



गेल (इंडिया) लिमिटेड

(भारत सरकार का उपक्रम - एक महारत्न कंपनी)

GAIL (India) Limited

(A Government of India Undertaking - A Maharatna Company)

पाता पेट्रोकेमिकल्स
पो - पाता, जिला - औरैया
पिन - 206241 (उ.प्र.), भारत

PATA - PETROCHEMICALS
P.O. - PATA, DISTT.-AURAIYA
PIN - 206241 (U.P.), INDIA

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Ref. No: GAIL/PATA/SD&E/MOEF/2022/

May 26, 2022

In-Charge

Ministry of Environment, Forests & Climate Change

Kendriya Bhavan, 5th Floor

Sector- H, Aliganj,

Lucknow-226024

Subject: Submission of compliance to conditions of Environment Clearances accorded to GAIL (India) Limited, Pata for Petrochemical Complex, LPG Recovery Project, LLDPE Debottlenecking Project, HDPE Expansion & 5th Furnace Project, Expansion of Petrochemical Complex Project and Polypropylene Expansion Project.

References:

1. J-11011/22/90-IA-II Dated March 30, 1992, regarding GAIL, Pata Petrochemical Project.
2. J-11011/29/96-IA.II (I) Dated January 16, 1997, regarding LPG Recovery Facility.
3. J-11011/237/2003-IA.II (I) Dated April 19, 2004, regarding LLDPE Debottlenecking Project.
4. J-11011/143/2004 - IA II (I) Dated 12th January, 2005, regarding HDPE Expansion & 5th Furnace Project.
5. J-11011/595/2010-IA II (I), Dated 23rd May 2012, regarding Expansion of Petrochemical Complex Project.
6. J-11011/595/2010-IA(II)I, Dated 16th October 2020 regarding Polypropylene Expansion Project

Dear Sir,

Please find enclosed the compliance status of all the conditions of above referred environment clearances granted to GAIL, Pata as on 31.03.2022 for the period October 2021 to March 2022. You will appreciate that the compliance for each of the previous conditions were time bound and were implemented by us before the subject project was commissioned.

Thanking you.

Yours Sincerely,

(Ajay Asthana)

General Manager (TS)

- CC: 1. In-Charge, Central Pollution Control Board, Gomti Nagar, Lucknow.
2. Member Secretary, Uttar Pradesh Pollution Control Board, Gomti Nagar, Lucknow.

पंजीकृत कार्यालय :

गेल भवन, 16 भीकाएजी कामा प्लेस, आर.के. पुरम्,
नई दिल्ली - 110066, इंडिया

REGD. OFFICE :
GAIL BHAWAN, 16 BHIKAIJI CAMA PLACE, R.K. PURAM,
NEW DELHI - 110066, INDIA

सीआईएन/CIN
L40200DL1984G01018976

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Compliance status to conditions of Environment Clearances at GAIL (India) Limited, Pata, U.P.

Environment Clearances accorded to GAIL (India) Limited, Pata as on 31st March, 2022 are as follows:

- A. Letter No. J-11011/22/90-IA-II, Dated-30/03/1992 for GAIL, **Pata Petrochemical Project.**
- B. Letter No. J-11011/29/96-IA-II (I), Dated 16/01/1997 for **LPG Recovery Facility.**
- C. Letter No. J-11011/237/2003-IA-II (I), Dated 19/04/2004 for **LLDPE Debottlenecking Project.**
- D. Letter No. J-11011/143/2004 – IA II (I), Dated 12/01/2005 for **HDPE Expansion & 5th Furnace Project.**
- E. Letter No. J-11011/595/2010-IA II (I), Dated 23/05/2012 for **Expansion of Petrochemical Complex project.**
- F. Letter No. J-11011/595/2010-IA(II)I, Dated 16/10/2020 for **Polypropylene Expansion Project**

Name of the Project: GAIL, Pata Petrochemical Project **Project Code:** NIL

Clearance Number: J-11011/22/90-IA-II, Dated 30/03/1992

Period of Compliance: October 2021 to March 2022

Sr. No.	Condition no.	Conditions	Compliance Status
1.	i.	The Project Authority must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	All the stipulations made by the State Pollution Control Board and the State Government are adhered to. Compliance to conditions of Consent to Operate have been sent to the Uttar Pradesh Pollution Control Board.
2.	ii.	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	Any expansion of the plant is taken up only after obtaining prior approval of the Ministry. GAIL Pata has been accorded 6 ECs for different expansions as mentioned above (A, B, C, D, E & F).
3.	iii.	The project Authority must submit comprehensive EIA report for the proposed activity along with any future activity proposed / approved by this Ministry within one month.	Comprehensive EIA study was done by NEERI for the proposed plant in July 1991. Report of the study was submitted to MoEF&CC.
4.	iv.	Rehabilitation of the families whose land has been acquired for the above petrochemical complex etc. should be handled in association with the State Government authorities as per their statutory norms / guidelines.	The rehabilitation package has been developed by GAIL Pata in association with the State Government Authorities and same is implemented as per statutory norms / guidelines.
5.	v.	The gaseous emissions from	The gaseous emissions from various

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition no.	Conditions	Compliance Status
		various process units should conform to the standard prescribed by the concerned authorities from time to time. At no time the emission level should go beyond the stipulated standards. In the event of the 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 measures are rectified to achieve the desired efficiency.	process units are monitored through state of art monitoring technologies and conform to the standard prescribed by the statutory authorities. Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and UPPCB through web based system. Mitigatory control methods have been adopted at design stage in order to reduce the load of gaseous emissions from process units. However, it is pertinent to mention here that GAIL, Pata uses Natural gas as fuel, which is a clean fuel free from sulphur and particulates.
6 (a).	vi (a).	Six ambient air quality monitoring stations should be set up in the downwind direction as well as where maximum ground level concentration of NO _x and HC is anticipated in consultation with State Pollution Control Board. Monitoring should be continuous for SO ₂ , NO _x , HC and CO in at least three sites as indicated in the EIA report submitted to the Ministry. Monitoring network should be designed taking into account land use pattern, location of stacks, meteorological and topographical features including the modelling exercise / calculations.	Five fixed real time ambient air quality monitoring station and Two third party ambient air quality monitoring stations (within and outside the premises) have been setup. In addition, 1 No. Mobile Van having real time ambient air quality monitoring station is also in use for monitoring of ambient air quality. Monitoring of ambient air quality is continuous for SO ₂ , NO ₂ , Total Hydrocarbons, CO, PM ₁₀ , PM _{2.5} and Benzene at five fixed real time ambient air quality monitoring stations and one mobile van. The locations covered by the stations have been fixed in consultation with the Pollution Control Board considering location of existing stacks, wind direction and other topographical features. Air modelling studies have been carried out by NEERI during EIA studies and the recommendations are followed.
6 (b).	vi (b).	All the stacks of the plant must be provided with automatic stack emission monitoring equipment. Stack emission and ambient air quality data must be submitted to State Pollution Control Board once in three	All the stacks of the plant are equipped with automatic stack emission monitoring equipment i.e. Online Continuous Emission Monitoring System (OCEMS). Presently the stacks are also connected to CPCB and UPPCB servers for continuous online monitoring of

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		months and this ministry in six months along with statistical analysis.	<p>parameters viz. CO, SO₂, NO₂ and PM. The average value of data of stack monitoring carried out by MoEF&CC approved and NABL accredited third party during the period October, 2021 - March, 2022 is given below:</p> <table border="1" data-bbox="895 524 1469 1962"> <thead> <tr> <th data-bbox="895 524 1134 577">Stacks</th> <th data-bbox="1134 524 1209 577">PM</th> <th data-bbox="1209 524 1294 577">SO₂</th> <th data-bbox="1294 524 1378 577">NO_x</th> <th data-bbox="1378 524 1469 577">CO</th> </tr> </thead> <tbody> <tr> <td data-bbox="895 577 1134 680">Standard (mg/Nm³)</td> <td data-bbox="1134 577 1209 680">10/ 5</td> <td data-bbox="1209 577 1294 680">50</td> <td data-bbox="1294 577 1378 680">350/ 250</td> <td data-bbox="1378 577 1469 680">150/ 100</td> </tr> <tr> <td colspan="2" data-bbox="895 680 1134 770"></td> <td colspan="3" data-bbox="1134 680 1469 770">Average value (mg/Nm³)</td> </tr> <tr> <td data-bbox="895 770 1134 860">LLDPE-1 Dowtherm A</td> <td data-bbox="1134 770 1209 860">1.9</td> <td data-bbox="1209 770 1294 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UB-1	3.1	16.9	37.9	31.4	Power Plant-1- UB-2	1.7	14.1	23.9	39.2	Power Plant-1- UB-3	2.2	12.7	24.2	42.9	Power Plant-2- UB-1	1.8	11.0	24.6	37.3	Power Plant-2- UB-2	1.5	13.8	22.1	41.5	HRSG- 1	2.1	9.2	29.3	34.8	HRSG- 2	2.6	9.3	27.5	35.7
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7 (a).	vii (a).	Fugitive emissions should be controlled and regularly monitored and data recorded.	Fugitive emissions are monitored and controlled through Leak Detection and Repair program as per OISD-GDN-224.																																																				
7 (b).	Vii (b).	<p>Fugitive emission of HC from storage tanks should be controlled through proper tank design and subsequent preventive measures as mentioned below and maintenance schedules.</p> <p>i) Provision of floating roof tanks for volatile products. ii) Replacement of gland packing of pumps by means of mechanical seals; and iii) Use of submerged filling in product loading gantries.</p>	<p>The steps taken to control fugitive emissions at GAIL Pata include:</p> <p>i) Floating roof tanks have been provided for volatile products like GHU Light Cut, GHU Fuel Oil, Hexane, Hexene-1 & Cyclo Hexane. ii) All the pumps have been provided with mechanical seals for pumping C₂C₃, Ethylene, C₄ Mix, Butene-1, Propylene, Naphtha, MFO, Hexane & Cyclo Hexane. iii) Submerged filling is used in liquid product loading gantries.</p>																																																				
8.	viii.	Low NO _x burners should be used to limit NO _x emissions.	Low NO _x burners are used in all the Furnaces and Boilers.																																																				
9.	ix.	Flare system should be designed for smokeless burning with adequate steam for all normal venting and flaring.	Flare system is designed for smokeless burning with adequate steam for all normal venting and flaring. Flare stacks have also been provided with adequate heights to ensure effective dispersion of emissions.																																																				
10.	x.	Loading / Unloading and transportation of products may be restricted to daytime periods. Loading facilities	Loading / Unloading of LHC is carried out in accordance with PESO approval. Loading facilities for liquid products are provided with vapour return circuits.																																																				

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		should have vapour return circuits.	
11.	xi.	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.	It is confirmed that so far there has been no need for any change in the stack design. All the stacks have been suitably designed to be able to take care of excess emissions due to failure in any system of the plant. Height of all the stacks in the complex is as per standard height of more than 30 meters.
12.	xii.	An all-weather station for wind speed & direction, temperature and rainfall should be installed within the petrochemical premises.	2 nos. all weather stations for monitoring of wind speed & direction, temperature, rainfall and relative humidity have been installed.
13.	xiii.	Exploitation of ground water in the area should be carried as per the recommendations contained in the report of the Central Ground Water Board on Hydro-geological investigations.	The water consumption for the plant is met through Canal water (Etawah Branch of Lower Ganga Canal system through Burhadana Distributory). There is no exploitation of ground water in the complex.
14.	xiv.	Treatment and disposal facilities for liquid effluent should be completed along with commissioning of process units. Sufficient surface aerators with proper spacing in the aeration basin of the activated sludge extended aeration units should be provided to maintain desired DO concentration of more than 1.0 mg/L.	Waste Water Treatment plant having 2 nos. 150 m ³ /hr capacity chains is functional and treating combined (domestic + industrial) effluents from various process units. Based on the design organic load, four nos. 30 HP aerators are provided in the aeration basin, which help in maintaining DO concentration of more than 1.0 mg/L.
15.	xv.	The project authorities must recycle the wastewater to the maximum extent possible. The final treated effluent should conform to the prescribed MINAS standards.	Maximum recycle of treated effluent is done for use of water in horticulture purposes. The final treated effluent conforms to the prescribed standards.
16.	xvi.	Complete recycling of wastewater under normal operation through irrigation applications; green belt	Maximum recycle of Waste water is done for use in horticulture purpose. Two number guard ponds of 33,600 m ³ capacity have been provided to deal

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition no.	Conditions	Compliance Status
		maintenance, firefighting etc. may be planned for aiming at zero discharge. In case of failure of ETP, effluent should be collected and stored in Guard Pond(s) for a minimum of 7 days and should not be disposed off unless the treatment facilities are restarted and desired efficiency is achieved.	with any emergency situations for 7 days. An assessment by CSIR-NEERI, Nagpur has been carried out and further detailed engineering is being carried out by M/s Engineers India Limited (EIL) with an aim to move towards zero discharge.
17.	xvii.	Disposal in the Sengar River should be at a depth along riverbed for better mixing. During lean flow periods of the river and ETP under normal operation, the treated effluent after reuse for green belt development and firewater make up should be discharged in Sengar River through a closed pipeline at controlled rate depending on the river flow.	After maximum recycling of treated effluent for horticulture purpose the balance water is discharged to Sengar river through 8 km long closed pipeline at the end of which is specially designed diffuser arrangement along stream bed to ensure thorough mixing. During lean flow period controlled discharge of treated effluent is ensured.
18.	xviii.	Performance studies of each of the effluent / Sewage treatment plant should be undertaken at regular intervals. Also proper maintenance schedule of polishing lagoon be planned and implemented.	Regular performance of the wastewater treatment plant is monitored by checking samples at intermittent units. De-silting of guard pond is done on regular basis.
19.	xix.	Sludge recirculation to aeration basin from final clarifier should be planned for maintaining the desired MLSS concentration.	The WWTP has been designed for recirculation of sludge in aeration tank. Extended Aeration mode of treatment is adapted from the various forms of activated sludge processes. Desired MLSS concentration as designed is maintained.
20.	xx.	Adequate number of effluent quality monitoring stations should be set up in consultation with U.P. Pollution Control Board. Final effluent discharge should be daily monitored for BOD, suspended solids, phenol, sulphide and Oil	Adequate numbers of effluent quality monitoring stations have already been set up in consultation with U.P. Pollution Control Board. Final effluent discharge is monitored daily for pH, COD, BOD, TSS, Phenol, Sulfide and Oil & Grease. Third Party monitoring agency is also monitoring wastewater quality regularly.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition no.	Conditions	Compliance Status																								
		& Grease. Wastewater should also be analysed regularly for other parameters listed in MINAS and stipulated by the State & Central Pollution Control Board. The effluent monitored data along with its statistical analysis and interpretation in the form of a report should be submitted to this ministry regularly once in six months and to the State Pollution Control Board once in three months.	<p>The average value of data of treated wastewater for the period Oct'21 to March'22 monitored by MoEF&CC approved and NABL accredited third party is given below:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Avg. Value (mg/l)</th> <th>Standard (mg/l)</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>7.4</td> <td>6.5-8.5</td> </tr> <tr> <td>TSS</td> <td>23.9</td> <td>100</td> </tr> <tr> <td>BOD</td> <td>17.5</td> <td>30</td> </tr> <tr> <td>COD</td> <td>112.2</td> <td>250</td> </tr> <tr> <td>O&G</td> <td>BDL (<4)</td> <td>10</td> </tr> <tr> <td>phenol</td> <td>BDL (<0.001)</td> <td>1</td> </tr> <tr> <td>Sulphide</td> <td>BDL (<0.5)</td> <td>2</td> </tr> </tbody> </table> <p>In addition to the above, continuous online monitoring of the effluent parameters like pH, BOD, COD, TSS, TOC & Flow is done at CPCB and UPPCB through web based server systems.</p>	Parameter	Avg. Value (mg/l)	Standard (mg/l)	pH	7.4	6.5-8.5	TSS	23.9	100	BOD	17.5	30	COD	112.2	250	O&G	BDL (<4)	10	phenol	BDL (<0.001)	1	Sulphide	BDL (<0.5)	2
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21.	xxi.	Monitoring of noise levels should be regularly carried out to assess the efficiency of maintenance schedules undertaken to reduce noise levels and noise protection measures.	Noise levels are regularly monitored on monthly basis. Remedial actions and maintenance schedules for equipment are ensured to maintain noise levels as per prescribed standards.																								
22.	xxii.	The project authorities must prepare a well-designed scheme for solid waste disposal based on comprehensive EIA study and submit the same to this Ministry within six months. Ground water near solid waste disposal site as well as around petrochemical complex should be regularly monitored and data recorded.	Solid waste disposal scheme based on comprehensive EIA study has already been submitted to the ministry. There is no solid waste disposal site within the complex, however, ground water quality within and outside the complex is regularly monitored.																								
23.	xxiii.	A green belt development plan should be finalized and submitted to this ministry within six months for approval. The width of green belt adequate to attenuate noise,	Green belt development Plan has already been submitted to the ministry. Presently 192 Hectares of green belt/area has been developed in the premises. Project laydown areas are also taken up for plantation. Regular																								

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition no.	Conditions	Compliance Status
		H ₂ S and HC from Fugitive Sources etc. Storage dumping yards should also be brought under plantation. As and when necessary, sludge disposal sites should be reclaimed for growing trees.	maintenance and plantation of tree saplings in and around the plant complex is done and also mass tree plantation programs are organized. There is no sludge disposal site inside the plant battery limit.
24.	xxiv.	A detailed risk analysis report based on maximum credible accident analysis should be carried out within a period of six months of the issue of this letter of approval. This study apart from other factors should also consider the following: a) Stability Condition 'F' b) Fire and hazard impact zone should not cross the plant boundaries under worst possibilities. Based on this, a Disaster management plan should be prepared and after approval by the concerned nodal agency, the same must be submitted to this ministry by December 1992.	Detailed Risk analysis for Petrochemical Complex & expansions plant has been carried out. Emergency Response and Disaster Management Plan (ERDMP) of GAIL Pata Plant has been developed through PNGRB accredited agency M/s TQ Services, Hyderabad and implemented at GAIL, Pata and valid up till 24.08.2022. Copy of ERDMP has been submitted to PNGRB & other district authorities.
25.	xxv.	The Storage tank and sphere must conform to the stipulations made by the chief inspector of factories, controller of explosives etc. wherever required, it should be supplemented by OISD Codes.	Storage tanks and sphere are designed based on applicable OISD GDN-118 and are having valid approval of chief inspector of factories and statutory body (PESO).
26.	xxvi.	During site preparations, care should be taken to stabilize the sites before onset of monsoon. Further, during the construction phase, necessary and adequate steps should be taken to provide sanitation facilities and noise protection devices and fuel to the workers. The petrol and diesel run machinery should be	All necessary precautions are taken during site preparation and construction phase.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition no.	Conditions	Compliance Status												
		maintained as per standards.													
27.	xxvii.	A separate Environmental Management Cell with suitably qualified staff to carry out various functions should be set up under the control of Senior Executive who will report directly to the head of the organization.	A full-fledged Environmental Management Cell is in place to undertake environment and sustainable development related functions.												
28.	xxviii.	The project authority must set up a separate laboratory facility for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the Chief Executive.	Full-fledged Laboratory set up exists in the plant premises under the supervision of competent technical personnel. The Laboratory is NABL accredited.												
29.	xxix.	The project authorities must take adequate steps to ensure that the movement of raw materials and products would not disturb smooth flow of traffic in the area and would avoid towns.	Raw material for the petrochemical project is Natural Gas, received through cross country HVJ Pipeline. Also dedicated freight route and tanker parking areas have been developed for tankers and trucks, engaged in carrying products from the plant premises.												
30 (1).	xxx (1).	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.	<p>Dedicated funds are earmarked for the environmental protection measures. Details of expenditure on environmental protection measures at GAIL Pata is as below:</p> <table border="1"> <thead> <tr> <th>Head</th> <th>2021-22 (Rs.)</th> </tr> </thead> <tbody> <tr> <td>Treatment and disposal of waste</td> <td>7,14,57,212</td> </tr> <tr> <td>Depreciation and maintenance cost of equipment used in pollution control</td> <td>3,14,51,572</td> </tr> <tr> <td>External services for environmental management</td> <td>49,48,757</td> </tr> <tr> <td>External certification of management systems</td> <td>13,59,500</td> </tr> <tr> <td>Cost of Personnel for general environmental management activities</td> <td>6,70,07,238</td> </tr> </tbody> </table>	Head	2021-22 (Rs.)	Treatment and disposal of waste	7,14,57,212	Depreciation and maintenance cost of equipment used in pollution control	3,14,51,572	External services for environmental management	49,48,757	External certification of management systems	13,59,500	Cost of Personnel for general environmental management activities	6,70,07,238
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**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition no.	Conditions	Compliance Status	
			Extra expenditures for installing cleaner technologies	1,29,13,558
			Other environmental costs	2,66,52,106
			Total	21,57,89,943
30 (2).	xxx (2).	The Ministry or any other competent authority may stipulate any further conditions after reviewing the comprehensive impact assessment report prepared by project authorities or due to any change in the pollution scenario" of the area in question.	The condition is noted for needful compliance and implementations.	
30 (3).	xxx (3).	The Ministry may revoke clearance if implementation of the condition is not satisfactory.	The condition is noted and suitable compliance to all the conditions is ensured.	
30 (4).	xxx (4).	The above condition will be enforced interalia along with Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, and Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments.	It is always ensured that the above conditions are enforced interalia along with Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, and Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments as applicable.	

Name of the Project: LPG Recovery Facility **Project Code:** NIL

Clearance Number: J-11011/29/96-IA.II (I) Dated 16/01/1997

Period of Compliance: October, 2021 to March, 2022

Sr. No.	Condition No.	Conditions	Compliance Status
31	i.	The project authority must strictly adhere to the terms and conditions stipulated by the Ministry while granting environmental clearance to the petro-chemical complex vide O.M. No. J-11011/22/90-IA.II dated 30.03.1992.	Compliance to the conditions of environmental clearance granted to the petrochemical complex vide O.M. No. J-11011/22/90-IA.II dated 30.03.1992 is provided at Sr. No. 1 to 30 above.
32	ii.	The project authority must strictly comply with the stipulations made by state pollution control board	All the stipulations made by the State Pollution Control Board and the State Government are adhered

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition No.	Conditions	Compliance Status
		and state government.	to. Compliance to conditions of Consent to Operate have been sent to the Uttar Pradesh Pollution Control Board.
33	iii.	Any expansion of the plant can be taken up only with prior approval of this ministry.	Any expansion of the plant is taken up only after obtaining prior approval of the Ministry. GAIL Pata has been accorded 6 ECs for different expansions as mentioned above (A, B, C, D, E & F).
34	iv.	The hazardous wastes including residual solvents, spent activated carbon, ETP sludge etc. shall be handled as per hazardous wastes (Management and Handling) rules, 1989 and necessary approval from UPPCB in this regard must be obtained.	GAIL Pata has been accorded Hazardous waste authorization by UPPCB vide letter no. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026. All the hazardous wastes generated are disposed as per the direction mentioned in the authorization.
35	v.	Handling, Manufacturing, storage and transportation of hazardous chemicals must be carried out in accordance with the manufacture, storage and import of hazardous chemicals rules, 1989 as amended in October, 1994. Necessary approvals from Chief controller of explosives/ Chief inspector of factories must be obtained as per regulations.	All applicable provisions of the manufacture, storage and import of hazardous chemicals rules, 1989 as amended in October, 1994 are suitably followed. All necessary approvals from Petroleum & Explosives Safety Organization /Chief inspector of factories have been obtained and are in place.
36	vi.	The project authorities must setup adequate facilities for collections and analysis of samples (air, water and noise parameters), monitoring of environmental quality parameters and carry out time bound action plans related to environmental management and pollution control.	Five fixed real time ambient air quality monitoring station and Two portable third party ambient air quality monitoring stations (within and outside the premises) have been setup. In addition, 1 No. Mobile Van having real time ambient air quality monitoring station is also in use for monitoring of ambient air quality. In addition, Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and UPPCB through web based system. Noise levels are also regularly

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Condition No.	Conditions	Compliance Status
			monitored in ambient as well as work zone areas. Final effluent discharge is monitored daily for pH, COD, BOD, TSS, Phenol, Sulfide and Oil & Grease. Third Party monitoring agency is also monitoring wastewater quality regularly. In addition to the above, continuous online monitoring of the effluent parameters like pH, BOD, COD, TSS, TOC & Flow is done at CPCB and UPPCB through web based server systems. A full-fledged NABL accredited Laboratory set up exists in the plant premises under the supervision of competent technical personnel.
37	vii.	The fund earmarked for the environmental protection measures shall not be diverted for other purposes and year wise expenditure reported to this ministry of proper monitoring of the project implementation.	The dedicated funds are earmarked for the environmental protection measures. Details of year wise expenditure on environmental protection measures are regularly reported to the ministry.
38	viii.	Six-monthly progress report on the implementation status of environmental conditions mentioned above must be submitted to ministry / CPCB and State Pollution Control Board regularly. The project will be monitored intralia by ministry's regional office at Lucknow.	Six-monthly progress report on the implementation status of environmental conditions is regularly submitted to the Regional Offices of MoEF&CC & CPCB and to the Uttar Pradesh Pollution Control Board.

Name of the Project: LLDPE Debottlenecking Project

Project Code: UP-IND-62-164- 2004

Clearance Number: J-11011/237/2003-IA.II (I) Dated 19/04/2004

Period of Compliance: October 2021 to March 2022

Sr. No.	Cond. No.	Conditions	Compliance Status
Specific Conditions:			
39	(i)	The gaseous emissions (SO ₂ , NO _x and HC, HCl, Cl ₂) from the various	The gaseous emissions from various process units are monitored through

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		<p>process units shall conform to the standards prescribed under Environment (Protection) Act, 1986 or norms stipulated by the SPCB's whichever is more stringent. At no time, the emission level shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.</p>	<p>state of art monitoring technologies and conform to the standard prescribed by the statutory authorities. Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and UPPCB through web based system. Mitigatory control methods have been adopted at design stage in order to reduce the load of gaseous emissions from process units.</p> <p>It is always ensured that in any such event of failure of pollution control system(s), the respective unit is not restarted until the control measures are rectified to achieve the desired efficiency.</p> <p>However, it is pertinent to mention here that GAIL, Pata uses Natural gas as fuel, which is a clean fuel free from sulphur and particulates.</p>
40	(ii)	<p>Adequate number of ambient air quality monitoring stations shall be set up in consultation with SPCB, based on the occurrence of maximum ground level concentration and downwind direction of wind. The monitoring network shall be decided based on modelling exercise to represent short term GLCs. Continuous online stack monitoring equipment shall be installed for all the stacks in the petrochemical plant. The company shall install low NOx burners in cracker furnaces.</p>	<p>Five fixed real time ambient air quality monitoring station and Two third party portable ambient air quality monitoring stations (within and outside the premises) have been setup. In addition, 1 No. Mobile Van having real time ambient air quality monitoring station is also in use for monitoring of ambient air quality. The locations covered by the stations have been fixed considering location of existing stacks, wind direction and other topographical features. Air modelling studies have been carried out by NEERI during EIA studies and the recommendations are followed.</p> <p>All the stacks of the plant are equipped with automatic stack emission monitoring equipment i.e. Online Continuous Emission Monitoring System (OCEMS).</p> <p>Low NOx burners have also been installed in all cracker furnaces.</p>
41	(iii)	<p>For control of fugitive emissions, the</p>	<p>The complex has been provided with</p>

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		<p>company shall provide for a main flare system and an auxiliary flare system, and route all Unsaturated hydrocarbons to the flare system. The flare system shall be designed for smokeless burning. All the pumps and other equipment, where there is a likelihood of hydrocarbon leakages shall be provided with LEL indicators, and also provide for immediate isolation of such equipment, in case of a leakage. The product loading gantry shall be connected to the product sphere in closed circuit through the vapour arm connected to the tanker. Data on fugitive emissions shall be regularly monitored and records maintained.</p>	<p>a main flare system and an auxiliary flare system. The Flare system is designed for smokeless burning with adequate steam for all normal venting and flaring. LEL indicators & open path gas detection system have been provided in storage and process areas for detection of any hydrocarbon leakages. The product loading gantry is connected to the product sphere in closed circuit through the vapour arm connected to the tanker for all liquid products. Fugitive emissions are monitored and controlled through Leak Detection and Repair (LDAR) program as per OISD-GDN-224.</p>
42	(iv)	<p>The wastewater generated (2864 m³/d) shall be treated in the wastewater treatment plant. The treated wastewater, meeting the norms, shall be used for green belt development within the plant premises, or discharged into Sengar river, about 8 km. away in a closed pipeline through a well-designed diffuser. The company shall undertake measures to maximize recycling of treated wastewater and work towards achieving zero discharge.</p>	<p>The wastewater generated is treated in the wastewater treatment plant. Part of the treated wastewater, meeting the norms, is used for horticulture purpose and balance water is discharged to Sengar river through 8 km long closed pipeline at the end of which is specially designed diffuser arrangement along stream bed to ensure thorough mixing. An assessment by CSIR-NEERI, Nagpur has been carried out and further action is under progress with an aim to move towards zero discharge.</p>
43	(v)	<p>The non-hazardous solid waste generated (spent alumina and silica gel) shall be sold to approved parties. For management of the hazardous solid wastes (3.85 TPD of ETP sludge and tar), the company shall install an incinerator for tar, design a landfill for sludge, and explore bioremediation of the sludge.</p>	<p>The non-hazardous solid waste generated (spent alumina and silica gel) is sold to approved parties. GAIL Pata has received Authorization to generate Hazardous Wastes from Uttar Pradesh Pollution Control Board vide Authorization No. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026. As per the authorization received, the prescribed mode of disposal for Sludge and Tar Waste has been given</p>

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
			to be 'Disposal through TSDF'. In view of this, Sludge and tar waste are being disposed through approved TSDF as prescribed by Uttar Pradesh Pollution Control Board.
44	(vi)	All the recommendations of the Charter on Corporate Responsibility for Environmental Protection (CREP) for the petrochemical sector shall be strictly implemented.	The recommendations of the Charter on Corporate Responsibility for Environmental Protection (CREP) for the petrochemical sector are already implemented and regularly followed.
45	(vii)	Green belt of adequate width and density shall be provided to mitigate the effects of fugitive emission all around the plant. A minimum of 25% of the area shall be developed as green belt with local species in consultation with the DFO, and as per CPCB's guidelines.	Green belt of adequate width and density has been provided all around the plant to mitigate the effects of fugitive emission. Presently 33% area of the premises has been developed as green belt/area with native species. Project laydown areas are also taken up for plantation. Regular maintenance and plantation of tree saplings in and around the plant complex is done and also mass tree plantation programs are organized.
46	(viii)	The company shall obtain necessary approval for drawl of groundwater from the concerned State agency.	The water consumption for the plant is met through Canal water (Etawah Branch of Lower Ganga Canal system through Burhadana Distributory). There is no drawl of ground water in the complex.
47	(ix)	The company shall undertake rainwater-harvesting measures to harvest the rain water for their own utilization as well as to recharge the groundwater table.	Rain Water harvesting measures have been implemented in all the major buildings at GAIL, Pata. In addition, a natural pond inside the premises is used for rain water harvesting for utilization of water from the pond as per requirement.
48	(x)	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of the workers and Employees is done on a regular basis (6 monthly basis for workers and on annual basis for employees) and records maintained as per the Factories Act and OISD-GDN-166.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
General Conditions			
49	(i)	The project authorities shall strictly adhere to the stipulations made by the Uttar Pradesh State Pollution Control Board and the State Government.	All the stipulations made by the State Pollution Control Board and the State Government are adhered to. Compliance to conditions of Consent to Operate has been sent to the Uttar Pradesh Pollution Control Board.
50	(ii)	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the respective unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	The condition is noted and complied as per prescribed limit.
51	(iii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Any expansion of the plant is taken up only after obtaining prior approval of the Ministry. GAIL Pata has been accorded 6 ECs for different expansions as mentioned above (A, B, C, D, E & F).
52	(iv)	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended on 3rd October 1994 and 6th January 2000. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives. Fire Safety Inspectorate etc. shall be obtained wherever applicable.	All applicable provisions of the manufacture, storage and import of hazardous chemicals rules, 1989 as amended on 3rd October 1994 and 6th January 2000 are suitably followed. All necessary approvals from Petroleum & Explosives Safety Organization, Chief inspector of factories and Fire safety inspectorate have been obtained and are in place.
53	(v)	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 as amended in January 2000,	All the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the latest Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 are strictly complied with.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		wherever applicable. Authorization from the State Pollution Control Board must be obtained for collections/treatment/ Storage / disposal of hazardous wastes.	GAIL Pata has been accorded Hazardous waste authorization for collections/treatment/ Storage / disposal of hazardous wastes by UPPCB vide letter no. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026.
54	(vi)	The overall noise levels in and around the plant area shall 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 shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	All sources of noise generation have been provided with suitable noise control measures including acoustic hoods, silencers, enclosures etc. as applicable to maintain overall noise levels in and around the plant area within the standards. Noise levels are regularly monitored in ambient and work zone areas to ensure that noise levels are within prescribed standards.
55	(vii)	A separate Environment Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	A full-fledged Environmental Management Cell is in place to undertake environment and sustainable development related functions. Full-fledged NABL accredited Laboratory set up also exists in the plant premises under the supervision of competent technical personnel.
56	(viii)	The project authorities shall provide adequate funds both recurring and non-recurring, to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Adequate dedicated funds are earmarked for the environmental protection measures and to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government.
57	(ix)	The implementation of the project vis-à-vis environmental action plans shall be monitored by Ministry's Regional Office at Lucknow/State Pollution Control Board /Central Pollution Control Board. A six monthly compliance status report shall be submitted to monitoring	Six-monthly compliance status report on the implementation status of environmental conditions is regularly submitted to the Regional Offices of MoEF&CC & CPCB and to the Uttar Pradesh Pollution Control Board.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		agencies.	
58	(x)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board / Committee and may also be seen at website of the Ministry at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Ministry's Regional office at Lucknow.	The matter was suitably advertised in the local newspapers that are widely circulated in the region as per requirement.

Name of the Project: HDPE Expansion & 5th Furnace Project

Project Code: UP-67/173-2005

Clearance Number: J-11011/143/2004 – IA II (I) Dated 12/01/2005

Period of Compliance: October 2021 to March 2022

Specific Conditions:

Sr. No.	Cond. No.	Conditions	Compliance Status
59	(i)	All the measures detailed in the EMP shall be taken to control the point/stack and fugitive gaseous emissions from the proposed facilities namely, Gas Cracker Furnace (GCF) and process and storage units etc. for ensuring that the ambient air quality around Pata due to the expansion is maintained at the predicted 24 hourly average maximum concentration levels and shall not exceed for the worst scenario predicted for SO ₂ (12 µg/m ³); NO _x (25 µg/m ³) and CO (2 mg/m ³).	The point/stack and fugitive gaseous emissions have been controlled by adopting mitigatory control methods at design stage in order to reduce the load of gaseous emissions from process units. Also the point/stack and fugitive gaseous emissions from various process units are monitored through state of art monitoring technologies and conform to the standards prescribed under Environment (Protection) Act, 1986 and norms stipulated by the UPPCB. In addition, Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
			UPPCB through web based system.
60	(ii)	The location of the three existing ambient air quality monitoring stations along with the mobile unit shall be reviewed in consultation with SPCB, based on the occurrence of maximum ground level concentration and downwind direction of wind. The monitoring protocol shall ensure continuous monitoring of all the parameters.	Five fixed real time ambient air quality monitoring station and Two third party portable ambient air quality monitoring stations (within and outside the premises) have been setup. In addition, 1 No. Mobile Van having real time ambient air quality monitoring station is also in use for monitoring of ambient air quality. Monitoring of ambient air quality is continuous for SO ₂ , NO ₂ , Total Hydrocarbons, CO, PM ₁₀ , PM _{2.5} and Benzene/VOC at five fixed real time ambient air quality monitoring stations and one mobile van. The locations covered by the stations have been fixed in consultation with the Pollution Control Board considering location of existing stacks, wind direction and other topographical features.
61	(iii)	The practice of acoustic plant design shall be adopted to limit noise exposure for personnel to an 8 hr time weighted average of 90 db (A).	All required measures have been undertaken during design stage of plant to limit noise exposure for personnel as per prescribed standards.
62	(iv)	For control of fugitive emissions, the company shall provide for a main flare system and an auxiliary flare system, and route all unsaturated hydrocarbons to the flare system. The flare system shall be designed for smokeless burning. All the pumps and other equipment where there is a likelihood of HC leakages shall be provided with LEL indicators and also provide for immediate isolation of such equipment, in case of a leakage. The company shall adopt Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions.	The complex has been provided with a main flare system and an auxiliary flare system. The Flare system is designed for smokeless burning with adequate steam for all normal flaring. LEL indicators & open path gas detection system have been provided in storage, process areas and main flare KODs for detection of any hydrocarbon leakages. The product loading gantry is connected to the product sphere in closed circuit through the vapour arm connected to the tanker for all liquid products. Fugitive emissions are monitored and controlled through Leak

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
			Detection and Repair (LDAR) program as per OISD-GDN-224.
63	(v)	The product loading gantry shall be connected to the product sphere in closed circuit through the vapours arm connected to the tanker. Data on fugitive emissions shall be regularly monitored and records maintained.	The product loading gantry is connected to the product sphere in closed circuit through the vapour arm connected to the tanker for liquid products. Fugitive emissions are monitored and controlled through Leak Detection and Repair (LDAR) program as per OISD-GDN-224.
64	(vi)	The company shall ensure that no halogenated organic is sent to the flares. If any of the halogenated organic are present then the respective streams may be incinerated, if there are no technically feasible or economically viable reduction/recovery options. Any stream containing organic carbon, other than halogenated shall be connected to proper flaring system, if not to a recovery device or an incinerator.	No halogenated organics are present in any of the streams in this natural gas based petrochemical complex.
65	(vii)	All new standards/norms that are being proposed by the CPCB for petrochemical plants shall be applicable for the proposed expansion unit. The company shall conform to the process vent standards for organic chemicals including non-VOCs and all possible VOCs i.e. TOCs standard and process vent standards for top priority chemicals. The company shall install online monitors for VOC measurements. Action on the above should be taken during the detailed design stage of the NCC and intimate to this Ministry.	Environment monitoring including work area environment w.r.t to Non-VOCs and VOCs monitoring is done through In-house Laboratory and approved third party on a regular basis as per CPCB standards. Online LEL indicators & open path gas detection system have been provided in storage, process areas and main flare KODs for detection of any hydrocarbon leakages.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
66	(viii)	The waste water generated (3184 m ³ /d) shall be treated in comprehensive waste water treatment plant. As reflected in the EIA /EMP report, the company shall maximize the recycling of treated effluent and treated effluent after conforming to the proposed standards should be used for green belt development. The remaining treated effluent should be discharged into Sengar River about 08 kms away from the plant in a closed pipeline through a well-defined diffuser at a point where dispersion of effluent is rapid and ensures minimum impact on the aquatic ecology.	The wastewater generated is treated in the wastewater treatment plant. Part of the treated wastewater, meeting the norms, is used for horticulture purpose and balance water is discharged to Sengar river through 8 km long closed pipeline at the end of which is specially designed diffuser arrangement along stream bed to ensure thorough mixing.
67	(ix)	The company shall obtain necessary approval from the State Irrigation Department to meet the additional water requirement from the existing canal network.	Necessary approval from the State Irrigation Department has been obtained vide agreement no DG738976, dated 02/05/2017.
68	(x)	The solid waste will be generated in the form of 5 TPA of molecular sieve once in five year and Tar. The company shall incinerate Tar or use it for road making and design a landfill for disposal of molecular sieve.	GAIL Pata has received Authorization to generate Hazardous Wastes from Uttar Pradesh Pollution Control Board vide Authorization No. 14295/ UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026. All the waste generated are suitably disposed in environment friendly manner as recommended in Hazardous Waste Authorisation.
69	(xi)	Green belt shall be provided to mitigate the effects of fugitive emissions all around the plant in a minimum of 25% of the plant area in consultation with DFO as per CPCB guidelines.	Green belt of adequate width and density has been provided all around the plant to mitigate the effects of fugitive emission. Presently 33% area of the premises has been developed as green belt/area with native species. Regular plantation of tree saplings in and around the plant complex is done and also mass tree plantation programs are organized.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
70	(xii)	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Occupational Health Surveillance of the workers and Employees is done on a regular basis (6 monthly basis for workers and on annual basis for employees) and records maintained as per the Factories Act and OISD-GDN-166.
71	(xiii)	The Company shall implement all the recommendations made in the EIA /EMP report and risk assessment report.	All the recommendations made in the EIA /EMP report and risk assessment report are being suitably complied.

Sr. No.	Cond. No.	Conditions	Compliance Status
General Conditions:			
72	(i)	The project authorities must strictly adhere to the stipulations made by the Uttar Pradesh State Pollution Control Board and the State Government.	All the stipulations made by the State Pollution Control Board and the State Government are adhered to. Compliance to conditions of Consent to Operate have been sent to the Uttar Pradesh Pollution Control Board.
73	(ii)	No further expansion or modernization in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Any expansion of the plant is taken up only after obtaining prior approval of the Ministry. GAIL Pata has been accorded 6 ECs for different expansions as mentioned above (A, B, C, D, E & F).
74	(iii)	At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.	The gaseous emissions from various process units are monitored through state of art monitoring technologies and conform to the standard prescribed by the statutory authorities. Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and UPPCB through web based system. Mitigatory control methods have been adopted at design stage in order to reduce the load of gaseous emissions from process units. It is always ensured that in any such event of failure of pollution control system(s), the respective unit is not restarted until the control measures are rectified to achieve the desired

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
			efficiency. However, it is pertinent to mention here that GAIL, Pata uses Natural gas as fuel, which is a clean fuel free from sulphur and particulates.
75	(iv)	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).	All sources of noise generation have been provided with suitable noise control measures including acoustic hoods, silencers, enclosures etc. as applicable to maintain overall noise levels in and around the plant area within the standards. Noise levels are regularly monitored in ambient and work zone areas to ensure that noise levels are within prescribed standards.
76	(v)	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.	All applicable provisions of the manufacture, storage and import of hazardous chemicals rules, 1989 as amended on 3rd October 1994 and 6th January 2000 are suitably followed. All necessary approvals from Petroleum & Explosives Safety Organization have been obtained and are in place.
77	(vi)	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 and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/ disposal of hazardous wastes.	All the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the latest Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 are strictly complied with. GAIL Pata has been accorded Hazardous waste authorization for collections / treatment / Storage / disposal of hazardous wastes by UPPCB vide letter no. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026.
78	(vii)	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	Adequate dedicated funds are earmarked for the environmental protection measures and to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government.

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	
79	(viii)	The stipulated conditions will be monitored by the Regional Office of this Ministry at Lucknow/Central Pollution Control Board/State Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly.	Six-monthly compliance status report on implementation status of the stipulated conditions along with monitored data is regularly submitted to the Regional Offices of MoEF&CC & CPCB and to the Uttar Pradesh Pollution Control Board.
80	(ix)	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	The matter was suitably advertised in the local newspapers that are widely circulated in the region as per requirement.
81	(x)	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.	Suitable information as required was communicated to the concerned agencies.

Name of the Project: Expansion of Petrochemical Complex project
Clearance Number: J-11011/595/2010-IA II (I), Dated 23/05/2012
Period of Compliance: October, 2021 to March, 2022

Project Code: NIL

Sr. No.	Cond. No.	Conditions	Compliance Status
SPECIFIC CONDITIONS:			
82	(i)	All the specific conditions and	All the specific conditions and general

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		general conditions specified in the environmental clearances letters accorded vide Ministry's letter nos. J-11011//22/90-IA.II (I) dated 30 th March, 1992, J-11011/29/96-IA.II (I) dated 16 th January, 1997, J-11011/237/2003-IA.II (I) dated 19 th April, 2004 and J-11011/143/2004-IA.II (I) dated 12 th January, 2005 should be implemented.	conditions specified in the environmental clearances letters accorded are implemented.
83	(ii)	M/s GAIL (India) Limited shall comply with the new standards/norms prescribed for petrochemical industry notified under the Environment (Protection) Rules, 1986.	M/s GAIL (India) Limited is complying with the new standards/norms as prescribed for petrochemical industry notified under the Environment (Protection) Rules, 1986.
84	(iii)	The process emissions (Particulate matter, SO ₂ , NO _x , HC, CO and VOCs) from various units shall conform to all standards prescribed by CPCB / U.P. Pollution Control Board (UPPCB) from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Stack emissions shall be monitored regularly.	The gaseous emissions from various process units are monitored through state of art monitoring technologies and conform to the standard prescribed by the statutory authorities. Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and UPPCB through web based system. Mitigatory control methods have been adopted at design stage in order to reduce the load of gaseous emissions from process units. It is always ensured that in any such event of failure of pollution control system(s), the respective unit is not restarted until the control measures are rectified to achieve the desired efficiency. However, it is pertinent to mention here that GAIL, Pata uses Natural gas as fuel, which is a clean fuel free from sulphur and particulates.
85	(iv)	OISD guidelines shall be followed for minimum distance between various units.	Minimum distance between various units is ensured as per the OISD-STD-118.
86	(v)	Low NO _x burner shall be installed to control NO _x emissions.	Low NO _x burners are used in all the

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status																																																
			Furnaces and Boilers.																																																
87	(vi)	As proposed, vapor recovery system shall be provided for product loading gantry.	The product loading gantry is connected to the product sphere in closed circuit through the vapour arm connected to the tanker.																																																
88	(vii)	Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826 (E) dated 16 th September, 2009.	Ambient air quality data is collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826 (E) dated 16 th September, 2009.																																																
89	(viii)	In-plant control and monitoring measures for checking fugitive emissions from all the vulnerable sources should be provided. Adequate dust suppression systems with water spray should be provided for storage yard, junction houses. Raw material loading and unloading area should be covered and also provided with water spraying system. Fugitive emissions in the work zone environment, product, raw materials storage area etc. should be regularly monitored and records maintained. The emissions should conform to the limits stipulated by the UPPCB.	<p>Fugitive emissions in all the areas of the plant are monitored and controlled through Leak Detection and Repair (LDAR) program as per OISD-GDN-224. In addition, LEL indicators & openpath gas detection system have been provided in storage and process areas for detection of any hydrocarbon leakages.</p> <p>Raw material used in the plant is natural gas which is received through cross country pipeline and remains in closed system and as such there is no requirement of any dust suppression system.</p>																																																
90	(ix)	Steps shall be taken to minimize fugitive emissions. Monitoring of fugitive emissions shall be carried out as per guidelines of CPCB by fugitive emissions detector and report shall be submitted to the Ministry's Regional Office at Lucknow.	<p>Fugitive emissions are monitored and controlled through Leak Detection and Repair (LDAR) program as per guidelines of CPCB and OISD-GDN-224. Summary Report of the LDAR monitoring of FY 2021-22 is as follows:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Plant</th> <th>Total No. of Points</th> <th>Total Leak (kg/day)</th> </tr> </thead> <tbody> <tr><td>1</td><td>GPU-I</td><td>2383</td><td>5.105</td></tr> <tr><td>2</td><td>GPU-II</td><td>1401</td><td>3.409</td></tr> <tr><td>3</td><td>LPG</td><td>1912</td><td>3.420</td></tr> <tr><td>4</td><td>GCU-I (COLD)</td><td>2521</td><td>6.273</td></tr> <tr><td>5</td><td>GCU-I (HOT)</td><td>2559</td><td>7.718</td></tr> <tr><td>6</td><td>GCU-II (COLD)</td><td>8268</td><td>9.417</td></tr> <tr><td>7</td><td>GCU - II HOT</td><td>3853</td><td>3.097</td></tr> <tr><td>8</td><td>LLDPE-II</td><td>1397</td><td>3.063</td></tr> <tr><td>9</td><td>POWER PLANT-II</td><td>549</td><td>0.032</td></tr> <tr><td>10</td><td>IOP-STORAGE</td><td>2540</td><td>4.981</td></tr> <tr><td>11</td><td>POWER PLANT-I</td><td>404</td><td>0.055</td></tr> </tbody> </table>	Sr. No.	Plant	Total No. of Points	Total Leak (kg/day)	1	GPU-I	2383	5.105	2	GPU-II	1401	3.409	3	LPG	1912	3.420	4	GCU-I (COLD)	2521	6.273	5	GCU-I (HOT)	2559	7.718	6	GCU-II (COLD)	8268	9.417	7	GCU - II HOT	3853	3.097	8	LLDPE-II	1397	3.063	9	POWER PLANT-II	549	0.032	10	IOP-STORAGE	2540	4.981	11	POWER PLANT-I	404	0.055
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**Compliance status to conditions of Environment Clearances at
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Sr. No.	Cond. No.	Conditions	Compliance Status			
			12	LPG LOADING GANTRY	800	0.187
			13	Total	28587	46.757
			All above leaks have been suitably attended.			
91	(x)	Continuous ambient air quality monitoring stations for PM10, SO2, NOx, CO, HC and VOCs shall be set up in the petrochemical complex in consultation with CPCB/U PPCB. Unit shall follow CPCB/MoEF calibration protocol for the calibration of continuous stack monitoring and ambient air quality monitoring analyzer installed in all stations. Data of stack monitoring and ambient air shall be displayed on web as well as outside the premises at prominent place for public viewing. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MoEF, the respective Zonal Office of CPCB and U PPCB.	Five fixed continuous ambient air quality monitoring stations have been setup in addition to 1 No. Mobile Van for real time monitoring of SO2, NOx, Total Hydrocarbons, CO, PM10, PM2.5 and VOCs. All the stacks of the plant are equipped with automatic stack emission monitoring equipment i.e. Online Continuous Emission Monitoring System (OCEMS). Calibration of all the monitoring equipment is carried out as per prescribed protocol. Monitored data is displayed outside the premises at prominent place for public viewing and also uploaded on company's website and updated periodically. The data is sent to U PPCB and summary of the same is also submitted to regional offices of MoEF&CC & CPCB through the instant half-yearly compliance report.			
92	(xi)	A proper leak detection and repair (LDAR) Program shall be prepared and implemented. Focus shall be given for prevention of fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. A preventive maintenance schedule for each unit shall be prepared and adhered to.	Fugitive emissions are monitored and controlled through Leak Detection and Repair (LDAR) program as per OISD-GDN-224. A preventive maintenance schedule for pumps valves etc. exists and the same is adhered to.			
93	(xii)	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.	The gaseous emissions from DG sets are dispersed through adequate stack height as per CPCB standards. Also acoustic enclosures are provided to the DG sets to mitigate the noise pollution.			
94	(xiii)	Continuous monitoring system for VOCs at all important places/areas shall be ensured. When monitoring	LEL indicators & open path gas detection system have been provided in storage and process areas for			

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status
		results indicate above permissible limits, effective measures shall be taken immediately.	detection of any hydrocarbon leakages.
95	(xiv)	Additional fresh water requirement from canal shall not exceed 1020 m ³ /hr and prior permission shall be obtained from the concerned agency. No ground water shall be used.	Necessary approval from the State Irrigation Department has been obtained vide agreement no DG738976, dated 02/05/2017. The water consumption for the plant is completely met through Canal water (Etawah Branch of Lower Ganga Canal system through Burhadana Distributory). No ground water is used in the complex.
96	(xv)	Additional industrial effluent generation due to proposed expansion shall not exceed 64 m ³ /hr. Industrial effluents including existing (214 m ³ /hr) shall be segregated and treated in the ETP. As proposed, treated effluent (50 m ³ /hr) shall be recycled and reused within factory premises. Remaining treated effluent shall be discharged into Sengar River after obtaining prior permission from the UPPCB and meeting the norms prescribed. Water quality of treated effluent should be monitored regularly. Online TOC analyzer, pH meter and flow meter shall be installed to monitor the treated water quality before discharge into River. As proposed, sewage shall be transferred to aeration tank along with process wastewater.	Waste Water Treatment plant having 2 nos. 150 m ³ /hr capacity chains is functional for treating combined effluents from various process units. Necessary augmentation to the old ETP Plant has been incorporated with respect to additional waste water generation from the expansion project. Maximum treated water is recycled and reused for horticulture purposes. Balanced treated water is discharged to Sengar river. Necessary approval from UPPCB has been obtained. The treated water Quality is monitored regularly through Online Water Analyser and the flow meter. Also, parameters of online effluent quality monitoring system are connected with CPCB & UPPCB servers. The sewage water is channelized to the aeration tank of wastewater treatment plant along with Process waste water for further treatment.
97	(xvi)	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Separate storm water drain exists. It has been ensured that process effluent and other waste water are not mixed with storm water. Contaminated Storm Water is treated in Waste Water Treatment plant and is passed through guard pond.
98	(xvii)	The company should obtain authorization for collection, storage	Hazardous Waste Authorization has been accorded to GAIL Pata vide ref

**Compliance status to conditions of Environment Clearances at
GAIL (India) Limited, Pata, U.P.**

Sr. No.	Cond. No.	Conditions	Compliance Status																																																																																
		and disposal of hazardous waste under the hazardous waste (management, handling and trans-boundary movement) rules, 2008 and amended as on date for management of hazardous wastes and prior permission from UPPCB should be obtained for disposal of solid/hazardous waste in TSDF. Measures should be taken for firefighting facilities in case of emergency. Membership of TSDF for hazardous waste disposal should be obtained and submitted to the regional office at Lucknow.	no. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026. All Hazardous wastes are disposed in line with the recommendations of the hazardous waste authorization accorded by the UPPCB. Firefighting facility is in place at GAIL Pata to handle any emergency. GAIL, Pata is also a permanent member of Uttar Pradesh Waste Management Project (membership no. UPWMP-KNP-HzW – CHW-TSDF – 1268) for utilizing their common hazardous waste treatment storage disposal facility (CHW-TSDF) to dispose hazardous waste safely & securely and has already been submitted to the regional office.																																																																																
99	(xviii)	Existing captive secured landfill site shall be designed as per CPCB guidelines. A performance evaluation study for the existing captive secured landfill site shall be carried out and report shall be submitted to the respective regional office of the MoEF, CPCB and UPPCB within three months. All the recommendations made in the study shall be implemented.	Secured landfill site is not in use. However, a scientific solid waste management facility has been developed for intermediate storage of the waste to ensure timely disposal to authorized agencies.																																																																																
100	(xix)	Piezometer wells shall be installed around secured landfill. Ground water monitoring shall be carried out in every three months and trend analysis shall be carried out and report shall be sent to the CPCB and UPPCB.	<p>Secured landfill site is not in use. However, Piezometer wells are installed for regular sampling and analysis of ground water along with depth by third party environment monitoring agency. Quarterly trend analysis of ground water quality during FY 2021-22 is as follows:</p> <table border="1"> <caption>Quarterly Trend Analysis of Ground Water Quality (FY 2021-22)</caption> <thead> <tr> <th>Parameter</th> <th>Q1</th> <th>Q2</th> <th>Q3</th> <th>Q4</th> </tr> </thead> <tbody> <tr><td>Colour</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Turbidity</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>pH at 25 °C</td><td>~7.5</td><td>~7.5</td><td>~7.5</td><td>~7.5</td></tr> <tr><td>Total dissolved solids</td><td>~400</td><td>~400</td><td>~400</td><td>~400</td></tr> <tr><td>Total Alkalinity as CaCO3</td><td>~100</td><td>~100</td><td>~100</td><td>~100</td></tr> <tr><td>Total Hardness as CaCO3</td><td>~100</td><td>~100</td><td>~100</td><td>~100</td></tr> <tr><td>Calcium Hardness as CaCO3</td><td>~50</td><td>~50</td><td>~50</td><td>~50</td></tr> <tr><td>Magnesium</td><td>~50</td><td>~50</td><td>~50</td><td>~50</td></tr> <tr><td>Chloride as Cl-</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Sulphate as SO4</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Nitrate as NO3</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Iron as Fe</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Fluoride as F</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Zinc as Zn</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> <tr><td>Dissolve Oxygen</td><td>~10</td><td>~10</td><td>~10</td><td>~10</td></tr> </tbody> </table>	Parameter	Q1	Q2	Q3	Q4	Colour	~10	~10	~10	~10	Turbidity	~10	~10	~10	~10	pH at 25 °C	~7.5	~7.5	~7.5	~7.5	Total dissolved solids	~400	~400	~400	~400	Total Alkalinity as CaCO3	~100	~100	~100	~100	Total Hardness as CaCO3	~100	~100	~100	~100	Calcium Hardness as CaCO3	~50	~50	~50	~50	Magnesium	~50	~50	~50	~50	Chloride as Cl-	~10	~10	~10	~10	Sulphate as SO4	~10	~10	~10	~10	Nitrate as NO3	~10	~10	~10	~10	Iron as Fe	~10	~10	~10	~10	Fluoride as F	~10	~10	~10	~10	Zinc as Zn	~10	~10	~10	~10	Dissolve Oxygen	~10	~10	~10	~10
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Sr. No.	Cond. No.	Conditions	Compliance Status
101	xx	Spent catalyst and bottom tank sludge shall be sent to authorized re-processors/ recyclers.	Spent catalysts and Bottom tank sludge are disposed as per recommendations of hazardous waste authorization accorded by UPPCB.
102	(xxi)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in the material handling. Firefighting system should be as per the OISD norms. All the OISD standards shall be followed.	Protection against all Fire Hazards is in place. Firefighting systems are in line as per the OISD-GDN-115 & OISD-GDN-116.
103	(xxii)	The company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	Handling, Manufacturing and storage of all hazardous chemicals are carried out in accordance with the manufacture, storage and import of hazardous chemicals rules, 1989 as amended. Also, Transportation of Hazardous Chemicals is carried out as per the Motor Vehicle Act (MVA), 1989.
104	(xxiii)	The company shall undertake following waste minimization measures:- 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 closed Feed system into batch reactors. e) Venting equipment through vapor recovery system f) Use of high pressure hoses for equipment cleaning to reduce wastewater generation.	a) Complied. Addition of all the chemicals and catalysts is metered and controlled in order to minimize waste generation. b) Complied. Byproducts generated are used in process to the extent possible or sold to customers. c) Complied. All the fillings are carried out through mechanized means in closed loop system. d) Not Applicable e) Complied. Loading of all liquid products is carried out through vapour recovery system. f) Complied. All types of cleaning works are carried out using high pressure hoses.
105	(xxiv)	Green belt shall be developed in 33 % area to mitigate the effects of fugitive emissions all around the	Green belt of adequate width and density has been provided all around the plant to mitigate the effects of

**Compliance status to conditions of Environment Clearances at
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Sr. No.	Cond. No.	Conditions	Compliance Status
		plant as per CPCB guidelines in consultation with the local DFO. Thick greenbelt with suitable plant species shall be developed around the proposed distillery to mitigate the odor problem.	fugitive emission as well as odour if any. Presently 33% area of the premises has been developed as green belt/area with native species. Regular plantation of tree saplings in and around the plant complex is done and also mass tree plantation programs are organized.
106	(xxv)	Occupational health surveillance program shall be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health center shall be strengthened and the regular medical test records of each employee shall be maintained separately.	Occupational Health Surveillance of the workers and Employees is done on a regular basis (6 monthly basis for workers and on annual basis for employees) and records maintained as per the Factories Act and OISD-GDN-166. The first aid facilities in the occupational health center are regularly reviewed and strengthened as per requirement.
107	(xxvi)	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines are implemented.
108	(xxvii)	All the commitments made during the public hearing/ public consultation meeting held on 5 th September, 2011 should be satisfactorily implemented and adequate budget provision should be made accordingly.	All the commitments made during the public hearing/ public consultation meeting held on 5 th September, 2011 have been suitably implemented.
109	(xxviii)	Company shall prepare project specific environmental manual and a copy shall be made available at the project site for compliance.	Project specific environmental manual and procedures are in place.
110	(xxix)	Company should adopt corporate environment policy as per the Ministry's O.M No J-11013/41/2006-IA.II (I) dated 26 th April, 2011 and implemented. Under Corporate Social Responsibility (CSR), sufficient budgetary provision should be made for health improvement, education, water and electricity supply etc. in and around the project.	Corporate Sustainable Development Policy and site level Environment Policy exists. GAIL has allocated an annual budget of 2 % of the Average Net Profit during the three immediately preceding financial years for Corporate Social Responsibility (CSR) activities, which is effectively used for carefully chosen programs in the field of community development, education, infrastructure, health care,

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Sr. No.	Cond. No.	Conditions	Compliance Status
			skill development and environment & sanitation. Socially useful programs have been undertaken in GAIL since its inception in and around the areas adjoining its major work centers.
111	(xxx)	Provision shall be made for the housing for construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. the housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	The site has been fully developed and stabilized. All necessary measures are taken in respect of sanitation facilities, hygiene etc. for workers. Mostly Local laborers are deployed to the extent possible.

Sr. No.	Cond. No.	Conditions	Compliance Status
General Conditions			
112	(i)	The project authorities shall strictly adhere to the stipulations made by the U.P Pollution Control Board (UPPCB)	All the stipulations made by the Uttar Pradesh Pollution Control Board are adhered to.
113	(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to the 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.	Any expansion of the plant is taken up only after obtaining prior approval of the Ministry. GAIL Pata has been accorded 6 ECs for different expansions as mentioned above (A, B, C, D, E & F).
114	(iii)	The locations of ambient air quality monitoring stations shall be decided in consultation with the state pollution control board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind	Five fixed real time ambient air quality monitoring station and Two third party ambient air quality monitoring stations (within and outside the premises) have been setup. In addition, 1 No. Mobile Van having real time ambient air quality monitoring station is also in use

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		direction as well as where maximum ground level concentrations are anticipated.	for monitoring of ambient air quality. The locations covered by the stations have been fixed in consultation with the Pollution Control Board considering location of existing stacks, wind direction and other topographical features.
115	(iv)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz 75 dBA (day time) and 70 dBA (night time)	All sources of noise generation have been provided with suitable noise control measures including acoustic hoods, silencers, enclosures etc. as applicable to maintain overall noise levels in and around the plant area within the standards. Noise levels are regularly monitored in ambient and work zone areas to ensure that noise levels are within prescribed standards.
116	(v)	The company shall harvest rainwater from the rooftops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve water.	Rain Water harvesting measures have been implemented in all the major buildings at GAIL, Pata. In addition, a natural pond inside the premises is used for rain water harvesting for utilization of water from the pond as per requirement.
116	(vi)	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.	Training is imparted to the employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees are also undertaken on regular basis.
118	(vii)	The company shall also comply with all the environmental protection measures and safeguards proposed in the document submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall	All the environmental protection measures and safeguards are being complied.

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Sr. No.	Cond. No.	Conditions	Compliance Status
		be implemented.	
119	(viii)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	GAIL has allocated an annual budget of 2 % of the Average Net Profit during the three immediately preceding financial years for Corporate Social Responsibility (CSR) activities, which is effectively used for carefully chosen programs in the field of community development, education, infrastructure, health care, skill development and environment & sanitation. Socially useful programs are undertaken by involving local villages and administration.
120	(ix)	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	GAIL Pata regularly undertakes developmental and welfare measures in the project area for overall improvement.
121	(x)	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	A full-fledged Environmental Management Cell is in place to undertake environment and sustainable development related functions. Full-fledged NABL accredited Laboratory set up also exists in the plant premises under the supervision of competent technical personnel.
122	(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 and Forests 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.	Adequate dedicated funds are earmarked for the environmental protection measures and to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government.
123	(xii)	A copy of the clearance letter shall be sent by the project proponent to concerned panchayat, Zila Parishad/Municipal Corporation,	A copy of the clearance letter was sent to the concerned panchayat.

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Sr. No.	Cond. No.	Conditions	Compliance Status
		Urban local Body and the local NGO, if any, from whom suggestions/representations, if any were received while processing the proposal.	
124	(xiii)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated Environmental Clearance including results of monitored data.	Six monthly reports on the status of compliance of the stipulated Environmental Clearance including results of monitored data is regularly submitted.
125	(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 by e-mail.	The environmental statement for each financial year ending 31 st March in Form-V is submitted to the Uttar Pradesh Pollution Control Board. A copy of the same is also uploaded on the website of the company along with the status of compliance of environmental clearance conditions and also sent to the Regional Office of MoEF&CC by e-mail.
126	(xv)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and the copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	The matter was suitably advertised in the local newspapers that are widely circulated in the region as per requirement and a copy of the same was also forwarded to the concerned Regional Office of the Ministry.
127	(xvi)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial	Suitable information as required was communicated to the concerned agencies.

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		closure and the final approval of the project by the concerned authorities and the date of start of the project.	

Name of the Project: Poly Propylene Expansion Project **Project Code:** NIL

Clearance Number: J-11011/595/2010-IA II (I), Dated 16/10/2020

Period of Compliance: October, 2021 to March, 2022

Sr. No.	Cond. No.	Conditions	Compliance Status
SPECIFIC CONDITIONS:			
128	(i)	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.	All the environmental protection measures and safeguards are being fulfilled.
129	(ii)	As committed by the Project proponent, 75 % of the effluent discharged to the river shall be recovered and reused to reduce the fresh water requirement. The total effluent proposed to discharge to the river is 164 cum/hr, out of which 75 % shall be treated through ETP/RO system and reused in the plant/process. Only the remaining 25 % the effluent shall be sent for river discharge after meeting the prescribe standards.	An assessment by CSIR-NEERI, Nagpur has been carried out and further detailed engineering is being carried out by M/s Engineers India Limited (EIL) with an aim to move towards zero discharge
130	(iii)	Total fresh water requirement shall not exceed 2040 cum/hr, proposed to be met from water supply from the Irrigation Department, Etawah Zone. Necessary permission in this regard shall be obtained from the concerned regulatory authority. The fresh water requirement shall be reduced after installation of rainwater harvesting system in the unit/project area.	Approval from the State Irrigation Department has been obtained vide agreement no DG738976, dated 02/05/2017. Additional rainwater harvesting structures are also proposed to be built in the upcoming unit/project area.
131		Comprehensive water audit to be conducted on annual basis and	Comprehensive water audit activity is under progress at present and

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		report to the concerned Regional Office of MoEF&CC. Outcome from the report to be implemented for conservation scheme.	outcome from the report shall be suitably implemented.
132	(iv)	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	Separate storm water drain exists. It has been ensured that process effluent and other waste water are not mixed with storm water. Contaminated Storm Water is treated in Waste Water Treatment plant and is passed through guard pond.
133	(v)	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.	Hazardous chemicals being used at GAIL Pata are stored in tanks, tank farms, drums, carboys etc. Flame arresters are provided on tank farm, and solvents are being transferred through pumps.
134	(vi)	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.	All the generated hazardous wastes are being disposed of as per the directions of Hazardous Waste Authorization accorded from Uttar Pradesh Pollution Control Board vide letter no. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026. There is no generation of ash from the boilers as natural gas is the source of fuel.
135	(vii)	Regular VOC monitoring shall be done at vulnerable points.	VOC monitoring is carried out and controlled through Leak Detection and Repair (LDAR) program as per OISD-GDN-224.
136	(viii)	The oily sludge shall be subjected to melting pit for oil recovery and the residue shall be bio-remediated. The sludge shall be stored in HDPE lined pit with proper leachate collection system.	All the generated hazardous wastes are being disposed off as per the directions of Hazardous Waste Authorization accorded by Uttar Pradesh Pollution Control Board vide letter no. 14295/UPPCB/ Kanpur Dehat (UPPCBRO) / HWM/ AURRAIYA/ 2021, dated 08.07.2021 and is valid up to 07/07/2026. The oily sludge is stored in HDPE lined pits inside the plant premises before disposal.
137	(ix)	Oil catchers/oil traps shall be	Oil catchers/oil traps are already

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Sr. No.	Cond. No.	Conditions	Compliance Status
		provided at all possible locations in rain/ storm water drainage system inside the factory premises.	available at all possible locations in storm water drainage system inside the factory premises.
138	(x)	<p>The company shall undertake waste minimization measures as below:</p> <p>a. Metering and control of quantities of active ingredients to minimize waste.</p> <p>b. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</p> <p>c. Use of automated filling to minimize spillage.</p> <p>d. Use of Close Feed system into batch reactors.</p> <p>e. Venting equipment through vapor recovery system.</p> <p>f. Use of high pressure hoses for equipment cleaning etc. to reduce wastewater generation.</p>	<p>a. Complied. Addition of all the chemicals and catalysts is metered and controlled in order to minimize waste generation.</p> <p>b. Complied. Byproducts generated are used in process to the extent possible or sold to customers.</p> <p>c. Complied. All the fillings are carried out through mechanized means in closed loop system.</p> <p>d. Not Applicable</p> <p>e. Complied. Loading of all liquid products is carried out through vapor recovery system.</p> <p>f. Complied. All types of cleaning works are carried out using high pressure hoses.</p>
139	(xi)	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.	Green belt of adequate width and density has been provided all around the plant premises. Presently 33% area of the premises has been developed as green belt/area with native species. Regular plantation of tree saplings in and around the plant complex is done and also mass tree plantation programs are organized.
140	(xii)	As proposed, Rs 4.77 crores shall be allocated for Corporate Environment Responsibility (CER) shall be utilized for meeting the commitment of the socio-economic issues and as per the proposed action plan. The CER plan shall be completed within three year of expansion of the project.	An amount of Rs 4.77 crores has been allocated for Corporate Environment Responsibility (CER) and shall be utilized for meeting the commitment of the socio-economic issues.
141	(xiii)	The project proponent shall ensure 70% of the employment to the local people, as per the applicable law. The project proponent shall set up	It shall be ensured that maximum employment is provided to the local people as per the applicable law. Necessary skill development center

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Sr. No.	Cond. No.	Conditions	Compliance Status
		a skill development center/provide skill development training to village people.	has been established and skill development training is also imparted to village people.
142	(xiv)	A separate Environmental Management Cell (having qualified person with Environmental Science/ Environmental Engineering/ specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	A full-fledged Environmental Management Cell is in place to undertake environment and sustainable development related functions. Full-fledged NABL accredited Laboratory set up also exists in the plant premises under the supervision of competent technical personnel.
143	(xv)	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.	Protection against all Fire Hazards is in place. Firefighting systems are in line as per the OISD-GDN-115 & OISD-GDN-116.
144	(xvi)	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. In case of the treated effluent to be utilized for irrigation/gardening, real time monitoring system shall be installed at the ETP outlet.	Online Continuous Emission Monitoring System has been provided in all the stacks and real time data is sent to CPCB and UPPCB through web based system. Continuous online monitoring of the effluent parameters like pH, BOD, COD, TSS, & Flow is done at CPCB and UPPCB through web based server systems.
145	(xvii)	PP to set up occupational health Centre for surveillance of the worker's health within and outside the plant on a regular basis. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.	Occupational Health Surveillance of the workers and Employees is done on a regular basis (6 monthly basis for workers and on annual basis for employees) and records maintained as per the Factories Act and OISD-GDN-166. The health data is suitably used in deploying the duties of the workers. All workers & employees are provided with required safety kits/mask for personal protection.
146	(xviii)	The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended	The National Emission Standards for Petrochemical (Basic & Intermediates) issued by the Ministry vide G.S.R. 820 (E) dated 9th November, 2012 as amended is being followed.

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		time to time shall be followed.	
147	(xix)	Recommendations of mitigation measures from possible accident shall be implemented based on Risk Assessment studies conducted for worst case scenarios using latest techniques.	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented suitably.
148	(xx)	The project proponent shall develop R & D facilities to develop their own technologies for propylene and polypropylene processing.	A dedicated Corporate R&D department exist in GAIL (India) Limited which also caters to the research and development work related to GAIL Pata.

Sr. No.	Cond. No.	Conditions	Compliance Status
General Conditions			
149	(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 imposed and to add additional environmental protection measures required, if any.	The condition is noted. Any expansion of the plant is taken up only after obtaining prior approval of the Ministry.
150	(ii)	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.	Energy source for lighting purpose shall be LED based lighting in the upcoming project. Also, Phase wise replacement of incandescent lamps with LEDs is under progress for the existing facility.
151	(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	All sources of noise generation have been provided with suitable noise control measures including acoustic hoods, silencers, enclosures etc. as applicable to maintain overall noise levels in and around the plant area

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		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).	within the standards. Noise levels are regularly monitored in ambient and work zone areas to ensure that noise levels are within prescribed standards.
152	(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.	All relevant measures for improving the socio-economic conditions of the surrounding area along with CER activities shall be suitably undertaken by involving local villages and administration.
153	(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.	The dedicated funds are earmarked for the environmental protection measures 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.
154	(vi)	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.	The condition is not applicable, as there were no suggestions/ representations.
155	(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 e-mail) to the	Six monthly reports on the status of compliance of the stipulated Environmental Clearance including results of monitored data is regularly submitted to the Regional Offices of MoEF&CC and CPCB and to the UPPCB and the same is also uploaded on the

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		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.	website of the company.
156	(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.	The environmental statement for each financial year ending 31 st March in Form-V is submitted to the Uttar Pradesh Pollution Control Board. A copy of the same is also uploaded on the website of the company along with the status of compliance of environmental clearance conditions and also sent to the Regional Office of MoEF&CC by e-mail.
157	(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.	The matter was suitably advertised in the local newspapers that are widely circulated in the region as per requirement and forwarded to the concerned Regional Office of the Ministry.
158	(x)	The project authorities shall inform the Regional Office as well 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.	Required information will be suitably communicated.
159	(xi)	This Environmental clearance is granted subject to final outcome of	The condition is noted.

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Sr. No.	Cond. No.	Conditions	Compliance Status
		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.	