B	PUMP	89.5	06.08.2022
9	PX-II	205-PM-03-A	PUMP	88.6	06.08.2022
10	PX-II	205-PM-07-A	PUMP	86.2	06.08.2022
11	PX-II	206-PM-03-B	PUMP	88.1	06.08.2022
12	PX-II	205-PM-06-B	PUMP	86.4	06.08.2022
13	PX-II	206-PM-06-B	PUMP	87.5	06.08.2022
14	PX-II	205-PM-05-B	PUMP	88.2	06.08.2022
15	PX-II	206-PM-01-B	PUMP	88.5	06.08.2022
16	PX-II	206-PM-04-A	PUMP	89.2	06.08.2022
17	PX-II	206-PM-04-C	PUMP	89.9	06.08.2022
18	PX-II	206-PM-02-B	PUMP	86.6	06.08.2022
19	PX-II	206-FM-03	ID FAN	85.2	06.08.2022
20	PX-II	206-FM-01	FD FAN	83	06.08.2022
21	PX-II	203-FM-02	FD FAN	83.5	06.08.2022
22	PX-II	207-PM-03-A	PUMP	84.3	06.08.2022
23	PX-II	207-PM-02-A	PUMP	84.2	06.08.2022
24	PX-II	207-PM-04-A	PUMP	87.2	06.08.2022
25	PX-II	208-P-03-B	PUMP	84.8	06.08.2022
26	PX-II	208-P-02-B	PUMP	86.2	06.08.2022
27	PX-II	208-P-01-B	PUMP	89.5	06.08.2022
1	CCRU	38-PM-CF-801-C	PUMP	87.3	08.08.2022
2	CCRU	08-KM-RP-0101-A	COMPRESSOR	84	08.08.2022
3	CCRU	08-KM-RP-202-B	COMPRESSOR	82.5	08.08.2022
4	CCRU	08-KM-RN-301-B	COMPRESSOR	86.2	08.08.2022
5	CCRU	08-KM-RP-202-C	COMPRESSOR	83.3	08.08.2022
6	CCRU	UNDER COMPRESSOR HOUSE	COMPRESSOR	81.5	08.08.2022
7	CCRU	08-KM-RP-303-A	COMPRESSOR	89.3	08.08.2022
8	CCRU	08-KA-RP-302	COMPRESSOR	82	08.08.2022
9	CCRU	PA-CF-202-C	PUMP	87.8	08.08.2022
10	CCRU	08-PA-CF-104-A	PUMP	86.1	08.08.2022
11	CCRU	08-PA-CF-102-B	PUMP	85.8	08.08.2022
12	CCRU	08-PA-CF-203-B	PUMP	89.6	08.08.2022
13	CCRU	08-PA-CF-105-B	PUMP	90	08.08.2022
14	CCRU	08-PA-CF-204-A	PUMP	88.6	08.08.2022
15	CCRU	08-PM-CF-101-A	PUMP	87.7	08.08.2022
16	CCRU	08-PM-CF-301-A	PUMP	84.2	08.08.2022
17	CCRU	08-PM-CF-201-A	PUMP	89.8	08.08.2022
18	CCRU	08-PM-CF-701-B	PUMP	84.8	08.08.2022
1	PTA	Process Air Compressor	COMPRESSOR	85.1	18.08.2022
2	PTA	21-P1-125-A	PUMP	81.7	18.08.2022
3	PTA	21-FN-164-A	ID FAN	86.1	18.08.2022
4	PTA	21-B1-0553	PUMP	89.9	18.08.2022
5	PTA	21-P1-556-A	PUMP	88.7	18.08.2022
6	PTA	FN-1259-B	FD FAN	87.6	18.08.2022

7	PTA	FN-1259-A	FD FAN	89.8	18.08.2022
8	PTA	K1-1260	COMPRESSOR	86.9	18.08.2022
9	PTA	P1-1209-D	PUMP	88.8	18.08.2022
10	PTA	P1-1209-C	PUMP	88.6	18.08.2022
11	PTA	P1-1209-A	PUMP	90	18.08.2022
12	PTA	21-P1-1251-C	PUMP	89.6	18.08.2022
13	PTA	21-P1-1251-A	PUMP	89.8	18.08.2022
14	PTA	21-P1-1420-A	PUMP	81.6	18.08.2022
15	PTA	P1-2301-B	PUMP	89.5	18.08.2022
16	PTA	P1-1816-B	PUMP	84.6	18.08.2022
17	PTA	21-P1-2210-A	PUMP	90	18.08.2022
18	PTA	21-P1-2202-A	PUMP	86.4	18.08.2022
19	PTA	21-P1-2203-B	PUMP	89.7	18.08.2022
20	PTA	P1-1410-B	PUMP	86.9	18.08.2022
21	PTA	21-P1-0702-B	PUMP	87.9	18.08.2022
22	PTA	P1-507-B	PUMP	85.9	18.08.2022
23	PTA	21-P1-607-B	PUMP	89.9	18.08.2022
24	PTA	21-P1-615-A	PUMP	90	18.08.2022
25	PTA	21-P1-505-A	PUMP	85.9	18.08.2022
26	PTA	21-P1-632-A	PUMP	86.1	18.08.2022
27	PTA	21-P1-1606-A	PUMP	89.8	18.08.2022
28	PTA	21-P1-2221-B	PUMP	89.8	18.08.2022
29	PTA	21-P1-2625-B	PUMP	90	18.08.2022
30	PTA	21-K1-830-B	COMPRESSOR	89.8	18.08.2022
31	PTA	21-P1-2401-B	PUMP	83.1	18.08.2022
32	PTA	21-P1-2401-A	PUMP	84.2	18.08.2022

Noise survey of Target units of PR & PREP September- 2022

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	SRU-I	21-PM-CF-007-B	PUMP	89.7	03.09.2022
2	SRU-I	21-PA-CF-002-B	PUMP	87.4	03.09.2022
3	SRU-I	21-PM-CF-003-A	PUMP	90	03.09.2022
4	SRU-I	21-PM-CF-003-B	PUMP	81.9	03.09.2022
5	SRU-I	21-PM-CF-001-C	PUMP	88.9	03.09.2022
6	SRU-I	17-PA-CF-03-B	PUMP	88.6	03.09.2022
7	SRU-I	17-PA-CF-002-B	PUMP	87.9	03.09.2022
8	SRU-I	17-PA-CF-001-B	PUMP	89.6	03.09.2022
9	SRU-I	17-PA-CF-008-A	PUMP	86.8	03.09.2022
1	SRU-II	51-PM-104-A	PUMP	89.8	05.09.2022
2	SRU-II	51-PM-108-A	PUMP	89.9	05.09.2022
3	SRU-II	51-PM-109-A	PUMP	90	05.09.2022
4	SRU-II	53-PM-103-A	PUMP	89.9	05.09.2022
5	SRU-II	53-PM-101-A	PUMP	88.2	05.09.2022
6	SRU-II	54-PM-103-B	PUMP	87.3	05.09.2022
7	SRU-II	54-PM-102-B	PUMP	85.5	05.09.2022
8	SRU-II	53-PM-102-B	PUMP	89.6	05.09.2022
9	SRU-II	57-PM-104-A	PUMP	88.2	05.09.2022
10	SRU-II	57-PM-102-B	PUMP	89.6	05.09.2022
11	SRU-II	57-PM-103-A	PUMP	89.2	05.09.2022
12	SRU-II	57-PM-101-A	PUMP	88.6	05.09.2022

13	SRU-II	55-K-101	AIR BLOWER	86.7	05.09.2022
14	SRU-II	55-K-102	AIR BLOWER	87.6	05.09.2022
15	SRU-II	57-KM-101-B	COMPRESSOR	90	05.09.2022
16	SRU-II	57-KM-101-A	COMPRESSOR	89.2	05.09.2022
17	SRU-II	26-KM-101-B	INCINERATOR FAN	89.6	05.09.2022
18	SRU-II	26-PM-104-A	PUMP	86.3	05.09.2022
19	SRU-II	26-PM-102-A	PUMP	89.9	05.09.2022
20	SRU-II	26-PM-103-A	PUMP	89.2	05.09.2022
21	SRU-II	26-PM-101-A	PUMP	89.5	05.09.2022
22	SRU-II	20-PM-103-B	PUMP	86.2	05.09.2022
23	SRU-II	20-PM-102-A	PUMP	89.7	05.09.2022
24	SRU-II	25-PM-109-C	PUMP	88.9	05.09.2022
25	SRU-II	25-PM-108-A	PUMP	88.5	05.09.2022
26	SRU-II	51-PM-103-B	PUMP	89.6	05.09.2022
27	SRU-II	51-PM-101-B	PUMP	86.9	05.09.2022

1	DHDT	72-PM-003-B	PUMP	90	20.09.2022
2	DHDT	72-P-02-C	PUMP	85.7	20.09.2022
3	DHDT	72-PM-004-A	PUMP	87.9	20.09.2022
4	DHDT	72-PM-005-B	PUMP	87.7	20.09.2022
5	DHDT	72-PM-007-A	PUMP	88.3	20.09.2022
6	DHDT	UNDER COMP. HOUSE	COMPRESSOR	85.5	20.09.2022
7	DHDT	72-KM-002-A	COMPRESSOR	86.6	20.09.2022
8	DHDT	72-KM-002-B	COMPRESSOR	88.3	20.09.2022
9	DHDT	72-PM-001-B	PUMP	83.5	20.09.2022

1	HGU-II	76-P-103-B	PUMP	85.8	20.09.2022
2	HGU-II	76-KM-001-B	COMPRESSOR	77.9	20.09.2022
3	HGU-II	76-KM-103-A	COMPRESSOR	78.7	20.09.2022
4	HGU-II	UNDER COMP. HOUSE	COMPRESSOR	77.2	20.09.2022
5	HGU-II	76-P-002-A	PUMP	88	20.09.2022
6	HGU-II	76-P-101-B	PUMP	89.8	20.09.2022

1	CPP/TPS	UB CONTROL ROOM	CONTROL ROOM	63.2	21.09.2022
2	CPP/TPS	VHP CONTROL ROOM	CONTROL ROOM	68.2	21.09.2022
3	CPP/TPS	GTG-3	GENERATOR	81.7	21.09.2022
4	CPP/TPS	GTG-1	GENERATOR	82.4	21.09.2022
5	CPP/TPS	BOILER NO.1 STG	BOILER	81.8	21.09.2022
6	CPP/TPS	BOILER NO.3 STG	BOILER	88.2	21.09.2022
7	CPP/TPS	9060-39-FD-FM-101-A	FD FAN 1 A	87.6	21.09.2022
8	CPP/TPS	9060-39-FD-FM-101-B	FD FAN 1 B	86.2	21.09.2022
9	CPP/TPS	9060-39-ID-PM-101-A	ID FAN	84.1	21.09.2022
10	CPP/TPS	9060-39-ID-PM-101-B	ID FAN	89	21.09.2022
11	CPP/TPS	9060-39-PM-CF-408-B	PUMP	81.2	21.09.2022
12	CPP/TPS	9060-89-PM-CF-608-B	PUMP	86.3	21.09.2022
13	CPP/TPS	9060-89-PM-CF-508-A	PUMP	87.7	21.09.2022
14	CPP/TPS	89-PM-CF-808-A	PUMP	83.6	21.09.2022
15	CPP/TPS	9060-89-FD-FM-1103-A	FD FAN	85.2	21.09.2022
16	CPP/TPS	9060-39-ID-FM-301-B	ID FAN 3 B	86.8	21.09.2022
17	CPP/TPS	9060-39-FD-FM-301-B	FD FAN 3 B	88.2	21.09.2022

18	CPP/TPS	9060-89-PA-CF-9904-C	PUMP	88.7	21.09.2022
19	CPP/TPS	9060-89-PA-CF-9902-A	PUMP	88.8	21.09.2022
20	CPP/TPS	9060-89-FD-FM-1103-B	FD FAN	87.9	21.09.2022
 					
1	MSQ	301-KM-201-B	COMPRESSOR	77.9	24.09.2022
2	MSQ	301-KM-101-A	COMPRESSOR	76.2	24.09.2022
3	MSQ	301-PM-101-A	PUMP	82	24.09.2022
4	MSQ	303-PM-206-B	PUMP	89.5	24.09.2022
5	MSQ	303-PM-202-A	PUMP	84.5	24.09.2022
6	MSQ	303-PM-102-B	PUMP	85.2	24.09.2022
7	MSQ	303-PM-101-A	PUMP	87.1	24.09.2022
8	MSQ	303-PM-210-B	PUMP	86.3	24.09.2022
9	MSQ	301-PM-211-B	PUMP	83.6	24.09.2022
10	MSQ	301-PM-213-A	PUMP	82.6	24.09.2022
11	MSQ	301-PM-214-B	PUMP	81.9	24.09.2022
12	MSQ	301-PM-201-B	PUMP	88.9	24.09.2022
13	MSQ	301-PM-203-A	PUMP	83.5	24.09.2022
14	MSQ	301-PM-215-B	PUMP	83.6	24.09.2022
15	MSQ	301-PM-254-A	PUMP	81	24.09.2022
16	MSQ	301-PM-253-A	PUMP	89.1	24.09.2022
17	MSQ	303-K-201-B	COMPRESSOR	80	24.09.2022
18	MSQ	UNDER COMP. HOUSE	COMPRESSOR	80	24.09.2022
19	MSQ	303-K-301-B	COMPRESSOR	89.7	24.09.2022
20	MSQ	303-P-303-A	PUMP	82.7	24.09.2022
Noise survey of Target units of PR & PREP October- 2022					
S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	HGU-1	06-P-202-B	PUMP	89.9	04.10.2022
2	HGU-1	06-P-203-A	PUMP	90	04.10.2022
3	HGU-1	06-KA-203-A	ID FAN	88.4	04.10.2022
4	HGU-1	06-KA-202	ID FAN	89.6	04.10.2022
5	HGU-1	06-KA-201	FD FAN	85.2	04.10.2022
 					
1	DHDS	FD-01-B	FD FAN	68.9	06.10.2022
2	DHDS	FD-01-A	FD FAN	70.2	06.10.2022
3	DHDS	52-PA-CF-104-B	PUMP	88.4	06.10.2022
4	DHDS	52-PA-CF-107-A	PUMP	90	06.10.2022
5	DHDS	52-PA-CF-123-A	PUMP	88.1	06.10.2022
6	DHDS	52-PA-CF-101-A	PUMP	90	06.10.2022
7	DHDS	52-PA-CF-102-B	PUMP	88.1	06.10.2022
8	DHDS	52-KM-RP-101-B	COMPRESSOR	83.5	06.10.2022
 					
1	DCU	78-PM-114-N1	PUMP	82.9	07.10.2022
2	DCU	78-PM-135-B	PUMP	89.6	07.10.2022
3	DCU	78-PM-148-B	PUMP	90	07.10.2022
4	DCU	78-PM-131-A	PUMP	88.7	07.10.2022
5	DCU	78-PM-112-A	PUMP	89.6	07.10.2022
6	DCU	78-PM-105-A	PUMP	88.7	07.10.2022
7	DCU	78-PM-113-B	PUMP	89.1	07.10.2022
8	DCU	78-PM-124-A	PUMP	90	07.10.2022
9	DCU	78-PM-111-B	PUMP	88.4	07.10.2022

10	DCU	78-PM-161-A	PUMP	87.9	07.10.2022
11	DCU	78-PM-122-A	PUMP	89.6	07.10.2022
12	DCU	78-PM-109-B	PUMP	88.8	07.10.2022
13	DCU	78-PM-108-A	PUMP	90	07.10.2022
14	DCU	78-PM-107-B	PUMP	89.2	07.10.2022
15	DCU	78-PM-110-B	PUMP	90	07.10.2022
16	DCU	78-FD-101-A	FD FAN	79	07.10.2022
17	DCU	78-FD-101-B	FD FAN	78.5	07.10.2022
18	DCU	78-ID-101	ID FAN	78.2	07.10.2022
19	DCU	78-ID-102	ID FAN	77.8	07.10.2022
20	DCU	78-FD-102-A	FD FAN	76.5	07.10.2022
21	DCU	78-FD-102-B	FD FAN	76.1	07.10.2022
22	DCU	78-PM-123-B	PUMP	80	07.10.2022
23	DCU	78-PM-125-A	PUMP	89.7	07.10.2022
24	DCU	78-PM-104-A	PUMP	86.6	07.10.2022
25	DCU	78-PM-116-A	PUMP	88.8	07.10.2022
26	DCU	78-PM-126-A	PUMP	87.8	07.10.2022
27	DCU	78-PM-130-A	PUMP	81.6	07.10.2022
28	DCU	78-PM-115-D	PUMP	86.4	07.10.2022
29	DCU	78-P-118-B	PUMP	88.8	07.10.2022
30	DCU	78-PM-127-B	PUMP	89.3	07.10.2022
31	DCU	78-PM-134-B	PUMP	86.5	07.10.2022

1	OHCU	05-KM-RP-001-D	COMPRESSOR	84.2	14.10.2022
2	OHCU	05-KM-RP-001-C	COMPRESSOR	85.7	14.10.2022
3	OHCU	05-KM-RP-001-B	COMPRESSOR	85.2	14.10.2022
4	OHCU	05-KM-RP-001-A	COMPRESSOR	84.8	14.10.2022
5	OHCU	UNDER COMP. HOUSE	COMPRESSOR	89.6	14.10.2022
6	OHCU	05-PM-RC-07-E	PUMP	89.7	14.10.2022
7	OHCU	05-PM-CF-503-B	PUMP	89.6	14.10.2022
8	OHCU	05-PM-CF-513-A	PUMP	88.2	14.10.2022
9	OHCU	05-PM-CF-514-B	PUMP	88.8	14.10.2022
10	OHCU	05-PM-LM-515-B	PUMP	89.6	14.10.2022
11	OHCU	05-PM-CF-511-A	PUMP	86	14.10.2022
12	OHCU	05-PM-CF-301-B	PUMP	87.3	14.10.2022
13	OHCU	05-PM-CF-501-B	PUMP	86.2	14.10.2022
14	OHCU	05-PM-CF-504-A	PUMP	82.8	14.10.2022
15	OHCU	05-PM-CF-508-B	PUMP	90	14.10.2022
16	OHCU	05-PM-CF-505-A	PUMP	89.9	14.10.2022
17	OHCU	05-PM-CF-502-C	PUMP	89.6	14.10.2022
18	OHCU	05-PM-CF-502-B	PUMP	90	14.10.2022
19	OHCU	05-PM-CF-507-A	PUMP	89.6	14.10.2022
20	OHCU	05-PM-CF-506-B	PUMP	84.4	14.10.2022
21	OHCU	05-PM-CF-510-B	PUMP	90	14.10.2022
22	OHCU	05-PM-CF-509-A	PUMP	86	14.10.2022
23	OHCU	FF-FN-505	ID FAN	87.8	14.10.2022
24	OHCU	FF-FN-504-A	FD FAN	88.7	14.10.2022
25	OHCU	P-001-A	PUMP	88.1	14.10.2022

1	HCU	75-FN-102	FD FAN	79.3	17.10.2022
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2	HCU	75-FN-101	FD FAN	81.6	17.10.2022
3	HCU	75-FN-103	ID FAN	80.5	17.10.2022
4	HCU	75-PM-106-B	PUMP	85.7	17.10.2022
5	HCU	75-PM-107-B	PUMP	87.7	17.10.2022
6	HCU	75-PM-111-B	PUMP	90	17.10.2022
7	HCU	75-PM-104-B	PUMP	89.8	17.10.2022
8	HCU	75-PM-103-B	PUMP	88.6	17.10.2022
9	HCU	75-PM-102-B	PUMP	89.9	17.10.2022
10	HCU	75-PM-113-A	PUMP	89.8	17.10.2022
11	HCU	75-PM-114-B	PUMP	90	17.10.2022
12	HCU	75-PM-112-B	PUMP	89.9	17.10.2022
13	HCU	75-PM-116-A	PUMP	90	17.10.2022
14	HCU	75-PM-115-B	PUMP	86.5	17.10.2022
15	HCU	75-PM-201-B	PUMP	89.2	17.10.2022
16	HCU	75-PM-123-A	PUMP	83.5	17.10.2022
17	HCU	75-K-802-A	COMPRESSOR	89.6	17.10.2022
18	HCU	75-K-002-B	COMPRESSOR	90	17.10.2022
19	HCU	UNDER COMP. HOUSE	COMPRESSOR	87.2	17.10.2022
20	HCU	75-P-002	PUMP	80.4	17.10.2022

1	AVU-II	73-PM-05-B	PUMP	86.2	18.10.2022
2	AVU-II	73-PM-020-A	PUMP	84.6	18.10.2022
3	AVU-II	73-FN-002	ID FAN (TURBINE)	85.5	18.10.2022
4	AVU-II	73-FN-001-A	FD FAN	84.8	18.10.2022
5	AVU-II	73-PM-10-C	PUMP	88.9	18.10.2022
6	AVU-II	73-PM-10-B	PUMP	89.3	18.10.2022
7	AVU-II	74-PM-01-A	PUMP	85.1	18.10.2022
8	AVU-II	74-PM-06-A	PUMP	86.7	18.10.2022
9	AVU-II	74-PM-06-B	PUMP	88.4	18.10.2022
10	AVU-II	73--PM-08-B	PUMP	88.4	18.10.2022
11	AVU-II	74--PM-02-A	PUMP	88.8	18.10.2022
12	AVU-II	73-PM-13-C	PUMP	89.6	18.10.2022
13	AVU-II	73-PM-13-B	PUMP	90	18.10.2022
14	AVU-II	73-PM-09-A	PUMP	88	18.10.2022
15	AVU-II	73-PM-14-B	PUMP	88.5	18.10.2022
16	AVU-II	59-PM-62-A	PUMP	83.7	18.10.2022
17	AVU-II	59-PM-01-B	PUMP	86.2	18.10.2022
18	AVU-II	73-PM-02-C	PUMP	85.8	18.10.2022
19	AVU-II	73-PM-02-B	PUMP	85.1	18.10.2022
20	AVU-II	73-PM-02-A	PUMP	84.1	18.10.2022
21	AVU-II	73-PM-003-A	PUMP	81	18.10.2022
22	AVU-II	73-PM-032-B	PUMP	85.3	18.10.2022
23	AVU-II	73-PM-24-B	PUMP	83.1	18.10.2022
24	AVU-II	73-PM-04-A	PUMP	86.7	18.10.2022
25	AVU-II	74-PM-04-A	PUMP	86.7	18.10.2022
26	AVU-II	73-PM-01-A	PUMP	83.7	18.10.2022
27	AVU-II	73-PM-01-C	PUMP	84.8	18.10.2022
28	AVU-II	73-PM-01-D	PUMP	86.5	18.10.2022
29	AVU-II	73-PM-04-B	PUMP	86.8	18.10.2022
30	AVU-II	73-PM-015-C	PUMP	89.4	18.10.2022

31	AVU-II	59-PM-04-A	PUMP	85	18.10.2022
32	AVU-II	73-PM-12-B	PUMP	86.8	18.10.2022
33	AVU-II	73-PM-06-B	PUMP	88.4	18.10.2022
34	AVU-II	73-PM-11-B	PUMP	87.2	18.10.2022
35	AVU-II	73-PM-036-B	PUMP	86.7	18.10.2022
36	AVU-II	73-PM-07-A	PUMP	85.6	18.10.2022
37	AVU-II	74-PM-010-A	PUMP	85.6	18.10.2022
38	AVU-II	74-PM-07-B	PUMP	87.7	18.10.2022
39	AVU-II	74-PM-03-A	PUMP	87.7	18.10.2022
40	AVU-II	74-PM-03-C	PUMP	84.6	18.10.2022

Noise survey of Target units of PR & PREP November- 2022

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	PX-I	202-PM-10-B	PUMP	80.4	03.11.2022
2	PX-I	202-PM-16-A	PUMP	84.8	03.11.2022
3	PX-I	202-P-02-B	PUMP	87.7	03.11.2022
4	PX-I	202-P-01-B	PUMP	85	03.11.2022
5	PX-I	202-PM-03-A	PUMP	85.7	03.11.2022
6	PX-I	202-P-04-B	PUMP	84.9	03.11.2022
7	PX-I	201-PM-01-B	PUMP	89.6	03.11.2022
8	PX-I	201-PM-08-A	PUMP	86.1	03.11.2022
9	PX-I	201-P-02-B	PUMP	85.4	03.11.2022
10	PX-I	UNDER COMP. HOUSE	COMPRESSOR	85.8	03.11.2022
11	PX-I	202-K-2-A	COMPRESSOR	88.8	03.11.2022
12	PX-I	202-K-2-B	COMPRESSOR	89.8	03.11.2022
13	PX-I	202-KM-4	COMPRESSOR	86.1	03.11.2022
14	PX-I	201-K-1-A	COMPRESSOR	89.1	03.11.2022
15	PX-I	204-PM-01-A	PUMP	82.4	03.11.2022
16	PX-I	209-PM-01-A	PUMP	82.7	03.11.2022
1	PX-II	205-PM-02-A	PUMP	87.5	04.11.2022
2	PX-II	205-PM-02-B	PUMP	88	04.11.2022
3	PX-II	205-PM-04-B	PUMP	88.6	04.11.2022
4	PX-II	205-P-08-B	PUMP	86	04.11.2022
5	PX-II	207-PM-01-B	PUMP	90	04.11.2022
6	PX-II	206-PM-07-A	PUMP	87.3	04.11.2022
7	PX-II	205-PM-07-B	PUMP	88.5	04.11.2022
8	PX-II	205-P-03-A	PUMP	88.7	04.11.2022
9	PX-II	206-PM-03-B	PUMP	89.6	04.11.2022
10	PX-II	205-PM-06-A	PUMP	86.1	04.11.2022
11	PX-II	206-PM-06-A	PUMP	87.8	04.11.2022
12	PX-II	205-PM-05-B	PUMP	86.7	04.11.2022
13	PX-II	206-PM-04-C	PUMP	88.3	04.11.2022
14	PX-II	206-P-01-B	PUMP	87.3	04.11.2022
15	PX-II	206-P-02-B	PUMP	86.1	04.11.2022
16	PX-II	206-PM-04-A	PUMP	89.9	04.11.2022
17	PX-II	206-FM-03	ID FAN	81.6	04.11.2022
18	PX-II	206-FM-01	FD FAN	82.6	04.11.2022
19	PX-II	206-FM-02	FD FAN	81.8	04.11.2022
20	PX-II	207-PM-03-B	PUMP	83.6	04.11.2022
21	PX-II	207-PM-02-A	PUMP	84.3	04.11.2022

22	PX-II	207-PM-04-A	PUMP	86.3	04.11.2022
23	PX-II	208-KM-01	COMPRESSOR	82.6	04.11.2022
24	PX-II	UNDER COMP. HOUSE	COMPRESSOR	79.6	04.11.2022
25	PX-II	208-PM-02-B	PUMP	84.2	04.11.2022
26	PX-II	208-P-1-RA	PUMP	87.9	04.11.2022
1	PTA	Process Air Compressor	COMPRESSOR	85.4	10.11.2022
2	PTA	21--P1-125-B	PUMP	80.7	10.11.2022
3	PTA	FN-164-B	FD FAN	82.5	10.11.2022
4	PTA	FN-164-A	FD FAN	83.5	10.11.2022
5	PTA	FN-165	ID FAN	88.6	10.11.2022
6	PTA	21-B1-0553	AIR BLOWER	90	10.11.2022
7	PTA	P1-1209-D	PUMP	88.8	10.11.2022
8	PTA	P1-1209-C	PUMP	88.6	10.11.2022
9	PTA	P1-1209-B	PUMP	90	10.11.2022
10	PTA	P1-1207-B	PUMP	89.9	10.11.2022
11	PTA	K1-1260	COMPRESSOR	82	10.11.2022
12	PTA	21-P1-1251-C	PUMP	89.5	10.11.2022
13	PTA	21-P1-1251-B	PUMP	90	10.11.2022
14	PTA	21-P1-1420-B	PUMP	86.6	10.11.2022
15	PTA	P1-2301-B	PUMP	88.6	10.11.2022
16	PTA	P1-1816-A	PUMP	82.2	10.11.2022
17	PTA	21-P1-2210-A	PUMP	89.8	10.11.2022
18	PTA	21-P1-2202-A	PUMP	85	10.11.2022
19	PTA	21-P1-2203-B	PUMP	89.8	10.11.2022
20	PTA	21-P1-1410-A	PUMP	82.5	10.11.2022
21	PTA	21-P1-0702-A	PUMP	86	10.11.2022
22	PTA	P1-507-A	PUMP	84.1	10.11.2022
23	PTA	21-P1-607-A	PUMP	88.6	10.11.2022
24	PTA	21-P1-606-A	PUMP	85.1	10.11.2022
25	PTA	21-P1-615-B	PUMP	87	10.11.2022
26	PTA	21-P1-407-A	PUMP	85	10.11.2022
27	PTA	21-P1-1606-A	PUMP	88.2	10.11.2022
28	PTA	21-P1-2221-A	PUMP	87.1	10.11.2022
29	PTA	21-P1-2625-A	PUMP	90	10.11.2022
30	PTA	21-P1-2401-A	PUMP	79.5	10.11.2022
1	CCRU	KA-RP-101-A	COMPRESSOR	84.4	14.11.2022
2	CCRU	KA-RP-202-B	COMPRESSOR	85.4	14.11.2022
3	CCRU	08-KM-RP-301-A	COMPRESSOR	88.4	14.11.2022
4	CCRU	UNDER COMP. HOUSE	COMPRESSOR	79.4	14.11.2022
5	CCRU	08-KM-RP-303-A	COMPRESSOR	88.3	14.11.2022
6	CCRU	08-PM-CF-202-B	PUMP	83.3	14.11.2022
7	CCRU	08-PM-CF-104-A	PUMP	82.2	14.11.2022
8	CCRU	08-PM-CF-102-A	PUMP	83.5	14.11.2022
9	CCRU	08-PM-CF-203-A	PUMP	86.9	14.11.2022
10	CCRU	08-PM-CF-201-B	PUMP	87.9	14.11.2022
11	CCRU	08-PM-CF-701-B	PUMP	82.9	14.11.2022
12	CCRU	08-PM-CF-105-A	PUMP	87.5	14.11.2022
13	CCRU	08-PM-CF-101-A	PUMP	88.4	14.11.2022

14	CCRU	08-PM-CF-204-B	PUMP	89.3	14.11.2022
1	FCCU	07-PM-CF-103-B	PUMP	89.6	15.11.2022
2	FCCU	07-PM-CF-402-A	PUMP	89.9	15.11.2022
3	FCCU	07-FD-FN-941	FD FAN	79	15.11.2022
4	FCCU	07-PM-CF-01-A	PUMP	90	15.11.2022
5	FCCU	07-PM-CF-302-B	PUMP	88.1	15.11.2022
6	FCCU	07-PM-CF-02-A	PUMP	89.6	15.11.2022
7	FCCU	7-PM-CF-302-B	PUMP	88.1	15.11.2022
8	FCCU	7-PM-CF-209-B	PUMP	88.2	15.11.2022
9	FCCU	7-PM-CF-202-A	PUMP	89.5	15.11.2022
10	FCCU	7-PM-CF-207-A	PUMP	89.1	15.11.2022
11	FCCU	7-PM-CF-202-B	PUMP	90	15.11.2022
12	FCCU	7-PM-CF-204-A	PUMP	88	15.11.2022
13	FCCU	7-PM-CF-303-A	PUMP	88.4	15.11.2022
14	FCCU	7-PM-CF-303-B	PUMP	89.4	15.11.2022
15	FCCU	7-PM-CF-205-A	PUMP	88.9	15.11.2022
16	FCCU	7-PM-CF-203-A	PUMP	88.7	15.11.2022
17	FCCU	7-PM-CF-304-A	PUMP	86.7	15.11.2022
18	FCCU	7-PM-CF-311-A	PUMP	85.1	15.11.2022
19	FCCU	7-PM-CF-305-B	PUMP	88.2	15.11.2022
20	FCCU	7-PM-CF-210-B	PUMP	90	15.11.2022
21	FCCU	7-PM-CF-210-A	PUMP	89.9	15.11.2022

Noise survey of Target units of PR & PREP December- 2022

S.NO	Plant/Unit	Area	Source	Sound Level(dB)	DATE
1	MSQ	301-PM-210-B	PUMP	87.3	04.12.2022
2	MSQ	301-PKM-101-B	COMPRESSOR	84.4	04.12.2022
3	MSQ	301-KM-201-B	COMPRESSOR	82.5	04.12.2022
4	MSQ	301-PM-101-B	PUMP	87.7	04.12.2022
5	MSQ	303-PM-206-A	PUMP	85.6	04.12.2022
6	MSQ	303-PM-202-B	PUMP	87.9	04.12.2022
7	MSQ	303-PM-102-A	PUMP	89.8	04.12.2022
8	MSQ	303-PM-204-B	PUMP	89.4	04.12.2022
9	MSQ	303-PM-201-A	PUMP	89.5	04.12.2022
10	MSQ	303-PM-101-B	PUMP	90	04.12.2022
11	MSQ	301-PM-210-A	PUMP	87.5	04.12.2022
12	MSQ	301-PM-211-B	PUMP	84.5	04.12.2022
13	MSQ	301-PM-213-B	PUMP	86.5	04.12.2022
14	MSQ	301-PM-212-A	PUMP	89.9	04.12.2022
15	MSQ	301-PM-203-B	PUMP	86.2	04.12.2022
16	MSQ	301-PM-215-A	PUMP	86.8	04.12.2022
17	MSQ	301-PM-251-B	PUMP	81.2	04.12.2022
18	MSQ	301-PM-254-B	PUMP	89.6	04.12.2022
19	MSQ	301-PM-253-B	PUMP	89.5	04.12.2022
20	MSQ	303-P-111-A	PUMP	85.7	04.12.2022
21	MSQ	303-P-301-A	PUMP	88.7	04.12.2022
22	MSQ	303-P-304-A	PUMP	82.3	04.12.2022
23	MSQ	303-P-303-A	PUMP	84.3	04.12.2022
24	MSQ	303-KM-301-A	COMPRESSOR	83.5	04.12.2022
25	MSQ	UNDER COMP.HOUSE	COMPRESSOR	80.1	04.12.2022

1	CPP/TPS	UB CONTROL ROOM	CONTROL ROOM	81.5	21.09.2022
2	CPP/TPS	VHP CONTROL ROOM	CONTROL ROOM	68.6	21.09.2022
3	CPP/TPS	GTG-2	GENERATOR	81.6	08.12.2022
4	CPP/TPS	Boiler No.2	BOILER	87.6	08.12.2022
5	CPP/TPS	Back Side of VHP Control Room	CONTROL ROOM	86.5	08.12.2022
6	CPP/TPS	9060-39-FD-FM-101-A	FD FAN	87.5	08.12.2022
7	CPP/TPS	9090-39-FD-FM-101-B	FD FAN	88.6	08.12.2022
8	CPP/TPS	9060-39-ID-PM-101-B	ID FAN	86.9	08.12.2022
9	CPP/TPS	9060-39-ID-PM-301-B	ID FAN	85.8	08.12.2022
10	CPP/TPS	9060-39-ID-FM-201-B	ID FAN	84.2	08.12.2022
11	CPP/TPS	9060-39-FD-FM-201-B	FD FAN	86.6	08.12.2022
12	CPP/TPS	9060-39-FD-FM-201-A	FD FAN	87.1	08.12.2022
13	CPP/TPS	9060-39-ID-FM-301-A	ID FAN	87.1	08.12.2022
14	CPP/TPS	9060-39-ID-PM-101-A	ID FAN	85.2	08.12.2022
15	CPP/TPS	89-PM-CF-835-B	PUMP	79.6	08.12.2022
16	CPP/TPS	89-PM-CF-808-A	PUMP	86.5	08.12.2022
17	CPP/TPS	9060-89-PA-CF-9915-A	PUMP	86.6	08.12.2022
18	CPP/TPS	9060-89-PA-CF-9905-A	PUMP	87.8	08.12.2022
19	CPP/TPS	9060-89-PA-CF-9905-B	PUMP	88.6	08.12.2022
20	CPP/TPS	9060-89-PA-CF-9904-A	PUMP	89.2	08.12.2022
21	CPP/TPS	9060-89-PA-CF-9902-A	PUMP	87.6	08.12.2022
22	CPP/TPS	9060-89-FD-FM-1103-B	FD FAN	88.6	08.12.2022
23	CPP/TPS	9060-89-FD-FM-1103-A	FD FAN	89.4	08.12.2022
1	HGU-II	77-PM-203-A	PUMP	83.8	12.12.2022
2	HGU-II	76-PM-301-A	PUMP	82.2	12.12.2022
3	HGU-II	71-P-201-A	PUMP	87.8	12.12.2022
4	HGU-II	76-P-402-A	PUMP	83.1	12.12.2022
5	HGU-II	76-KM-001-B	COMPRESSOR	79.6	12.12.2022
6	HGU-II	76-KM-103-B	COMPRESSOR	76.2	12.12.2022
7	HGU-II	UNDER COMP. HOUSE	COMPRESSOR	74.6	12.12.2022
8	HGU-II	76-PM-111-B	PUMP	80.5	12.12.2022
9	HGU-II	76-P-002-B	PUMP	86.8	12.12.2022
1	DHDT	72-KM-002-A	COMPRESSOR	83.1	13.12.2022
2	DHDT	UNDER.COMP.HOUSE	COMPRESSOR	82.6	13.12.2022
3	DHDT	72-PM-007-B	PUMP	85.7	13.12.2022
4	DHDT	72-PM-004-A	PUMP	85.4	13.12.2022
5	DHDT	72-PM-601-B	PUMP	85.4	13.12.2022
6	DHDT	72-PM-005-B	PUMP	87.4	13.12.2022
7	DHDT	72-P-02-C	PUMP	86.4	13.12.2022

Panipat Refinery and Petrochemical complex

Noise monitoring results

Date/Period: -24 December 2022 (Q-3-2022-2023)

S. No.	Location name	Noise results	
		Day time (6.00 a.m. to 10.00 p.m) (Limit 75 dBA)*	Night time (10.00 p.m. to 6.00 a.m) (Limit 70 dBA)*
1	Gate no. 1	57.4	50.6
2	PTA Gate.	57.2	58.1
3	At entry of PNC flyover.	66.2	64.5
4	Near Raw water pond (north west corner).	58.7	54.8
5	Boundary wall (near operator cabin 4 of offsites.)	57.9	55.6
6	Near MCR.	61.5	55.1
7	Near Boundary wall at backside of ETP-2.	72.5	68.3
8	Near CR-11	56.7	50.1
9	Gate No. 2 (Time office)	58.6	52.2
10	Store	60.1	50.1
11	PTA control room	56.4	50.8
12	Admin building	51.7	41.6
13	Project building	54.6	50.8
14	PX control room.	55.3	53.4
15	3 G Ethanol	53.1	50.1
16	Main Gate (2G Ethanol Plant)	54.2	49.1
17	Control Room (2G Ethanol Plant)	58.1	52.6

*Note: as per Noise pollution (regulation and control) rules 2000

[Signature]
26/12/2022
Occupational Health Centre

OH CENTRE
PANIPAT
INDIA

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1651

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Baholi Panipat - 132140
2	Sender's authorisation No.	HW/03/PIT/2020/7613249
3	Manifest Document No.	1651
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67B2422
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP D-167 Kanda industrial area Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNG/HW/03 - 10052121/2021/23
10	Waste description	oil sludge (Residual)
11	Total quantity No. of Containers	14.55 m ³ or MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) oil sludge (10%)
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature
		Month Day Year
		07 04 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp	Signature
		Month Day Year
		07 04 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature
		Month Day Year
		07 04 2022

Pankaj Kumar
 पंकज कुमार
 Pankaj Kumar
 अधिकारी (एच एच & ए)
 Office: (HS & E)
 Panipat Refinery (IOCL) 132140

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

SI. No. 1653

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE



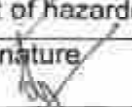
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Banda Panipat - 132140
2	Sender's authorisation No.	HWRP/PIT/2020/7613249
3	Manifest Document No.	1653
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LTD.
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 67 B 45 32
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem LTD P-167 Kanda industrial area Dhanbad - 828109
9	Receiver's authorisation No.	JSP43/Ho/RNC/HWRP - 10052121/2021/23
10	Waste description	oil sludge (Residual)
11	Total quantity No. of Containers	10.51 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) oil sludge (Liquor)
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature
		Month Day Year 07 05 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp	Signature
		Month Day Year 07 05 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature
		Month Day Year 07 05 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **1656**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Bahali Panipat - 132140
2	Sender's authorisation No.	HW/PIIT/2020/7613249
3	Manifest Document No.	1656
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LP
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67 B4532
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem LP D-167 leanda industrial Area Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNC/HW - 10052121/2021/23
10	Waste description	oil sludge (Residue)
11	Total quantity No. of Containers	15.25 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) oil sludge (<10%)
13	Special handling instructions and additional information	use ppe's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	 TILAK SINGH प्रबंधक (एच.एस.एन ई.) Manager (HS&E) पनीपत रिफाइनरी (आई.ओ.सी.एल.) - 132140 Panipat Refinery (I.O.C.L.) Panipat-132140	Name and stamp: _____ Signature _____ Month <input type="text" value="07"/> Day <input type="text" value="09"/> Year <input type="text" value="20"/> <input type="text" value="21"/>
15	Transporter acknowledgment of receipt of Wastes	 Nilay Narayan Dhanbad
	Name and stamp: _____ Signature _____ Month <input type="text" value="07"/> Day <input type="text" value="09"/> Year <input type="text" value="20"/> <input type="text" value="22"/>	
16	Receiver's certification for receipt of hazardous and other waste	 *Signature _____ Month <input type="text" value="07"/> Day <input type="text" value="09"/> Year <input type="text" value="20"/> <input type="text" value="22"/>

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
 {See rule 19 (1)}

Sl. No. 1659

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	Local Panipat Refinery & Petrochemical complex Bakoli Panipat - 132140
2	Sender's authorisation No.	HR67/PIT/2020/7613249
3	Manifest Document No.	1659
4	Transporter's name and address (Including Phone No. and e-mail)	Nitay Narayan Polychem
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	HR67B2422
7	Vehicle registration No.	HR67B2422
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nitay Narayan Polychem E/P D-167 Leander Industries Gurgaon Haryana - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNC/Haryana 1053/21/2021/23
10	Waste description	oil sludge
11	Total quantity No. of Containers	15.410 (Residual) for MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) oil sludge (100%)
13	Special handling instructions and additional information	use pppls
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature
		Month
		Day
		Year
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp	Signature
		Month
		Day
		Year
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature
		Month
		Day
		Year

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
(See rule 19 (1))

Sl. No: 1660

MANIFEST FOR HAZARDOUS AND OTHER WASTE

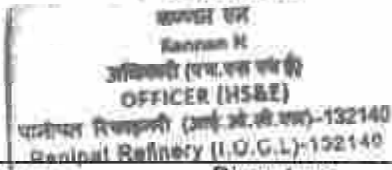
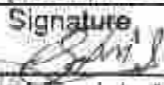
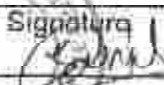
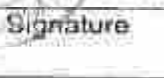
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex Baholi Panipat - 130140
2	Sender's authorisation No.	Huro/PIT/2020/9613249
3	Manifest Document No.	1660
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67B4532
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem UP Distt Raebareilly Area Dumbad - 828109
9	Receiver's authorisation No.	JSPCB/Ho/RNC/HW/01 - 10052121/2021/23
10	Waste description	Oil Sludge (Residue)
11	Total quantity No. of Containers	16.98 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Oil Sludge (10%)
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp: Signature	Month Day Year 07 15 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp: Signature	Month Day Year 07 15 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp: Signature	Month Day Year 07 15 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 2203

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE


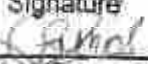

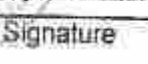
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex. Baholi, Panipat - 132140
2	Sender's authorisation No.	HWM/PIT/2020/7613249
3	Manifest Document No.	2203
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 67 B 2422
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP. D-167 Kanda Industrial area. Dhanbad - 828109
9	Receiver's authorisation No.	JSR B/Ho/RNC/HWM 10052121/2021/2023
10	Waste description	Residue & oily sludge (<10%)
11	Total quantity No. of Containers	16.44 p ^l or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) oily sludge (<10%)
13	Special handling instructions and additional information	USE PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	 Name and stamp:  Signature Month: 07 Day: 22 Year: 2022	
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp:  Signature Month: 07 Day: 22 Year: 2022	
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp:  Signature Month: 07 Day: 22 Year: 2022	

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **2204**

FORM 10
{See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

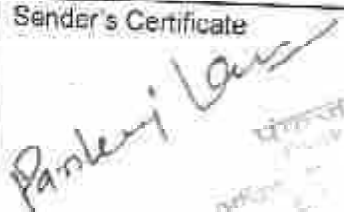


1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex, Village Baholi, Panipat - 132140		
2	Sender's authorisation No.	Hwm/PIT/2020/7613249		
3	Manifest Document No.	2204		
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychom LLP		
5	Type of vehicle	(Truck/Tanker/Special Vehicle)		
6	Transporter's registration No.			
7	Vehicle registration No.	HR 67A 4295		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychom LLP D-167 Kanha Industrial area, Dombad - 828109		
9	Receiver's authorisation No.	JSRCB/HO/RNE/Hwm 10052121/2021/23		
10	Waste description	Residue Slurry sludge (<10%)		
11	Total quantity No. of Containers	13.92	of	MT
		-		Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) oily sludge (<10%)		
13	Special handling instructions and additional information	Use PPEs		
14	Sender's Certificate	 Anand H अधिकारी (एच.एस.ई.) OFFICER (HS&E) पानिपत रिफ़ाइनरी (आई.ओ.सी.एल.)-132140 Panipat Refinery (I.O.C.L.)-132140		
	Name and stamp ;	Signature	Month	Day
			07	22
			20	22
15	Transporter acknowledgment of receipt of Wastes			
	Name and stamp ;	Signature	Month	Day
			07	22
			20	22
16	Receiver's certification for receipt of hazardous and other waste			
	Name and stamp ;	Signature	Month	Day
			07	22
			20	22

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1749

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex Baholi Panipat -132140
2	Sender's authorisation No.	HWm/PIT/2020/9613249
3	Manifest Document No.	1749
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP
5	Type of vehicle	(Truck/Tanker/Special Vehicle) <input checked="" type="checkbox"/>
6	Transporter's registration No.	
7	Vehicle registration No.	WB39B1007
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP D-167 Kanda Industrial area Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/HO/RMC/HWm-10052121/ 2021/23
10	Waste description	FCCU spent catalyst
11	Total quantity No. of Containers	24.21 for MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) <input checked="" type="checkbox"/> Powder form
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Signature	Month: 04 Day: 08 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	Month: 04 Day: 08 Year: 2022
	Name and stamp:  Signature	Month: 04 Day: 08 Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	Month: 04 Day: 08 Year: 2022
	Name and stamp:  Signature	Month: 04 Day: 08 Year: 2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1750

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	100L Panipat Refinery & Petrochemical Complex Baholi Panipat - 132140
2	Sender's authorisation No.	HWM/PIT/2020/7613249
3	Manifest Document No.	1750
4	Transporter's name and address (Including Phone No. and e-mail)	HIRAP GUWAHATI Roadways
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP13 BT4211
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nitay Narayan Polychem LLP D-167 Kanda Industrial Area Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNC/HWM-10052121/2021/23
10	Waste description	PCCO spent catalyst
11	Total quantity No. of Containers	28.65 kg or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Powder form
13	Special handling instructions and additional information	Use PPEU
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Name and stamp Signature	Month Day Year 04 08 2022
	Transporter acknowledgment of receipt of Wastes	
15	Name and stamp Signature	Month Day Year 04 08 2022
	Receiver's certification for receipt of hazardous and other waste	
16	Name and stamp Signature	Month Day Year 04 08 2022

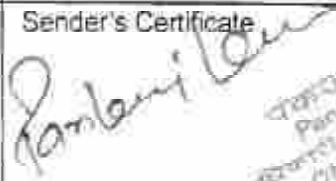
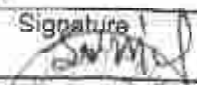
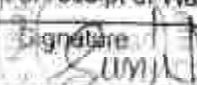
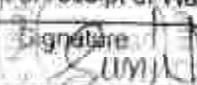
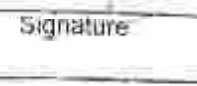
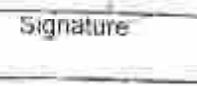
Similar copy to be sent to SPCB

Another copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
(See rule 19 (1))

Sl. No. **2189**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Bahoti Panipat - 132140
2	Sender's authorisation No.	
3	Manifest Document No.	HWm/PIT/2020/7013249 2189
4	Transporter's name and address (Including Phone No. and e-mail)	Nitay Narayan Polychem LLP
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP13AT2098
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nitay Narayan Polychem LLP D-167 Kanda Industrial area Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/Ho/RNC/HWm - 1005212/2021/23
10	Waste description	Fcc Spent catalyst
11	Total quantity No. of Containers	27.16 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Powder
13	Special handling instructions and additional information	use PPEU
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp  Signature  Month Day Year 05 14 2022	
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp  Signature  Month Day Year 05 14 2022	
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp  Signature  Month Day Year 05 14 2022	

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

SI No **2190**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Bahadri Panipat - 132140
2	Sender's authorisation No.	HWRM/PIT/2020/9613249
3	Manifest Document No.	2190
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LUP
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP 13 CT 1727
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem Lup. D-167 Kanha Industrial Area Dharwad - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNC/HWRM - 10052121/2021/23
10	Waste description	fcc spent catalyst
11	Total quantity No. of Containers	27.73 <input type="checkbox"/> or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Powder
13	Special handling instructions and additional information	use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature
		Month
		Day
		Year
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp	Signature
		Month
		Day
		Year
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature
		Month
		Day
		Year

**Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex**

Sl No **3181**

**FORM 10
{See rule 19 (1)}**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	IOCL PANIPAT REFINERY AND PETROCHEMICAL COMPLEX, BANOLT, PANIPAT-132140
2	Sender's authorisation No.	HUMIPET/202/17/013249
3	Manifest Document No.	3181
4	Transporter's name and address (including Phone No. and e-mail)	Goyal Roadways Raipur.
5	Type of vehicle	(Truck/Tanker/Special vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	CG-04-MH-2076
8	Receiver's name and mailing Address (including Phone No. and e-mail)	REFRACAST METALLURGICAL PVT. LTD, 22, INDUSTRIAL AREA RAIPUR, 493224, 98939469
9	Receiver's authorisation No.	4972/HSM/D/HO/CEB/2021, dt: 01/10/2021
10	Waste description	Spent catalyst (HAZ)
11	Total quantity No. of Containers	12,010/- Kilograms or MT or 12,010 MT, Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	USE APPROPRIATE PPE'S (Personal Protective Equipment)
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature
		Month
		Day
		Year
15	Transporter's acknowledgment of receipt of Wastes	
	Name and stamp	Signature
		Month
		Day
		Year
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature
		Month
		Day
		Year

Sender copy to be sent to SPCB

**Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex**

SI No:

3182

**FORM 10
(See rule 19 (1))**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	IOCL PANIPAT REFINERY AND PETROCHEMICAL COMPLEX, BAHALI, PANIPAT
2	Sender's authorisation No.	AWM/RET/2020/7613249
3	Manifest Document No.	3182
4	Transporter's name and address (including Phone No. and e-mail)	Grayal Roadways Rajpur.
5	Type of vehicle	(<input checked="" type="checkbox"/> Truck/Tanker/ <input type="checkbox"/> Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	CG-04-LV-7442
8	Receiver's name and mailing Address (including Phone No. and e-mail)	REFRALAST METALLURGICALS PLOT 22, INDUSTRIAL AREA RAIPUR, 932210, 89359100
9	Receiver's authorisation No.	4932/H-IND/HO/CECO/ 2021 dtd 10/10/2021
10	Waste description	Spent catalyst (n40)
11	Total quantity No. of Containers	11.960 m ³ in 01 No.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.
		Name and stamp: _____ Signature: _____ Month: 09 Day: 01 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	
		Name and stamp: _____ Signature: _____ Month: 09 Day: 01 Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	
		Name and stamp: _____ Signature: _____ Month: 09 Day: 01 Year: 2022

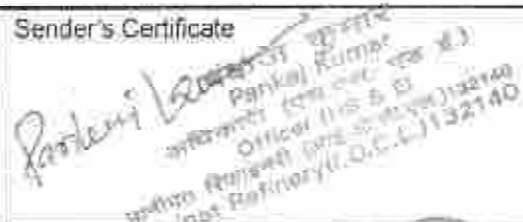
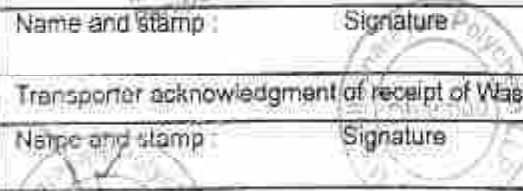

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl No. **1632**

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

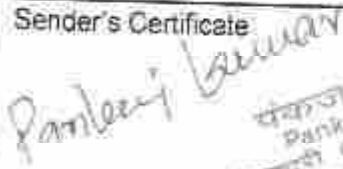

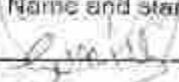
1	Sender's name and mailing address: (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Vill-Baholi Panipat-132140
2	Sender's authorisation No.	1632
3	Manifest Document No.	HW/PIIT/2020/7613249
4	Transporter's name and address: (Including Phone No. and e-mail)	Nilay Narayan Polychem Pvt
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR73A 3315
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem Up D-167 Wanda Industrial Area Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNC/HW/2024/10052121/2024/23
10	Waste description	Spent Alumina Catalyst
11	Total quantity No. of Containers	10.12 MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Granular - Solid
13	Special handling instructions and additional information	USE PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp:		Signature: 
		Month: 04 Day: 28 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp:		Signature: 
		Month: 04 Day: 28 Year: 2022
16	Receiver's certification for receipt of hazardous and other waste:	
Name and stamp:		Signature: 
		Month: 04 Day: 28 Year: 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
 (See rule 19 (1))

Sl. No. 1633

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery and Petrochemical Complex, village-Baholi Panipat Haryana - 132140
2	Sender's authorisation No.	
3	Manifest Document No.	HWM/PT/2020/7613249
4	Transporter's name and address (Including Phone No. and e-mail)	1633 Nilay Narayan Polychrom PPL
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR11K-4680
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychrom LLP D-167 Kanda industrial area Dhambod - 828109
9	Receiver's authorisation No.	JSPCB/HO/RNC/HWM/ 1005212/2021/23
10	Waste description	PTA - spent Alumina catalyst
11	Total quantity No. of Containers	14-38 Nos. or MT
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) granular solid.
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Signature	Month Day Year 04 29 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp:  Signature	Month Day Year 04 29 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp:  Signature	Month Day Year 04 29 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

SI No 2219

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex Baheli Panipat - 132140
2	Sender's authorisation No.	HCOM/PIT/2020/761324-9
3	Manifest Document No.	2219
4	Transporter's name and address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	—
7	Vehicle registration No.	HR 55Y 5164
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Nilay Narayan Polychem LLP D-117 Kanota Industrial area Dhambad - 828109
9	Receiver's authorisation No.	JSPCRB/HD/RNC/HCOM/ 10052/21/2021/2023
10	Waste description	spent clay
11	Total quantity No. of Containers	2196 / or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) granular solid
13	Special handling instructions and additional information	use ppels
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature Month Day Year 09 06 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp	Signature Month Day Year 09 06 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature Month Day Year 09 06 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
 {See rule 19 (1)}

Sl. No. **1746**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex vill-Baholi Panipat-132140
2	Sender's authorisation No.	HWm/PIT/2020/7613249
3	Manifest Document No.	1746
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	PB46M5213 & PB13B C1785
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Grado Industries Ahera Baghat UP - 250609
9	Receiver's authorisation No.	232/497 - 164/17
10	Waste description	VR Sludge
11	Total quantity No. of Containers	10-720 & 14-530 m ³ or MT = 25.25 MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR oily sludge
13	Special handling instructions and additional information	USE PROPER PPE
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp:		Signature
		Month Day Year
		04 02 2022
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp:		Signature
		Month Day Year
		04 02 2022
16	Receiver's certification for receipt of hazardous and other waste	
Name and stamp:		Signature
		Month Day Year
		04 02 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No: 1747

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE




1.	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL PANIPAT REFINERY & PETROCHEMICAL COMPLEX PANIPAT		
2.	Sender's authorisation No.	44NM/PT/2020/26/3249		
3.	Manifest Document No.	1949		
4.	Transporter's name and address (Including Phone No. and e-mail)	M/S YADAV TRANSPORT		
5.	Type of vehicle	(Truck/Tanker/Special Vehicle)		
6.	Transporter's registration No.			
7.	Vehicle registration No.	PB13BC1385 & HR67B24/13		
8.	Receiver's name and mailing Address (Including Phone No. and e-mail)	INDO INDUSTRIES AHRA BHAGPAT UP - 250609		
9.	Receiver's authorisation No.	232/492-164/12		
10.	Waste description	YR SLUDGE		
11.	Total quantity No. of Containers	12.06 & 22.82 MT	of or MT	
		(24.88 MT)	Nos	
12.	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)		
		VR OILY SLUDGE		
13.	Special handling instructions and additional information	USE PROPER PPE'S		
14.	Sender's Certificate:	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.		
	Name and stamp:	Signature	Month	Day
			07	07
				2022
15.	Transporter acknowledgment of receipt of Wastes			
	Name and stamp:	Signature	Month	Day
			07	07
				2022
16.	Receiver's certification for receipt of hazardous and other waste			
	Name and stamp:	Signature	Month	Day
			07	07
				2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1634

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE


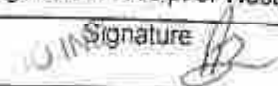

1	Sender's name and mailing address (Including Phone No. and e-mail)	100L Panipat Refinery & Petrochemical complex Baholi Panipat - 132140
2	Sender's authorisation No.	HWRM/PIT/2020/76/13249
3	Manifest Document No.	1634
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Padan Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle) <input checked="" type="checkbox"/> Truck
6	Transporter's registration No.	
7	Vehicle registration No.	HR67C-8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indo Industries Ahera Bhagpat up - 250609
9	Receiver's authorisation No.	232/497-164/17
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	13.64 MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR-sludge
13	Special handling instructions and additional information	USE PPE
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Pankaj Kumar Officer (HS & E) Panipat Refinery, I.O.C.L./132140	Signature Month: 04 Day: 30 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp: 	Signature Month: 04 Day: 30 Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp: 	Signature Month: 04 Day: 30 Year: 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1635

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	106 Panipat Refinery & Petrochemical complex Baholi Panipat - 132140
2	Sender's authorisation No.	HWM/PIT/2020/7613249
3	Manifest Document No.	1635
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle) ✓
6	Transporter's registration No.	
7	Vehicle registration No.	HR67C-8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indo Industries Ahera Bhagpat UP - 250609
9	Receiver's authorisation No.	282/497 - 164/17
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	15.740 m ³ or MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) UP - oily sludge
13	Special handling instructions and additional information	USE PPE
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp  Pankaj Kumar Officer (HS & E) Panipat Refinery (I), D.C.L. 132140	Signature Month Day Year 05 02 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp 	Signature Month Day Year 05 02 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp 	Signature Month Day Year 05 02 2022


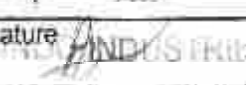

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **2199**

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	PANIPAT Refinery & Petrochemical Complex, Bahawal, Panipat - 132140
2	Sender's authorisation No.	HWRB/PIT/2020/17613249
3	Manifest Document No.	2199
4	Transporter's name and address: (Including Phone No. and e-mail)	Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67C 8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indo-Industries Awara Bahagpat up-250609
9	Receiver's authorisation No.	282/497 - 164/17
10	Waste description	VR sludge
11	Total quantity No. of Containers	14.15 for MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR - Sludge
13	Special handling instructions and additional information	USE PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Signature	Month: 06 Day: 06 Year: 20 22
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp:  Signature	Month: 06 Day: 06 Year: 20 22
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp:  Signature	Month: 06 Day: 06 Year: 20 22

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 2200

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE




1	Sender's name and mailing address (Including Phone No. and e-mail)	PANIPAT Refinery & Petro- Chemical complex Bahadur Panipat - 132140		
2	Sender's authorisation No.	HWRM/PIT/2020/17613249		
3	Manifest Document No.	2200		
4	Transporter's name and address (Including Phone No. and e-mail)	Rajeev Yadav Transport		
5	Type of vehicle	(Truck/Tanker/Special Vehicle)		
6	Transporter's registration No.			
7	Vehicle registration No.	HR67C 8824		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Ardo - Industries Ahera Bahadur up - 250609		
9	Receiver's authorisation No.	232/497 -164/17		
10	Waste description	VR sludge		
11	Total quantity No. of Containers	12.31	<input checked="" type="checkbox"/> or MT	Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR-Sludge		
13	Special handling instructions and additional information	Use PPE's		
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.		
	Name and stamp	Signature	Month	Day
			06	08
			20	22
15	Transporter acknowledgment of receipt of Wastes			
	Name and stamp	Signature	Month	Day
			06	08
			20	22
16	Receiver's certification for receipt of hazardous and other waste			
	Name and stamp	Signature	Month	Day
			06	08
			20	22

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1641

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Baholi Panipat - 132140
2	Sender's authorisation No.	HW/PIR/2020/7613249
3	Manifest Document No.	1641
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 67 C 88 24
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Arado Industries Ahera Bhagpat UP - 250609
9	Receiver's authorisation No.	232/497 - 164/17
10	Waste description	VR Oily sludge
11	Total quantity No. of Containers	32.56 m ³ or MT — Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR-oily sludge
13	Special handling instructions and additional information	USE PPE'S
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp:  Signature Pankaj Kumar Officer (HS & E) Panipat Refinery, O.C.L. 132140		Month: 06 Day: 18 Year: 20 22
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp:  Signature FOR INDO INDUSTRIES		Month: 06 Day: 18 Year: 20 22
16	Receiver's certification for receipt of hazardous and other waste	
Name and stamp:  Signature Signatory		Month: 06 Day: 18 Year: 20 22

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1648

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE




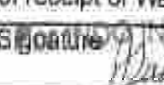
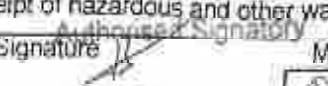
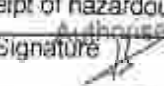
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex, Baholi, Panipat - 132140
2	Sender's authorisation No.	Hum/PIT/2022/7613249
3	Manifest Document No.	1648
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 67C 8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indo Industries Ahera Bhagpat UP - 250609
9	Receiver's authorisation No.	232/499 - 164/17
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	9.480 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR - oily sludge
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	 Kanna N OFFICER (HS&E) Panipat Refinery (I.O.C.L.)-132140	Name and stamp: _____ Signature _____ Month Day Year 06 28 2022
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: _____ Signature _____ Month Day Year 06 28 2022
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp: _____ Signature _____ Month Day Year 06 28 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 1649

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE


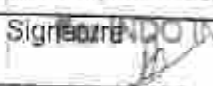

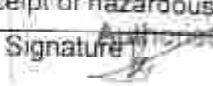
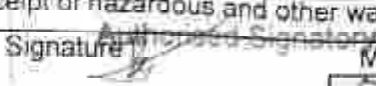
1	Sender's name and mailing address (Including Phone No. and e-mail)	100L Panipat Refinery & Petrochemical Complex, Baholi, Panipat - 132140
2	Sender's authorisation No.	HUOM/PIT/2020/7613249
3	Manifest Document No.	1649
4	Transporter's name and address : (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67C8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Arora - Industries Ahera Bahapat UP - 250409
9	Receiver's authorisation No.	232/499 - 164/17
10	Waste description	VR City Sludge
11	Total quantity No. of Containers	17.03 m ³ or MT Nos:
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR-city sludge
13	Special handling instructions and additional information	use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp:  Signature: 		Month: 06 Day: 29 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp:  Signature: 		Month: 06 Day: 29 Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	
Name and stamp:  Signature: 		Month: 06 Day: 29 Year: 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
 (See rule 19 (1))

Sl. No. **1652**

MANIFEST FOR HAZARDOUS AND OTHER WASTE


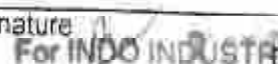
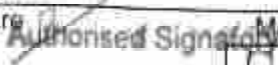
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Bakoli, Panipat - 132142
2	Sender's authorisation No.	HW10/PIT/2020/7613249
3	Manifest Document No.	1652
4	Transporter's name and address: (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 67 C 8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Yoda - Products Inc Alwar Bhogen UP - 250609
9	Receiver's authorisation No.	232/497 - 164/17
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	17.81 g/MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR oily sludge
13	Special handling instructions and additional information	USE PPE'S
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked and labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Signature: Pankaj Kumar Month: 07, Day: 04, Year: 2022	
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp:  Signature:  Month: 07, Day: 04, Year: 2022	
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp:  Signature:  Month: 07, Day: 04, Year: 2022	

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **1654**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE



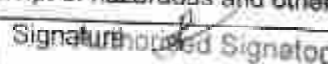
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Baholi Panipat-132140
2	Sender's authorisation No.	Huro/PIT/2020/613249
3	Manifest Document No.	1654
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67C8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indo - Industries Ahera Bahagpat UP- 20209
9	Receiver's authorisation No.	232/497-164/17
10	Waste description	UR oily sludge
11	Total quantity No. of Containers	12.56 MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) UR oily sludge
13	Special handling instructions and additional information	
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Signature	Month Day Year 02 05 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp:  Signature	Month Day Year 02 05 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp:  Signature	Month Day Year 02 05 2022

**Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex**

Sl. No. **1655**

**FORM 10
{See rule 19 (1)}**

MANIFEST FOR HAZARDOUS AND OTHER WASTE


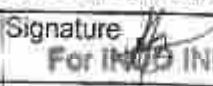

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Baholi Panipat - 132140
2	Sender's authorisation No.	HWRM/PIT/2020/7613249
3	Manifest Document No.	1655
4	Transporter's name and address : (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle):
6	Transporter's registration No.	.
7	Vehicle registration No.	HR 67 C 8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Foodo - Industries, Ahera Bahagpat UP - 20607
9	Receiver's authorisation No.	232/497 - 16A/17
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	13.92 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR oily sludge
13	Special handling instructions and additional information	
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp :  Signature	Month Day Year 07 06 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp :  Signature	Month Day Year 07 06 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp :  Signature	Month Day Year 07 06 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
 {See rule 19 (1)}

Sl. No. **1657**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Baholi Panipat - 132140
2	Sender's authorisation No.	HRM/PIT/2020/2613249
3	Manifest Document No.	1657
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR67C 8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Fooda - Products Ahern Bhagpat UP - 250609
9	Receiver's authorisation No.	232/497 - 164/17
10	Waste description	VR Oily Sludge
11	Total quantity/ No. of Containers	12.45 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR - Oily Sludge
13	Special handling instructions and additional information	USE PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp:  Signature	Month Day Year 07 11 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp:  Signature	Month Day Year 07 11 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp:  Signature	Month Day Year 07 11 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

SI. No. **2202**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE


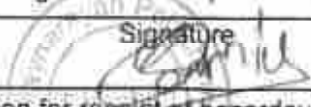
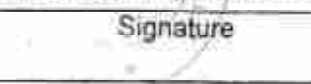
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL, Panipat Refinery & Petrochemical complex, Baholi, Panipat - 132140.
2	Sender's authorisation No.	HWM/RET/2020/7613249
3	Manifest Document No.	2202
4	Transporter's name and address (Including Phone No. and e-mail)	M/S Yadav Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	HR 67C 8824
7	Vehicle registration No.	
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indo-Industrial Ahmednagar Bhangar, W.P., PIN - 250608
9	Receiver's authorisation No.	202 M 97 - 164117
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	15,570 m ³ or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Sticky/Liquid) VR oily sludge
13	Special handling instructions and additional information	Use PPE's.
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	 Officer (HS&E) Panipat Refinery (I.O.C.L.)-132140	Name and stamp: _____ Signature: _____ Month: 07 Day: 19 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	For INDIA ONLY
	 Signature: _____ Month: 07 Day: 19 Year: 2022	
16	Receiver's certification for receipt of Hazardous and other waste	
	 Signature: _____ Month: 07 Day: 19 Year: 2022	

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **2206**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

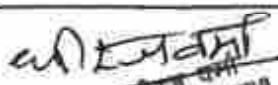
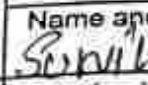

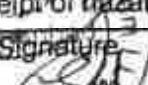
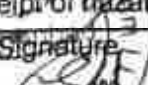
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL, Panipat Refinery & Petrochemical Complex Village Baholi, Panipat - 132140
2	Sender's authorisation No.	HWM/PIT/2020/7613249
3	Manifest Document No.	2206
4	Transporter's name and address (Including Phone No. and e-mail)	M/s ^{Nilay Narayan} Yashwanth Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	-
7	Vehicle registration No.	UP13BT4211
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Indus Nilay Narayan Polychem LLP. D-167, Konda Industrial Area, Dhanbad - 828109
9	Receiver's authorisation No.	JSPCB/HW/RWC/HWM 10052121/2021/2023
10	Waste description	VR oily sludge
11	Total quantity No. of Containers	16.480 MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) VR oily sludge
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp : 	Signature Month Day Year 08 18 2022
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp : 	Signature Month Day Year 08 18 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp : 	Signature Month Day Year 08 18 2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **2225**

FORM 10
{See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	Iocl, Panipat Refinery & Petrochemical complex, Bahali Panipat - 132140			
2	Sender's authorisation No.	HWM/PET/2020/7613243			
3	Manifest Document No.	2225			
4	Transporter's name and address : (Including Phone No. and e-mail)	Nilay narayan Polychem			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	—			
7	Vehicle registration No.	PB 13 BE 9786			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Nilaynarayan Polychem LLP, D-16745, KANDRA Industrial area, Gwalindpur, Dharwad.			
9	Receiver's authorisation No.	ISPCB/HO/RNC/HWM-100 52121/2021/23			
10	Waste description	Spent catalyst. FCC			
11	Total quantity No. of Containers	29.160 MT <input checked="" type="checkbox"/> m or MT Nos.			
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid in Powder form.			
13	Special handling instructions and additional information	Use PPE's.			
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>			
	Name and stamp :	Signature	Month	Day	Year
			10	11	2022
		Dhireni Verma Assistant Manager (H.S&E) Panipat Refinery - 132140 U.C.P. 132140			
15	Transporter acknowledgment of receipt of Wastes				
	Name and stamp :	Signature	Month	Day	Year
			10	11	2022
		Signature	Month	Day	Year
16	Receiver's certification for receipt of hazardous and other waste				
	Name and stamp :	Signature	Month	Day	Year
			10	11	2022
		Signature	Month	Day	Year

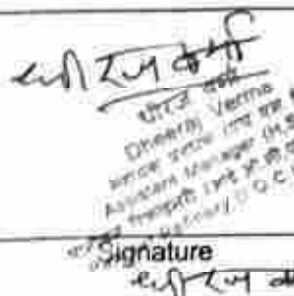

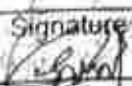
Sender copy to be sent to SPCA

**Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex**

Sl. No. 2226

**FORM 10
(See rule 19 (1))**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	I.O.C.L., Panipat Refinery & Petrochemical Complex, Bahadri, Panipat - 132140			
2	Sender's authorisation No.	HWM / PIT / 2020 / 761324B			
3	Manifest Document No.	2226			
4	Transporter's name and address (Including Phone No. and e-mail)	M/S. M. Jayaram.			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	—			
7	Vehicle registration No.	HR55R1548			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S. M. Jayaram Polychem. P-16745, KANDRA Industrial area, Govind pur, Dhanbad.			
9	Receiver's authorisation No.	JSPCB/HOIRNC/HWM-100 52121/2021/23			
10	Waste description	Spent catalyst. (fcs)			
11	Total quantity No. of Containers	27.850 MT <input checked="" type="checkbox"/> or <input type="checkbox"/> Nos.			
12	Physical form:	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid in powder form.			
13	Special handling instructions and additional information	USE PPE'S.			
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>			
Name and stamp:		Signature	Month	Day	Year
			0	11	2022
15		Transporter acknowledgment of receipt of Wastes			
Name and stamp:		Signature	Month	Day	Year
			10	11	2022
16		Receiver's certification for receipt of hazardous and other waste			
Name and stamp:		Signature	Month	Day	Year
			10	11	2022

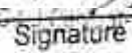
Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 2221

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL, Panipat refinery & Petrochemical Complex, Panipat, Panipat 132105			
2	Sender's authorisation No.	HM/PT/2020/3613249			
3	Manifest Document No.	2228			
4	Transporter's name and address (Including Phone No. and e-mail)	Nityamangal Logistics LLP			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	* .			
7	Vehicle registration No.	HR 67C8824			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	n/s Nityamangal Logistics LLP Gurgaon, Haryana			
9	Receiver's authorisation No.	ISPS/HO/RNCH/WH/10 52121/2021/23			
10	Waste description	waste sludge			
11	Total quantity No. of Containers	13.57	m ³ or MT		
			Nos.		
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	use PPE & proper handling while unloading			
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations			
	Name and stamp:  Signature TILAK SINGH प्रबंधक (एच.एस.एंड.ई.) Manager (HS&E) भारतीय रिफाइनरी (इंडियन ऑइल कॉर्पोरेशन लि.) Panipat Refinery (IOCL) Panipat-132105		Month	Day	Year
			10	15	20 22
15	Transporter acknowledgment of receipt of Wastes				
	Name and stamp	Signature	Month	Day	Year
			10	15	20 22
16	Receiver's certification for receipt of hazardous and other waste				
	Name and stamp	Signature	Month	Day	Year
			10	15	20 22



Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 2228

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

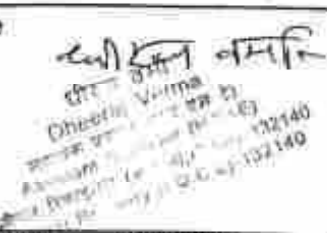
1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL, Panipat Refinery & Petrochemical complex, Baholi, Panipat - 132140
2	Sender's authorisation No.	HWMI/PIT/2020/76732-59
3	Manifest Document No.	2228
4	Transporter's name and address: (Including Phone No. and e-mail)	-
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	-
7	Vehicle registration No.	HR 3856861
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S. Bawal supply company Rai, Sonapat,
9	Receiver's authorisation No.	HWULSON/2022 26217740
10	Waste description	waste barrels/drum's plastic
11	Total quantity No. of Containers	- m ³ or MT 250/- Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE's during handling.
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p align="center"><i>(Signature)</i> Director, Verma Panipat Refinery (I.O.C.)-132140</p>
Name and stamp: <i>(Signature)</i>		Signature: <i>(Signature)</i>
Month: 10		Day: 13
Year: 2022		
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp: <i>(Signature)</i>		Signature: <i>(Signature)</i>
Month: 10		Day: 19
Year: 2022		
16	Receiver's certification for receipt of hazardous and other waste	
Name and stamp: <i>(Signature)</i>		Signature: <i>(Signature)</i>
Month: 10		Day: 19
Year: 2022		

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 2229

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	EOCL, Panipat Refinery Petrochemical complex Bahadur's Panipat + 132140				
2	Sender's authorisation No.	HWM/PIT/2020/7613295g				
3	Manifest Document No.	2229				
4	Transporter's name and address : (Including Phone No. and e-mail)	—				
5	Type of vehicle	(Truck/Tanker/Special Vehicle)				
6	Transporter's registration No.	—				
7	Vehicle registration No.	HR 38V 0484				
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S. Barrel supply company Raisone Pat,				
9	Receiver's authorisation No.	HWM/SON/2022/ 26217740				
10	Waste description	Waste barrels/drumms blocks				
11	Total quantity No. of Containersm ³ or MT 250Nos.				
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)				
13	Special handling instructions and additional information	Use PPE's during handling.				
14	Sender's Certificate	 <p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>				
Name and stamp		Signature		Month	Day	Year
				10	19	2022
15	Transporter acknowledgment of receipt of Wastes					
Name and stamp :		Signature		Month	Day	Year
				10	19	2022
16	Receiver's certification for receipt of hazardous and other waste					
Name and stamp :		Signature		Month	Day	Year
				10	19	2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

SI No 2100

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

SI No 2230

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	I o c l. Panipat Refinery & Petrochemical Complex Sector 4, Panipat - 132140			
2	Sender's authorisation No.	HWM/RT/2020/7613249			
3	Manifest Document No.	2230			
4	Transporter's name and address (Including Phone No. and e-mail)	M/S. Nilay Narayan			
5	Type of vehicle:	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	—			
7	Vehicle registration No.	HR 67CB824			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Nilay Narayan Polychem LLB D-16745, KANDRA Industrial area, Main Road, Phagwara			
9	Receiver's authorisation No.	JSPCB/HOT RNC/HWM-00 52121/2021/23			
10	Waste description	Oily Sludge (V.R.)			
11	Total quantity No. of Containers	12550 m ³ or MT <input checked="" type="checkbox"/> Nos.			
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	Used PPE, Follow Safety Guidelines.			
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>			
Name and stamp:		Signature	Month	Day	Year
[Stamp]		[Signature]	10	21	2022
15	Transporter acknowledgment of receipt of Wastes				
Name and stamp:		Signature	Month	Day	Year
[Stamp]		[Signature]	10	21	2022
16	Receiver's certification for receipt of hazardous and other waste				
Name and stamp:		Signature	Month	Day	Year
[Stamp]		[Signature]	10	21	2022

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl No **3186**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	E-och Panipat Refinery & Petrochemical complex Panipat - 132140			
2	Sender's authorisation No.	HWM/PFT/2020/2613249			
3	Manifest Document No.	3186			
4	Transporter's name and address (Including Phone No. and e-mail)	—			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	—			
7	Vehicle registration No.	HR 38 S-6861			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	MS Gases supply company Raj, Sonapat			
9	Receiver's authorisation No.	HWM/SON/2022/ 26277740			
10	Waste description	Waste barrel 1 drums of plastic			
11	Total quantity No. of Containers	250 Nos			
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	Use PPE's during handling.			
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.			
	Name and stamp	Signature	Month	Day	Year
	<i>[Signature]</i>	<i>[Signature]</i>	10	19	2022
15	Transporter acknowledgment of receipt of Wastes				
	Name and stamp	Signature	Month	Day	Year
	<i>[Signature]</i>	<i>[Signature]</i>	10	19	2022
16	Receiver's certification for receipt of hazardous and other waste				
	Name and stamp	Signature	Month	Day	Year
	<i>[Signature]</i>	<i>[Signature]</i>	10	19	2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl No **3187**

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	Iocl Panipat Refinery & Petrochemical Complex, Baholi Panipat - 132142			
2	Sender's authorisation No.	HWM/PII/2020/76/3245			
3	Manifest Document No.	3187			
4	Transporter's name and address (Including Phone No. and e-mail)	—			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	—			
7	Vehicle registration No.	HR 30U 3350			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	MS Barrel supply company, Raisonepat			
9	Receiver's authorisation No.	HWM/SON/2022/26277740			
10	Waste description	Waste barrel/Amount of plastic			
11	Total quantity No. of Containers	250 Nos			
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	Use PPE's during handling			
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>			
15	Name and stamp:	Signature	Month	Day	Year
	Signature	10	19	2022	
15	Name and stamp:	Signature	Month	Day	Year
	Signature	10	19	2022	
16	Name and stamp:	Signature	Month	Day	Year
	Signature	10	19	2022	

BARREL SUPPLY CO
 PLOT NO. 167, H.S. ROAD
 RAISONEPAT

Sender copy to be sent to SPCB

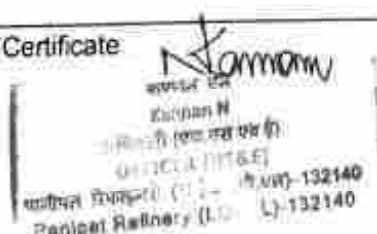
Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No.

3189

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery and Petrochemical Complex Baholi, Panipat - 132140		
2	Sender's authorisation No.	HWM/PIT/2020/7613240		
3	Manifest Document No.	2229 3189		
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuja Transport		
5	Type of vehicle	(Truck/Tanker/Special Vehicle)		
6	Transporter's registration No.	-		
7	Vehicle registration No.	HR38 U 3350 / HR38 V 6224		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	V.K. Containers, GR-153, Grampati Dham Indu. Area, BAHADURGARH - 124507.		
9	Receiver's authorisation No.	10/2017/UTL/HW/HWPCB		
10	Waste description	Empty C.S/MS. Drums		
11	Total quantity No. of Containers	- m ³ or MT 488 (244+244) Nos.		
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) C.S/MS. Drums		
13	Special handling instructions and additional information	USE PPEs		
14	Sender's Certificate	 <p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>		
Name and stamp For V. K. Containers		Month	Day	Year
		10	28	2022
15	Transporter acknowledgment of receipt of Wastes			
Name and stamp: Signature		Month	Day	Year
		10	28	2022
16	Receiver's certification for receipt of hazardous and other waste			
Name and stamp: Signature		Month	Day	Year
		10	28	2022

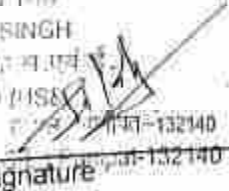

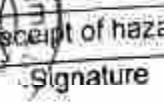
Author: _____ Signatory: _____
 Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
{See rule 19 (1)}

Sl. No.

3190

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex Bahali Panipat - 132114 HWM/PIT/2020/7613249
2	Sender's authorisation No.	
3	Manifest Document No.	3190
4	Transporter's name and address (Including Phone No. and e-mail)	
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 67C 8824
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Nilaynashayan Polychem LLP D-16745, KANDRA Industrial Estate, Area, Dharwad
9	Receiver's authorisation No.	JSPCB/HO/RNC/HWM-100 52121/2021/23
10	Waste description	VR Sludge
11	Total quantity No. of Containers	11.47 m or MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE'S
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp  Signature TILAK SINGH प्रबंधक (HWM) (प.स.प.) Manager (HWM) Panipat Refinery & Petrochemical Complex - 132114 Panipat Refinery & Petrochemical Complex - 132114	Month Day Year 10 29 2022
15	Transporter acknowledgment of receipt of Wastes Name and stamp  Signature	Month Day Year 10 29 2022
16	Receiver's certification for receipt of hazardous and other waste Name and stamp  Signature	Month Day Year 10 29 2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical C.

Indian Oil Corporation Limited

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. 3191

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex, Bahali, Panipat - 132140 2191 HW/PIST/2020/7613249			
2	Sender's authorisation No.	3191			
3	Manifest Document No.	-			
4	Transporter's name and address (Including Phone No. and e-mail)	-			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	-			
7	Vehicle registration No.	UP12AT 5992			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S. Nitay Narayan Polychem LLP, 0-16745 KANDRA Industrial Area, Gaurinagar, Dharwad.			
9	Receiver's authorisation No.	TS RCB/H-1RMC/HWM-10-52121/0021/23			
10	Waste description	UR sludge			
11	Total quantity No. of Containers	16.62	m or MT	Nos.	
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	Use PPE's.			
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.			
	Name and stamp	Signature	Month	Day	Year
			12	02	2022
15	Transporter acknowledgment of receipt of Wastes				
	Name and stamp	Signature	Month	Day	Year
			11	03	2022
16	Receiver's certification for receipt of hazardous and other waste				
	Name and stamp	Signature	Month	Day	Year
			11	03	2022

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL, Panipat Refinery & Petrochemical Complex, Village Baholi, Panipat - 132140
2	Sender's authorisation No.	HWM/P37/2020/76132493
3	Manifest Document No.	3192
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuja Transport.
5	Type of vehicle	(<input checked="" type="checkbox"/> Truck/ <input type="checkbox"/> Tanker/ <input type="checkbox"/> Special Vehicle)
6	Transporter's registration No.	HR47B8897
7	Vehicle registration No.	V.K. Containers, G.R. 158, Granpati Dham Industrial Area, Bahadurgarh - 124507
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	to/2017/UTL/HW/HSPCA HWM/HA/245601
9	Receiver's authorisation No.	Empty CAS./M.S. Drums
10	Waste description	249 Nos.
11	Total quantity No. of Containers	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
12	Physical form	USE PPE3
13	Special handling instructions and additional information	
14	Sender's Certificate	महाराज सिंह I hereby declare that the contents of consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Name and stamp: Signature	Month: 11, Day: 4, Year: 2021
16	Transporter acknowledgment of receipt of Wastes	Month: 11, Day: 5, Year: 2021
17	Name and stamp: Signature	Month: 11, Day: 5, Year: 2021
18	Receiver's certification for receipt of hazardous and other waste	Month: 11, Day: 5, Year: 2021
19	Name and stamp: Signature	

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **3193**

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL, Panipat Refinery & Petrochemical Complex, Village Bahall, Panipat - 132140			
2	Sender's authorisation No.	HWM/IT/2020/76/5249			
3	Manifest Document No.	3193			
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuja Transport			
5	Type of vehicle	<input checked="" type="checkbox"/> Truck/Tanker/Special Vehicle			
6	Transporter's registration No.	-			
7	Vehicle registration No.	HR 3QV - 6224			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	V.K. Containers, G.R. 153, Gram Patti Dham Industrial area, Bahadurgarh - 124507			
9	Receiver's authorisation No.	10/2017/UTL/MSH HS/PEB HWM/IT/HA/ 2022/2456617			
10	Waste description	Empty C.S. / M.S. drums			
11	Total quantity No. of Containers	231 Nos. <small>m³ or MT</small>			
12	Physical form	<input checked="" type="checkbox"/> (Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	U.S.E.P.P.E.M.S.			
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p><i>(Signature)</i></p>			
15	Name and stamp	Signature	Month	Day	Year
	Transporter acknowledgment of receipt of Wastes	<i>(Signature)</i>	11	15	2022
16	Name and stamp	Signature	Month	Day	Year
	Receiver's certification for receipt of hazardous and other waste	<i>(Signature)</i>	11	15	2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No.

3194

FORM 10
{See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery Petrochemical complex, Baholi Panipat - 132140
2	Sender's authorisation No.	HWM/PS T/2020/7613249
3	Manifest Document No.	3194
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuja Transport.
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 47 B 8896
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Barrel supply company Bai, Sonapat. Plot No-167 H.S.I.D.C.
9	Receiver's authorisation No.	H W U / S O N / 2 0 2 2 / 2 6 2 1 7 7 4 0
10	Waste description	waste barrels / drums of plastic
11	Total quantity No. of Containers	250 Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE's.
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp: <i>Signature</i>		Month: 11 Day: 16 Year: 2022
15	Transporter acknowledgment of receipt of Wastes	Month: 11 Day: 16 Year: 2022
Name and stamp: <i>Signature</i>		Month: 11 Day: 16 Year: 2022
16	Receiver's acknowledgment for receipt of hazardous and other waste	Month: 11 Day: 16 Year: 2022
Name and stamp: <i>Signature</i>		Month: 11 Day: 16 Year: 2022

BARREL SUPPLY CO.
PLOT NO 1671, H.S.I.D.C.

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
(See rule 19 (1))

SI No: **3195**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	I ocl Panipat Refinery & Petrochemicals complex, Bahali, Panipat - 132140			
2	Sender's authorisation No	HW M / PIT / 2020 / 7613249			
3	Manifest Document No.	3195			
4	Transporter's name and address (Including Phone No. and e-mail)	Amulya Transport			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.				
7	Vehicle registration No.	HR 38V 3350			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Barrel supply company Rai, Sonapat, Plot no-1671 HS IDG			
9	Receiver's authorisation No.	HW M / SON / 2022 / 26217740			
10	Waste description	Waste barrels/dums of plastic			
11	Total quantity No. of Containers	250 Nos. m or MT			
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	USE PPE'S.			
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.			
15	Name and stamp	Signature	Month	Day	Year
	Transporter acknowledgment of receipt of Wastes		11	16	2022
16	Name and stamp	Signature	Month	Day	Year
	Receiver's certification for receipt of hazardous and other waste		11	16	2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl No. **3197**

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex, Bahadur, Panipat-132140
2	Sender's authorisation No	HWM/PC/2020/76/3243
3	Manifest Document No	3197
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuj Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	-
7	Vehicle registration No.	HR385-6861
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Barrel supply company Rai, Panipat, Plot No-1671 H S PC
9	Receiver's authorisation No.	HVV/SON/2022/26217740
10	Waste description	Waste barrels / drums of Plastic
11	Total quantity No. of Containers	258/- Nos. m or MT
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE's.
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp: Signature		Month Day Year
Signature: [Signature]		11 20 2022
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp: Signature		Month Day Year
Signature: [Signature]		11 20 2022
16	Receiver's certification for receipt of hazardous and other waste	
Name and stamp: Signature		Month Day Year
Signature: [Signature]		11 20 2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited

Indian Oil Corporation Limited Panipat Refinery & Petrochemical Complex FORM 10 (See rule 19 (1))

Sl. No.

3198

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex, Baholi, Panipat, 132140		
2	Sender's authorisation No.	HWM/PET/2020/76/3249		
3	Manifest Document No.	3198		
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuja Transport		
5	Type of vehicle	(Truck/Tanker/Special Vehicle)		
6	Transporter's registration No.	-		
7	Vehicle registration No.	HR 47 B 8897		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S. Bansal supply company Rail, Panipat, Plot No-167-1 H.S. TE DC		
9	Receiver's authorisation No.	HWM/SON/2022/2621 7740		
10	Waste description	Waste barrels / drums of plastic		
11	Total quantity No. of Containers	m ³ or MT 242/- Nos		
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Sturry/Liquid)		
13	Special handling instructions and additional information	USE PPE.		
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <div style="text-align: right; margin-top: 10px;"> Name and stamp: _____ Signature: _____ Month: 11 Day: 28 Year: 2022 </div>		
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: _____ Signature: _____ Month: 10 Day: 20 Year: 2022		
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp: _____ Signature: _____ Month: 11 Day: 30 Year: 2022		

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10

Sl No: **3199**

(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex, Bahadur Panipat 132140		
2	Sender's authorisation No.	HUM/RET/2020/7613249		
3	Manifest Document No.	3199		
4	Transporter's name and address (Including Phone No. and e-mail)	-		
5	Type of vehicle	(Truck/Tanker/Special Vehicle)		
6	Transporter's registration No.	UP12 AT 2426 ^{JSPCB/HW}		
7	Vehicle registration No.	UP12 AT 2426		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Md. Jayaraman Poly chemical P. O-16745, KANDRA Industrial Area, Gurindpur, Dharambad.		
9	Receiver's authorisation No.	JSPCB/HW/RMC/HWM-100 S2 121/2021/23		
10	Waste description	PCC spent catalyst		
11	Total quantity No. of Containers	31.180 m or MT Nos.		
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)		
13	Special handling instructions and additional information	Use PPE's.		
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p><i>(Signature)</i> Director, Verma Panipat Refinery & Petrochemical Complex Panipat - 132140</p>		
15	Transporter acknowledgment of receipt of Wastes	Name and stamp <i>(Signature)</i>	Signature <i>(Signature)</i>	Month: 11, Day: 30, Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp <i>(Signature)</i>	Signature <i>(Signature)</i>	Month: 11, Day: 30, Year: 2022

Sender copy to be sent to SPCB

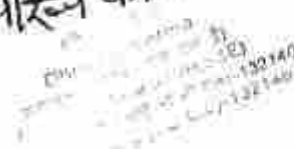
Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No

220

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery Petrochemical complex, Bahadur, Panipat 132140 HUM/PT/2020/7613249		
2	Sender's authorisation No.	3200		
3	Manifest Document No.	←		
4	Transporter's name and address (Including Phone No. and e-mail)	(Truck/Tanker/Special Vehicle)		
5	Type of vehicle	SS PCB / HORMC / HUM-100212/2021		
6	Transporter's registration No.	HRSBC9485		
7	Vehicle registration No.	MIS Nilay Narayan Polychem LLP, D-1674 S, KANORA Industrial Area, Gurgaon, Haryana, India.		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Ground floor, Dhanbad, JSPCB/HO/RMC/HUM-100		
9	Receiver's authorisation No.	32121/2021/123		
10	Waste description	Spent clay.		
11	Total quantity No. of Containers	25.98 m ³ or MT Nos.		
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)		
13	Special handling instructions and additional information	USE PPE'S.		
14	Sender's Certificate	<p align="center">I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p align="center">स्वीकृत वस्तु</p> <p align="center">  Name and stamp: स्वीकृत वस्तु Signature: स्वीकृत वस्तु Month: 12, Day: 01, Year: 2022 </p>		
15	Transporter acknowledgment of receipt of Wastes	<p align="center">Name and stamp: सुनील Signature: सुनील Month: 12, Day: 01, Year: 2022</p>		
16	Receiver's certification for receipt of hazardous and other waste	<p align="center">Name and stamp: सुनील Signature: सुनील Month: 12, Day: 01, Year: 2022</p>		

Sender copy to be sent to SPCB

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex, Bahad, Panipat 132140 HWM/PIT/2020/7613249			
2	Sender's authorisation No.	2201			
3	Manifest Document No.	-			
4	Transporter's name and address (Including Phone No. and e-mail)	(Truck/Tanker/Special Vehicle)			
5	Type of vehicle	JSPCB/HO/RNC/HWM-1005221 2021/23			
6	Transporter's registration No.	HR45C2215			
7	Vehicle registration No.	M/S Nilay Narayan Polychem LLP, D-16745, KAN PRM Industrial Area, Gurgaon, Haryana			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	JSPCB/HO/RNC/HWM-100 S2121/2021/23			
9	Receiver's authorisation No.	Spent clay			
10	Waste description	22.91 E22.91) M.T. Nos			
11	Total quantity No. of Containers	M/ or MT Nos			
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)			
13	Special handling instructions and additional information	USE PPE			
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.			
Name and stamp		Signature	Month	Day	Year
Signature		Month	Day	Year	
Transporter acknowledgment of receipt of Wastes		Signature	Month	Day	Year
Name and stamp		Signature	Month	Day	Year
Receiver's certification for receipt of hazardous and other waste		Signature	Month	Day	Year
Name and stamp		Signature	Month	Day	Year

Sender copy to be sent to SPCB


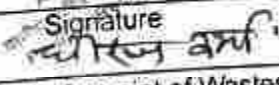



Indian Oil Corporation Limited

Indian Oil Corporation Limited Panipat Refinery & Petrochemical Complex

Sl. No. **3202**

FORM 10
{See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex, Bahali, Panipat - 132140
2	Sender's authorisation No.	HWM/PIR/2020/7613249
3	Manifest Document No.	3202
4	Transporter's name and address: (Including Phone No. and e-mail)	—
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	JSPCB/100/RNC/HWM-005741 2021/23
7	Vehicle registration No.	PB 13 BE 9786
8	Receiver's name and mailing Address: (Including Phone No. and e-mail)	M/S Anilay Narayan Polychem LLP, P-16745, KANDRA Industrial Area, Gwalior, Madhya Pradesh
9	Receiver's authorisation No.	JSPCB/100/RNC/HWM/100 S2121/2021/23
10	Waste description	Spent Catalyst (FCC)
11	Total quantity No. of Containers	29.900 m ³ or MT. <input checked="" type="checkbox"/> Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	USE PPE'S.
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p style="text-align: right;">  Dheeraj Verma Assistant Manager (HSE) Panipat Refinery & Petrochemical Complex Bahali, Panipat - 132140 </p>
15	Name and stamp	Signature:  Month: 12, Day: 03, Year: 2022
	Transporter acknowledgment of receipt of Wastes	Signature:  Month: 12, Day: 03, Year: 2022
16	Name and stamp	Signature:  Month: 12, Day: 03, Year: 2022
	Receiver's certification for receipt of hazardous and other waste	Signature:  Month: 12, Day: 03, Year: 2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
(See rule 19 (1))

Sl. No. **3703**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex - Baholi, Panipat - 132140
2	Sender's authorisation No.	HWRD/PIT/2020/9613249
3	Manifest Document No.	8203
4	Transporter's name and address (Including Phone No. and e-mail)	Rubamin PVT LTD
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	—
7	Vehicle registration No.	UP16AU5735
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Rubamin PVT. LTD Mansa Vadodara - 390016
9	Receiver's authorisation No.	UPCB/AWH-106975/ 2020-25
10	Waste description	Spent Catalyst (LHPT)
11	Total quantity No. of Containers	16.06 g/or MT Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid
13	Special handling instructions and additional information	USE PPE'S
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature: <i>Pankaj Kumar</i> Pankaj Kumar Officer (HS & E) Panipat Refinery (I.O.C.L.) 132140
		Month: 12 Day: 06 Year: 2020
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp	Signature: <i>Ajay Kumar</i> Month: 12 Day: 06 Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature: <i>[Signature]</i> Month: 12 Day: 06 Year: 2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **3384**

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Baholi Panipat 132140			
2	Sender's authorisation No.	Hwm/PIT/2020/743299			
3	Manifest Document No.	3204			
4	Transporter's name and address (Including Phone No. and e-mail)	Rubamir Pvt Ltd			
5	Type of vehicle	(Truck/Tanker/Special Vehicle)			
6	Transporter's registration No.	—			
7	Vehicle registration No.	UP16AU9278			
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Rubamir Pvt. Ltd Narva - Madadara - 390016			
9	Receiver's authorisation No.	UPCB/AWH - 106975/ 2020-25			
10	Waste description	spent catalyst (PHDT)			
11	Total quantity No. of Containers	13.19	or MT	Nos.	
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid.			
13	Special handling instructions and additional information	Use PPEs			
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.			
15	Name and stamp:	Signature	Month	Day	Year
	Transporter acknowledgment of receipt of Wastes	Signature	Month	Day	Year
16	Name and stamp:	Signature	Month	Day	Year
	Receiver's certification for receipt of hazardous and other waste	Signature	Month	Day	Year

Sender copy to be sent to SPCB

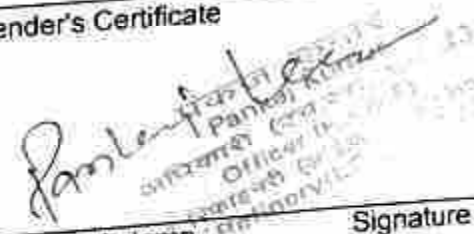
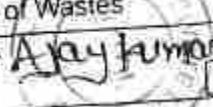
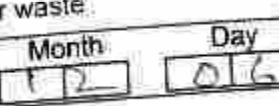
**Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex**

Sl. No.

3205

**FORM 10
(See rule 19 (1))**

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical complex Bakoli Panipat 132140
2	Sender's authorisation No.	HWM/PIT/2020/2613249
3	Manifest Document No.	3205
4	Transporter's name and address (Including Phone No. and e-mail)	Rubawin PVT LTD
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	—
7	Vehicle registration No.	UP78FT1044
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Rubawin PVT. LTD Gurgaon - Haryana - 390016
9	Receiver's authorisation No.	UPCB/AWH-106975 2020-20
10	Waste description	Spent Catalyst (DHP)
11	Total quantity No. of Containers	10.06 or MT Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	 Name and stamp: Panipat Refinery Signature: _____ Month: 12 Day: 06 Year: 2022	
15	Transporter acknowledgment of receipt of Wastes	 Name and stamp: _____ Signature: _____ Month: 12 Day: 06 Year: 2022
	Name and stamp: _____ Signature: _____ Month: 12 Day: 06 Year: 2022	
16	Receiver's certification for receipt of hazardous and other waste.	 Name and stamp: _____ Signature: _____ Month: 12 Day: 06 Year: 2022
	Name and stamp: _____ Signature: _____ Month: 12 Day: 06 Year: 2022	

Sender copy to be sent to SPCB

Indian Oil Corporation Limited







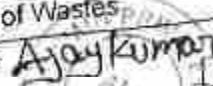
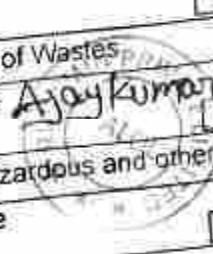
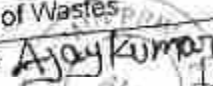
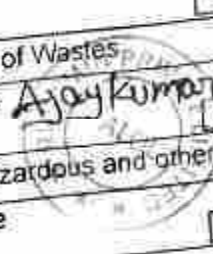
Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No.

3206

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	100L Panipat Refinery & Petrochemical complex Baholi Panipat - 182140
2	Sender's authorisation No.	HWRD/PIT/2020/2613249
3	Manifest Document No.	3206
4	Transporter's name and address (Including Phone No. and e-mail)	Rubamin PVT LTD
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	—
7	Vehicle registration No.	UP78UT 7397
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Rubamin PVT LTD Narna - Vadodara - 390016
9	Receiver's authorisation No.	GPCB/AWH - 106975/ 2022
10	Waste description	Spent catalyst (DHD)
11	Total quantity No. of Containers	11.93 Nos. <input checked="" type="checkbox"/> or MT
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid
13	Special handling instructions and additional information	use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp:   Signature		
Name and stamp:   Signature		
Name and stamp:   Signature		
15	Transporter acknowledgment of receipt of Wastes	Month: 12, Day: 06, Year: 2022
Name and stamp:   Signature		Month: 12, Day: 06, Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	Month: 12, Day: 06, Year: 2022
Name and stamp:   Signature		Month: 12, Day: 06, Year: 2022



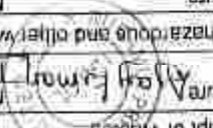
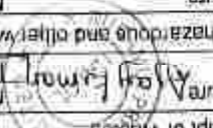
Sender copy to be sent to SPCB

Sl. No. 3207

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	101 Kalyanpur Kalyanpur & Petrochemical Complex Panipat (Haryana) - 132114
2	Sender's authorisation No.	HTM/PIT/2020/313249
3	Manifest Document No.	8207
4	Transporter's name and address (Including Phone No. and e-mail)	Kalyanpur Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	A
7	Vehicle registration No.	UP 28CN 4316
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Kalyanpur Pvt Ltd Kalyanpur - Vadodra - 390016
9	Receiver's authorisation No.	UPR/AVH-106735/2020-21
10	Waste description	Spent Catalyst (DHT)
11	Total quantity No. of Containers	15.43 of MT
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Name and stamp:  Signature:  Month: 12, Day: 03, Year: 2020
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp:  Signature:  Month: 12, Day: 07, Year: 2020

Sender copy to be sent to SPCB

3208

SI No.

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	Local Panipat Refinery & Petrochemical Complex Panipat, Panipat - 132145
2	Sender's authorisation No.	Harn/PT/2020/2613249
3	Manifest Document No.	3208
4	Transporter's name and address: (including Phone No. and e-mail)	Rubawin Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP28RT-9199
8	Receiver's name and mailing Address (including Phone No. and e-mail)	Rubawin Pvt Ltd Gurgaon - Haryana - 1220016
9	Receiver's authorisation No.	UP28RT/11/11-106957 2020-2025
10	Waste description	Spent catalyst (DHT)
11	Total quantity No. of Containers	15.97 MT
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slimy/Liquid) Solid.
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
14	Name and stamp: Signature	[Signature] Panipat Refinery & Petrochemical Complex Panipat - 132145
15	Transporter acknowledgment of receipt of Wastes	
15	Name and stamp: Signature	[Signature] Panipat Refinery & Petrochemical Complex Panipat - 132145
16	Receiver's certification for receipt of hazardous and other waste	
16	Name and stamp: Signature	[Signature] Panipat Refinery & Petrochemical Complex Panipat - 132145

Sender copy to be sent to SPCB

1	Sender's name and mailing address (Including Phone No. and e-mail)	IOCL Panipat Refinery & Petrochemical Complex Panipat - 132140
2	Sender's authorisation No.	H1000/PT/0000/9613249
3	Manifest Document No.	3209
4	Transporter's name and address (Including Phone No. and e-mail)	Rubani Pvt Ltd
5	Type of vehicle	[Truck/Tanker/Special Vehicle]
6	Transporter's registration No.	
7	Vehicle registration No.	UP 18 CT - 3297
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	Rubani Pvt Ltd Panipat - 132140
9	Receiver's authorisation No.	H1000/PT/0000/9613249
10	Waste description	Spent catalyst (DHT)
11	Total quantity No. of Containers	15.84 M or MT
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid.
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Name and stamp Signature Month Day Year
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp Signature Month Day Year

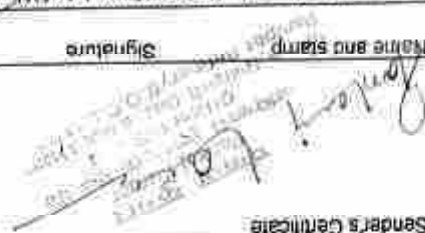
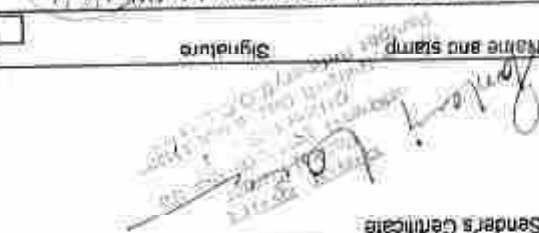
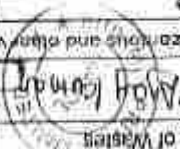
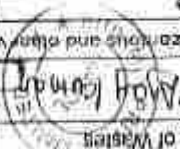
Sender copy to be sent to SPCB

SI No. 3210

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

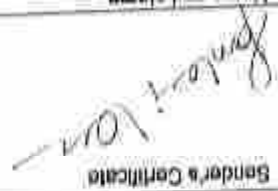

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	Indl. Petrochem. Refinery & Petrochemical Complex Panipat (Haryana) - 132140
2	Sender's authorisation No.	Hans/P/T/2020/9813299
3	Manifest Document No.	3210
4	Transporter's name and address (including Phone No. and e-mail)	Rubowin Pvt. LTD
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP98DN-6603
8	Receiver's name and mailing address (including Phone No. and e-mail)	Rubowin Pvt. LTD Gurgaon - 122009
9	Receiver's authorisation No.	UP98DN-6603
10	Waste description	Spent catalyst (SHHP)
11	Total quantity No. of Containers	16.41 Nos. of MT
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slurry/Liquid) Solid
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Signature:  Name and stamp: 
16	Receiver's certification for receipt of hazardous and other waste	Signature:  Name and stamp: 

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
 SI No. **3241**

MANIFEST FOR HAZARDOUS AND OTHER WASTE
FORM 10
 (See rule 18 (1))

1	Sender's name and mailing address (including phone No. and e-mail)	INR (Panipat) Refinery & Petrochemical Complex Panipat, Haryana - 121401 Harm/PT/F200/9613249
2	Sender's authorization No.	3241
3	Manifest Document No.	3241
4	Transporter's name and address (including phone No. and e-mail)	M/s. Kuberam Puri UD
5	Type of vehicle	(Truck/Tramper/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR 216 AU - 2768
8	Receiver's name and mailing Address (including phone No. and e-mail)	M/s. Kuberam Puri UD Panipat, Haryana
9	Receiver's authorization No.	HR/PT/F200/9613249
10	Waste description	Special Category (SURT)
11	Total quantity	12.866 MT
12	Physical form	Solid
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Name and stamp Signature Transporter acknowledgment of receipt of waste	 Name and stamp Signature Transporter acknowledgment of receipt of waste
16	Name and stamp Signature Receiver's certificate for receipt of hazardous and other waste	 Name and stamp Signature Receiver's certificate for receipt of hazardous and other waste
17	Name and stamp Signature Date	Month: 12, Day: 02, Year: 2022

Sender copy to be sent to DPCC

SI No. 3242

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	100 Panipat Refinery & Petrochemical Complex Panipat Refinery - 132104
2	Sender's authorisation No.	H/000/P17/0000/28102-09
3	Manifest Document No.	3042
4	Transporter's name and address (Including Phone No. and e-mail)	M/s. Subashini Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	GU6AV-8658
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/s. Subashini Pvt Ltd Panipat Refinery
9	Receiver's authorisation No.	UPR/1000-106935/00000
10	Waste description	Spent catalyst (Dimer)
11	Total quantity No. of Containers	15.220 MT
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE
14	Senders Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Waste Name and stamp Signature	12/08/2019
16	Receiver's declaration for receipt of hazardous and other waste Name and stamp Signature	12/08/2019

Sender copy to be sent to SPCC

3243

Sl. No.

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address: (Including Phone No. and e-mail)	1001. Kalyan Pvt Ltd Petrochemical Complex Panipat, Haryana - 132142
2	Sender's authorisation No.	8043
3	Manifest Document No.	8043
4	Transporter's name and address: (Including Phone No. and e-mail)	Kalyan Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UPA818T5109
8	Receiver's name and mailing Address: (Including Phone No. and e-mail)	
9	Receiver's authorisation No.	M/s Kalyan Pvt Ltd Narva - Madhya UPR/ANH-10695/2007 No. of MI 15.49 Nos.
10	Waste description	
11	Total quantity No. of Containers	
12	Physical form	(Solid/Semi-Solid/Sudge/City/Tarry/Slurry/Liquid) Solid
13	Special handling instructions and additional information	use pellets
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labeled and are in all respects in proper conditions for transport by road according to applicable national government regulations
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: _____ Signature: _____ Month: 10, Day: 09, Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp: _____ Signature: _____ Month: 10, Day: 09, Year: 2022

Sender copy to be sent to SPCB



Sender's Certificate
Panipat Refinery & Petrochemical Complex
Indian Oil Corporation Limited
Panipat, Haryana - 132142

MANIFEST FOR HAZARDOUS AND OTHER WASTE
(See rule 19 (1))
FORM 10


1	Sender's name and mailing address (Including Phone No. and e-mail)	Local Panipat Refinery Panipat Refinery - 132140 Panipat Refinery - 132140
2	Sender's authorisation No.	HRM/P17/2020/7413249
3	Manifest Document No.	3244
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Rubanum Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP 28 CT 3323
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/s Rubanum Pvt Ltd Panipat Refinery - 132140
9	Receiver's authorisation No.	M/s Rubanum Pvt Ltd Panipat Refinery - 132140 Panipat Refinery - 132140
10	Waste description	Spent catalyst (DHT)
11	Total quantity No. of Containers	17.80 / (M)
12	Physical form	Solid (Solid/Semi-Solid/Sludge/Liquid/Tarry/Slimy/Liquid)
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p><i>(Signature)</i> Panipat Refinery - 132140 Panipat Refinery - 132140 Panipat Refinery - 132140</p>
15	Transporter acknowledgment of receipt of Wastes	
16	Receiver's certification for receipt of hazardous and other waste	

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
 SI. No. **3145**

FORM 10
 (See rule 19 (1))

3145

1	Sender's name and mailing address (including Phone No. and e-mail)	loc Panipat Refinery & Petrochemical Complex Panipat - 132140
2	Sender's authorisation No.	HWP/PT/2020/253249
3	Manifest Document No.	3245
4	Transporter's name and address: (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd
5	Type of vehicle (Truck/Tanker/Special Vehicle)	
6	Transporter's registration No.	
7	Vehicle registration No.	UP4BDT4301
8	Receiver's name and mailing Address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd Narwa-Vadodara 390016
9	Receiver's authorisation No.	uptc/awh-106925/panow uptc
10	Waste description	Spent catalyst (HPT)
11	Total quantity No. of Containers	18.12 Nos. <input checked="" type="checkbox"/> or MT
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use pellets
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p align="right">  Janki Lal Director, Panipat Refinery & Petrochemical Complex Indian Oil Corporation Limited Panipat - 132140 </p>
15	Transporter's acknowledgment of receipt of Wastes	<p>Name and stamp: _____ Signature: _____ Month: _____ Day: _____ Year: _____</p>
16	Receiver's certification for receipt of hazardous and other waste	<p>Name and stamp: _____ Signature: _____ Month: _____ Day: _____ Year: _____</p>

Sender copy to be sent to SPCB

1	Sender's name and mailing address (including Phone No. and e-mail)	Local Panipat Refinery & Petrochemical Complex Bahawal Panipat - 132100
2	Sender's authorization No.	HTMP/PT/2020/2813299
3	Manifest Document No.	3246
4	Transporter's name and address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP78GN1599
8	Receiver's name and mailing Address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd Gurgaon - Vadodra - 390016
9	Receiver's authorization No.	GP28/19011-106975/20075
10	Waste description	Spent catalyst (DPPD)
11	Total quantity No. of Containers	15.92 No. of MT
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slimy/Liquid) Solid
13	Special handling instructions and additional information	Use PPE'S
14	Senders Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: _____ Signature: _____ Month: 12, Day: 09, Year: 2022
16	Receiver's certification for receipt of hazardous and other wastes	Name and stamp: _____ Signature: _____ Month: 12, Day: 09, Year: 2022

Sender copy to be sent to SPCA

3246

MANIFEST FOR HAZARDOUS AND OTHER WASTE

(See rule 15 (1))

FORM 10

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No.



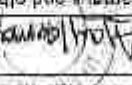
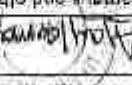
3247

Sl. No.

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	Panipat Refinery & Petrochemical Complex - 102140 Bahadur Panipat - 102140
2	Sender's authorisation No.	HMO/PIT/2000/213249
3	Manifest Document No.	3247
4	Transporter's name and address (including Phone No. and e-mail)	M/s Rubanum Pvt Ltd
5	Type of vehicle	(Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP28UT-3392
8	Receiver's name and mailing address (including Phone No. and e-mail)	M/s Rubanum Pvt Ltd Nurva - Vadodra - 390016
9	Receiver's authorisation No.	INPR/ARH-106925/2020-25
10	Waste description	DHDT spent catalyst
11	Total quantity No. of Containers	11.44 <input checked="" type="checkbox"/> For MT
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tamy/Slurry/Liquid) Solid
13	Special handling instructions and additional information	use PPEs
14	Senders Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of waste	Name and stamp:  Signature:  Month: 12, Day: 10, Year: 2022
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp:  Signature:  Month: 12, Day: 10, Year: 2022

Gender copy to be sent to SPCB

SI. No. 3248

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	BDCL Panipat Refinery & Petrochemical Complex Panipat, Haryana - 132140 H.O. No. P/11/2020/132140
2	Sender's authorisation No.	3248
3	Manifest Document No.	3248
4	Transporter's name and address (including Phone No. and e-mail)	Paik Rubanwin Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	UP 28 FT 1044
7	Vehicle registration No.	UP 28 FT 1044
8	Receiver's name and mailing Address (including Phone No. and e-mail)	Paik Rubanwin Pvt Ltd Kurva - Vadodra - 390016 G.P. No. / MCH - 106925/2020-21
9	Receiver's authorisation No.	
10	Waste description	DHT spent catalyst
11	Total quantity No. of Containers	10.92 ✓ or MT Nos.
12	Physical form	Solid
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: [Signature] Signature: [Signature] Month: 12, Day: 10, Year: 2020
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp: [Signature] Signature: [Signature] Month: 12, Day: 10, Year: 2020

Sender copy to be sent to SPCB

MANIFEST FOR HAZARDOUS AND OTHER WASTE
 FORM 10
 (See rule 19 (1))

1	Sender's name and mailing address (Including Phone No. and e-mail)	Local Panipat Refinery & Petrochemical Complex Panipat, Haryana - 132140
2	Sender's authorisation No.	HWM/PIT/2020/7613249
3	Manifest Document No.	8249
4	Transporter's name and address (Including Phone No. and e-mail)	DVS TECH
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UT16AW0461
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S SHREE CEMENT-LTD Rajasthan
9	Receiver's authorisation No.	RPCB/HWM/2020-21/ CPM/HW/69
10	Waste description	Organic Residue
11	Total quantity No. of Containers	27.02 Tons
12	Physical form	(Solid/Semi-Solid/Sludge/Oil/Ferry/Slurry/Liquid) Semi-solid
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, labeled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: _____ Signature: _____ Month: 12, Day: 12, Year: 2020
16	Receiver's acknowledgment for receipt of hazardous and other waste	Name and stamp: _____ Signature: _____ Month: 12, Day: 12, Year: 2020

Sender copy to be sent to SPCB



3250

SI. No.

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	101 Panipat Refinery & Petrochemical Complex Panipat - 132140
2	Sender's authorisation No.	H010/P17/2020/3619249
3	Manifest Document No.	3250
4	Transporter's name and address: (including Phone No. and e-mail)	Tejs Rubberwala Pvt Ltd Panipat - 132140
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UT16AUS968
8	Receiver's name and mailing Address (including Phone No. and e-mail)	Tejs Rubberwala Pvt Ltd Panipat - 132140
9	Receiver's authorisation No.	UPCB/PHW-106975/2020-25
10	Waste description	DHT spent catalyst
11	Total quantity No. of Containers	19.26 / or MT Nos
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tamy/Silury/Liquid) solid
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignments are fully and accurately described above by proper shipping name and are categorized packed marked, and labeled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp Signature	Month 12 Day 2 Year 2021
15	Transporter acknowledgment of receipt of Wastes	Month 12 Day 2 Year 2021
	Name and stamp Signature	Month 12 Day 2 Year 2021
16	Receiver's certification for receipt of hazardous and other waste	Month 12 Day 2 Year 2021
	Name and stamp Signature	Month 12 Day 2 Year 2021

Sendet copy to be sent to SPCCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
 SI. No. **3251**
FORM 10
(See rule 18 (1))
MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	1001 (Imp) Pat Refinery, Petrochemical Complex, Panipat, Haryana-132140
2	Sender's authorization No.	H/1001/PTR/2020/9613249
3	Manifest Document No.	3251
4	Transporter's name and address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HJ-16 AU 5731
8	Receiver's name and mailing Address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd, Nurga, Wadodara - 370016
9	Receiver's authorization No.	Impce/ANM-106975/9000-05
10	Waste description	HPDT spent catalyst
11	Total quantity No. of Containers	12.15 <input checked="" type="checkbox"/> M. <input type="checkbox"/> Nos.
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid) Solid
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked, labeled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and stamp	Signature
	Name and stamp	Signature
15	Transporter acknowledgment of receipt of Waste	
	Name and stamp	Signature
16	Receiver's certification for receipt of hazardous and other waste	
	Name and stamp	Signature
	Month	Day
	Year	Day
	Year	Day

Sender copy to be sent to SI/CI

Sl. No. 3252

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address: (including phone No. and e-mail)	Local Panipat Refinery & Petrochemical Complex Balli - 132140 HWN/P17/2020/2613249
2	Sender's authorisation No.	3252
3	Manifest Document No.	
4	Transporter's name and address (including phone No. and e-mail)	M/S Rubawin Pvt Ltd
5	Type of vehicle (Truck/Tanker/Special Vehicle)	
6	Transporter's registration No.	
7	Vehicle registration No.	UP88CT3297
8	Receiver's name and mailing Address: (including phone No. and e-mail)	M/S Rubawin Pvt Ltd Gurgaon Vaddodara 390016
9	Receiver's authorisation No.	UPCB/AWH-106975/2020-22
10	Waste description	DHD spent catalyst
11	Total quantity No. of Containers	16.84 / or MT Nos
12	Physical form (Solid/Semi-Solid/Sludge/Oily/Tarry/Slimy/Liquid)	Solid
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p><i>Panipat Refinery</i></p>
15	Transporter acknowledgment of receipt of Wastes	
	Name and stamp: Signature	<i>Panipat Refinery</i>
	Receiver's certification for receipt of hazardous and other waste	
15	Name and stamp: Signature	
	Name and stamp: Signature	

Sender copy to be sent to SPCB

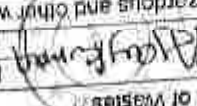

3253

Sl. No.

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	loc. Panipat Refinery & Petrochemical complex Balloli - 132140 HNM/PI/2020/2613249
2	Sender's authorisation No.	3253
3	Manifest Document No.	3253
4	Transporter's name and address (Including Phone No. and e-mail)	P/s Rubowin Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	UP78GN4316
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/s Rubowin Pvt Ltd Nehru Vadodra - 390016
9	Receiver's authorisation No.	MPCB/MAH-106925/2008
10	Waste description	CHD1 spent catalyst
11	Total quantity No. of Containers	15.67 <input checked="" type="checkbox"/> or M/L Nos. _____
12	Physical form	(Solid/Semi-Solid/Sudge/City/Tarry/slurry/Liquor) solid
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes Name and stamp Signature	 Month 10, Day 10, Year 2020
16	Receiver's certification for receipt of hazardous and other waste Name and stamp Signature	 Month 10, Day 10, Year 2020

Sender copy to be sent to SPCB

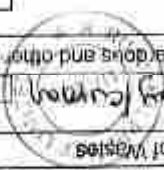
SI. No. 3254

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

MANIFEST FOR HAZARDOUS AND OTHER WASTE
FORM 10
(See rule 19 (1))

1	Sender's name and mailing address (including Phone No. and e-mail)	local Panipat Refinery & Petrochemical Complex Panipat
2	Sender's authorisation No.	H/01/P/2020/1613249
3	Manifest Document No.	3254
4	Transporter's name and address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	UPA8DN6603
7	Vehicle registration No.	
8	Receiver's name and mailing Address (including Phone No. and e-mail)	M/s Rubanwin Pvt Ltd Narva Vadodra 390016
9	Receiver's authorisation No.	UPCB/ANW-106935/2020-25
10	Waste description	DHD spent catalyst
11	Total quantity No of Containers	10.65 m ³ or MT
12	Physical form	Solid (Solid/Semi-Solid/Sudge/Oily/Tarry/Slimy/Liquid)
13	Special handling instructions and additional information	use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Signature: _____ Month: 12, Day: 12, Year: 2020
16	Receiver's certification for receipt of hazardous and other waste	Signature: _____ Month: 12, Day: 12, Year: 2020
	Name and stamp:	Signature: _____ Month: 12, Day: 12, Year: 2020

Sender copy to be sent to SPCB



Panipat Refinery

3255

Sl. No.

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	EOLR Refinery Panipat and Refinery Complex, Bahadur Fort, Panipat
2	Sender's authorisation No.	HUMIPRT/2020/3813245
3	Manifest Document No.	3255
4	Transporter's name and address (including Phone No. and e-mail)	-
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	-
7	Vehicle registration No.	HR4SD2619
8	Receiver's name and mailing Address (including Phone No. and e-mail)	M/S Shree Kant Industries, Sikandarpur, Bahadur Fort, Panipat
9	Receiver's authorisation No.	18101 dated 16/8/2022
10	Waste description	Spent Chromite Grounded
11	Total quantity No. of Containers	15-500 M/GMT
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE's.
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p> <p>Director, District Industries Centre, Panipat</p> <p>Official Stamp: District Industries Centre, Panipat</p>
15	Transporter acknowledgment of receipt of Wastes	<p>Name and stamp: M/S Shree Kant Industries Signature: [Signature]</p> <p>Month: 12, Day: 19, Year: 2022</p>
16	Receiver's certification for receipt of hazardous and other waste	<p>Name and stamp: [Signature] Signature: [Signature]</p> <p>Month: 12, Day: 19, Year: 2022</p>
18	Name and stamp Signature	<p>Name and stamp: [Signature] Signature: [Signature]</p> <p>Month: 12, Day: 19, Year: 2022</p>

Sender copy to be sent to SPCB

MANIFEST FOR HAZARDOUS AND OTHER WASTE

FORM 10
 (See rule 19 (1))

1	Sender's name and mailing address: (Including Phone No. and e-mail)	1001 Panipat Refinery & Petrochemical Complex Panipat, Panipat - 132140
2	Sender's authorisation No.	H/1000/PT/0000/9612249
3	Manifest Document No.	3256
4	Transporter's name and address: (Including Phone No. and e-mail)	M/C Ashishkathi Farooq Metal Pvt Ltd
5	Type of vehicle	Truck (Tanker/Special Vehicle)
6	Transporter's registration No.	
7	Vehicle registration No.	HR38A@723
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/C Ashishkathi Farooq Metal Pvt Ltd - T1129 Panipat
9	Receiver's authorisation No.	G310/H/1000/H0/CCRB/panipat
10	Waste description	PO5 - R02 (Spent - catalyst)
11	Total quantity No. of Containers	18.40 <input checked="" type="checkbox"/> Form
12	Physical form	(Solid/Liquid/Gas/Sludge/Oily/Tarry/Silica/Liquor) Solid
13	Special handling instructions and additional information	Use ppe's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked and labeled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Waste	Name and stamp Signature Month 12 Day 22 Year 2022
16	Receiver's certification for receipt of hazardous and other waste	Name and stamp Signature Month 12 Day 22 Year 2022
18	Name and stamp	Signature Month 12 Day 22 Year 2022

Sending copy to the head in SPECA

(Handwritten Signature)
 Signature
 Month 12 Day 22 Year 2022

SI. No. 3257

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
{ See rule 19 (1) }

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1. Sender's name and mailing address (including Phone No. and e-mail)
 1001 Panipat Refinery & Petrochemical Complex
 Baholi Panipat - 132140

2. Sender's authorisation No.
 HJM/PT/2020/713249

3. Manifest Document No.
 3257

4. Transporter's name and address (including Phone No. and e-mail)
 P/S Ashwani Ferro Metal Pvt Ltd.

5. Type of vehicle
 (Truck/Tanker/Special Vehicle)

6. Transporter's registration No.

7. Vehicle registration No.
 HR38Y8107

8. Receiver's name and mailing Address (including Phone No. and e-mail)
 P/S Ashwani Ferro Metal Pvt Ltd - Tilda Raipura

9. Receiver's authorisation No.
 6310/HMD/HO/RECB/2019

10. Waste description
 PDS - R02 (Specialist)

11. Total quantity
 No. of Containers: 1513
 M or MT: N/A

12. Physical form
 (Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
 Solid

13. Special handling instructions and additional information
 use PPEs

14. Sender's Certificate
 I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper condition for transport by road according to applicable national government regulations.

Name and stamp: [Signature] [Stamp]

15. Transporter acknowledgment of receipt of Wastes
 Name and stamp: [Signature] [Stamp]

16. Receiver's certification for receipt of hazardous and other waste
 Name and stamp: [Signature] [Stamp]

Name and stamp: [Signature] [Stamp]

Sender copy to be sent to SPCB

FORM 10
 (See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address: (Including Phone No. and e-mail)	FOCL Panipat Refinery & Petrochemical Complex, Panipat, Haryana - 132140
2	Sender's authorisation No.	HWM/PRT/2022/17613245
3	Manifest Document No.	3258
4	Transporter's name and address: (Including Phone No. and e-mail)	
5	Type of vehicle	
6	Transporter's registration No.	
7	Vehicle registration No.	H R 45 B 5871
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Mitaynagar Refinery P-16745, Kharak, Panipat Dist. of Gurgaon, Haryana
8	Receiver's authorisation No.	52121/2021/23
10	Waste description	V. B. M. Sample
11	Total quantity No. of Containers	25.520 m ³ or ML
12	Physical form	(Solid/Semi-Solid/Sludge/Oil/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed marked and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Name and stamp: Signature Transporter acknowledgment of receipt of Wastes	Signature: [Signature] Month: 12, Day: 23, Year: 2022
16	Name and stamp: Signature Receiver's certification for receipt of hazardous and other waste	Signature: [Signature] Month: 12, Day: 27, Year: 2022

Sender copy to be sent to SPCB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
 SI. NO. **3259**

FORM 10
 [See rule 19 (1)]

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	101 Panipat Refinery & Petrochemical Complex Panipat, Haryana - 132140
2	Sender's authorisation No.	6310/HSMB/Ho/cees/2019
3	Manifest Document No.	3259
4	Transporter's name and address (including Phone No. and e-mail)	M/s Aashwath Ferro Metal Pvt. Ltd. - 110
5	Type of vehicle	(Truck/Tractor/Special Vehicle)
6	Transporter's registration No.	GN04NP3800
7	Vehicle registration No.	
8	Receiver's name and mailing Address (including Phone No. and e-mail)	M/s Aashwath Ferro Metal Pvt. Ltd. - 110 Panipat
9	Receiver's authorisation No.	
10	Waste description	PDS - R02 (spent catalyst)
11	Total quantity No. of Containers	17-13 <input checked="" type="checkbox"/> in MT Nos.
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slurry/Liquid) solid
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
15	Transporter acknowledgment of receipt of Wastes	Name and stamp: _____ Signature: _____ Month: 12, Day: 26, Year: 2022
16	Receiver's verification for receipt of hazardous and other waste	Name and stamp: _____ Signature: _____ Month: 12, Day: 26, Year: 2022

Sender copy to be sent to SPECB

SI. No. 3260

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	Local Panipat Refinery & Petrochemical Complex Panipat, Panipat - 132140
2	Sender's authorisation No.	H/O M/P/T/0020/9213249
3	Manifest Document No.	3260
4	Transporter's name and address (Including Phone No. and e-mail)	M/s Ashhad Water Farm Metal Pvt. Ltd.
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	HR 43A 4520
7	Vehicle registration No.	
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/s Ashhad Water Farm Metal Pvt. Ltd - TTD Rajpur
8	Receiver's authorisation No.	6310/HMD/HO/ECR/2019
10	Waste description	PDS-R02 (spent catalyst)
11	Total quantity No. of Containers	8-78 <input checked="" type="checkbox"/> or ML Nos. _____
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slimy/Liquid) Solid
13	Special handling instructions and additional information	Use PPEs
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations
14	Name and stamp Signature	<i>[Signature]</i>
15	Transporter acknowledgment of receipt of Wastes	
15	Name and stamp Signature	
16	Receiver's certification for receipt of hazardous and other waste	
16	Name and stamp Signature	<i>[Signature]</i>
	Month	12
	Day	25
	Year	2022

Sender copy to be sent to SPCCB

SI No. 3261

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex
FORM 10
(See rule 19 (1))
MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (including Phone No. and e-mail)	East Coast Refinery & Petrochemical Complex Bachchan, Panipat - 132140
2	Sender's authorisation No.	HUM1PRT/2022/3261
3	Manifest Document No.	3261
4	Transporter's name and address (including Phone No. and e-mail)	—
5	Type of vehicle	[Truck/Tanker/Special Vehicle]
6	Transporter's registration No.	—
7	Vehicle registration No.	HR 67C 8824
8	Receiver's name and mailing Address (including Phone No. and e-mail)	Indo-Industrial Akhara Bhang Patti, V.P. Panipat - 132140
9	Receiver's authorisation No.	222/492-164/17 1809/UPCB/Institution/Oil/Chemical Panipat
10	Waste description	V.R. oily sludge
11	Total quantity No. of Containers	10 x 82 110.82
12	Physical form	(Solid/Semi-Solid/Sudge/Oily/Tarry/Slimy/Liquid)
13	Special handling instructions and additional information	Use PPE's
14	Sender's Certificate	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorized, packed, marked and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations
15	Name and stamp Signature	[Signature] Month: 12, Day: 28, Year: 2022
15	Transporter acknowledgment of receipt of Wastes	[Signature] Month: 12, Day: 28, Year: 2022
16	Name and stamp Signature	[Signature] Month: 12, Day: 28, Year: 2022

Sender copy to be sent to SPCLB

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No. **3262**

FORM 10
 {See rule 19 (1)}

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	IDCL, Panipat Refinery & Petrochemical complex, Bahedi, Panipat - 132140		
2	Sender's authorisation No.	HWM/PIIT/202017 6/3249		
3	Manifest Document No.	3262		
4	Transporter's name and address (Including Phone No. and e-mail)	Ahuja Transport		
5	Type of vehicle (Truck/Tanker/Special Vehicle)	—		
6	Transporter's registration No.	—		
7	Vehicle registration No.	HR38V0484		
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Bawal supply co Ltd.		
9	Receiver's authorisation No.	H.W.U./SON/2022/2621 7740.		
10	Waste description	Waste barrel / drums of Plastic		
11	Total quantity No. of Containers	250	m or MT Nos. <input checked="" type="checkbox"/>	
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)		
13	Special handling instructions and additional information	Use PPE's.		
14	Sender's Certificate	<p>I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.</p>		
	Name and stamp	Signature	Month	Day
	Signature	Month	Day	Year
15	Transporter acknowledgment of receipt of Wastes	Month	Day	Year
	Name and stamp	Signature	Month	Day
	Signature	Month	Day	Year
16	Receiver's certificate for receipt of hazardous and other waste	Month	Day	Year
	Name and stamp	Signature	Month	Day
	Signature	Month	Day	Year

Indian Oil Corporation Limited
Panipat Refinery & Petrochemical Complex

Sl. No: **3263**

FORM 10
(See rule 19 (1))

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. and e-mail)	Block 1 Panipat Refinery & Petrochemical complex, Bahadur Panipat - 132140
2	Sender's authorisation No.	HWM / PET / 2020 / 76 / 243
3	Manifest Document No.	3263
4	Transporter's name and address (Including Phone No. and e-mail)	Ahija Transport
5	Type of vehicle	(Truck/Tanker/Special Vehicle)
6	Transporter's registration No.	-
7	Vehicle registration No.	HR38U3350
8	Receiver's name and mailing Address (Including Phone No. and e-mail)	M/S Barrel Supply Co. Ltd.
9	Receiver's authorisation No.	HWM / SON / 2022 / 262 / 7740
10	Waste description	Waste barrels / drums of plastic
11	Total quantity No. of Containers	250 Nos
12	Physical form	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information	Use SPES.
14	Sender's Certificate: <i>संलग्न फॉर्म</i>	I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised packed marked and labelled and are in all respects in proper conditions for transport by road according to applicable national government regulations.
Name and stamp: <i>संलग्न फॉर्म</i>		Signature: <i>संलग्न फॉर्म</i>
		Month: <input type="text" value="12"/> Day: <input type="text" value="30"/> Year: <input type="text" value="2022"/>
15	Transporter acknowledgment of receipt of Wastes	
Name and stamp: BARREL SUPPLY CO H.S.I.I.D.C.		Signature: <i>मनदीप</i>
		Month: <input type="text" value="12"/> Day: <input type="text" value="30"/> Year: <input type="text" value="2022"/>
16	Receiver's acknowledgment for receipt of hazardous and other waste	
Name and stamp: MANISHA KUMAR		Signature: <i>MANISHA KUMAR</i>
		Month: <input type="text" value="12"/> Day: <input type="text" value="30"/> Year: <input type="text" value="2022"/>