

SL NO	CONDITION	COMPLIANCE
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# COMPLIANCE REPORT FOR

THE PERIOD OCTOBER'2020 – MARCH'2021

# ENVIRONMENTAL CLEARANCE

EC Letter No. J-11011/112/2013-IA.II(I), date 13<sup>th</sup> February, 2020



## ARDENT STEEL LIMITED

Vill: Phuljhar, Block: Banspal, Dist: Keonjhar, Odisha.

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**COMPLIANCE FOR ENVIRONMENTAL CLEARANCE OF THE IRON ORE PELLETISATION PLANT OF  
M/S ARDENT STEEL LIMITED**

**Vill: Phuljhar, Block: Banspal, Dist: Keonjhar, Odisha – 758085**

**A. SPECIFIC CONDITION**

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1	Ground water extraction shall be limited to 500 KLD at present. No additional ground water extraction is permitted.	Ground water extraction will not exceed 500 KLD at any time.
2	No slime pond is permitted.	There will be no slim pond within the plant premises.
3	Green belt shall be developed covering 33% of the area in a time frame of two years.	<p>Out of total plant area of 36.781ha, around 12.13 ha (32.98% of total area) of land has green belt cover. During the present six-month period 300 saplings are planted in the plant campus and 1700 saplings are distributed to villagers of Andharikhaman, Phuljhar, Chhatna, Dhaladihi, Kasia, etc to plant in their unused land.</p> <p>These saplings of Amla, Neem, Mahaneem, Guava, Bel, Mango, Jamun, Chhatina, Kendu, etc are procured form Forest Dept. nursery at Anjar, Belda, Telkoi &amp; Jhumpura.</p> <p>Some few Villagers name with sapling:  1.DuhshasanKhuntia (Phuljhar)=200 Neem  2.Jagannath Mahanta (Chhatina)=200 Bel  3. Subarna Munda (Kasia)=200 Mango</p>
4	Provision for industrial vacuum cleaner to control the fugitive emissions shall be made.	Truck Mounted unit with dual vacuum cleaner is provided. The suction system comprising of one Centre brush, two side brushes and two suction heads; one operating at a time having a container volume of 6.5 cum.

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5	Particulate emissions from the stacks shall be less than 30 mg/Nm <sup>3</sup> with bag house as APCD. Emission from ESP shall be less than 50 mg/Nm <sup>3</sup>	We are adhering to the norms. Efforts are being continuously made to reduce the emission from stack to less than 30 mg/Nm <sup>3</sup> by installing, i) New PTFE dust collecting bags has been replaced in each bag house. ii) New ID Fan to increase suction volume iii) New heat-exchanger (air cooler) to increase cooling surface area. Following the previous EC, we had taken all necessary steps to keep the emission from stack to less than 50 mg/Nm <sup>3</sup> .

#### B. GENERAL CONDITION

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<b>1</b>	<b>STATUTORY COMPLIANCE</b>	
1	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.	The copy of Consent to Establish & Consent to Operate for production of 0.69 million TPA Pellet issued by SPCB, Odisha are attached as <a href="#">Annexure - 1</a> & <a href="#">Annexure-2</a> .
2	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	We have entered into an agreement with Govt. of Odisha to draw 0.2 cusec water from ground water source through 3 bore wells for use in project. This agreement is valid up to 14.07.2022. The copy of this agreement is given as <a href="#">Annexure – 3</a> .
3	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	The HW waste authorization certificate issues by the SPCB, Odisha is valid upto 31.03.2022. This copy of the certificate is attached as <a href="#">Annexure – 4</a> .

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<b>II</b>	<b>AIR QUALITY MONITORING AND PRESERVATION:</b>	
<b>1</b>	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31 <sup>st</sup> March'2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30 <sup>th</sup> May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7 <sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	<p>Online stack monitoring facility for the stack has been installed but Due to the frequent network problem data transmission is not always successful. Jio fiber network will be installed in our plant very soon.</p> <p>Sufficient air pollution control devices such as ESP, Bag house, Bag filters etc. are provided to keep the pollution level control for all the units. Such as ESPs and Bag Filters etc.</p>
<b>2</b>	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986	Fugitive emissions are being controlled as per permissible limit issued by Ministry and also regularly monitoring has been practiced. Fugitive emission is monitored every month and the monitoring result in this 6month period is attached as <a href="#">Annexure – 5</a> .
<b>3</b>	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOX in reference to SO2 and NOX emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120degrees each), covering upwind and downwind directions.	The ambient air quality is within the standards stipulated by CPCB. AAQ monitoring results are submitted to Ministry's Regional Office at Bhubaneswar/ OPCB/ CPCB once in six month. The result is attached in <a href="#">Annexure – 6</a> .

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4	Sampling facility at process stacks shall be provided as per CPCB guidelines for manual monitoring of emissions.	Complied. Stack monitoring result are in <a href="#">Annexure - 7</a> .
5	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Manual stack monitoring, manual monitoring of ambient air quality and fugitive emissions results are attached in this report as annexures.
6	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Bag filters are installed at 6 locations in the plant to control fugitive emission. Apart from it, ESP is connected with Travelling Grate and 60 water sprinklers are there within the plant premises. The detail is attached as <a href="#">Annexure- 8</a> . <b>No Additions to existing bag filers at 6 locations or to 60 water sprinklers.</b>
7	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Agreed. We have started the process to install them.
8	Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.	All recommendation for CREP guidelines will be implemented.
9	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Fugitive emissions are being controlled as per permissible limit issued by Ministry and also regularly monitoring has been plasticized. 60 nos. of Water Sprinklers have been installed along the road as well as loading and unloading points, all roads inside the plant are concrete, a 10 KL capacity mobile water tanker has been engaged to sprinkle water on road, truck mounted sweeper machine is engaged to clean dust. Truck Mounted unit with dual vacuum cleaner is provided. The suction system comprising of one centre brush, two side brushes and two suction heads; one

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		operating at a time having a container volume of 6.5 cum.
10	Recycle and reuse iron ore fines, coal fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.	<p>In our pellet production process, a small amount of solid waste (like Dust generated from ESP, Dust generated from de-dusting units &amp; broken green pellets) are generated, which are recycled back to the feed system of the pellet plant.</p> <p>Negligible amount of coal ash is being generated from coal gasifire which is being used for levelling of low laying areas in the plant premises.</p> <p><b><u>Pet Coke (Solid) are covered under Roof Shed (Coal Mill area).</u></b>  <b>Total Raw Material Area:30331.82 Sqmtrs</b>  <b>Pet Coke Store Area:1155 Sqmtrs (Coal Mill area)</b></p>
11	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Vehicles having valid PUC certificates are engaged in transporting raw materials & finished products. These materials are transported in covered condition.
12	Wind shelter fence and chemical spraying shall be provided on the raw material stock.	Agreed.
13	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	Complied.
III	<b>WATER QUALITY MONITORING AND PRESERVATION:</b>	
1	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31 st March 2012 (Integrated iron & steel); G.S.R 414 (E) dated	The plant is operating on the concept of 'zero liquid discharge' i.e. no effluent is discharged outside the plant premises. Hence, no continuous effluent quality monitoring system is required to monitoring discharge of effluent liquid.

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	30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	
2	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Ground water monitoring data during the six month period is attached in <a href="#">Annexure - 9</a> .
3	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	There is no effluent discharge to outside. It is a zero liquid discharge unit. Hence, no continuous effluent quality monitoring system required.
4	The project proponent shall provide the ETP to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; SO. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time.	The small quantity of wastewater being generated from the process is treated in settling ponds by gravitational settling and the treated water being recycled in the process only. So effluent treatment plant is not required for this process.
5	Adhere to 'Zero Liquid Discharge	Agreed, we are following it. No wastewater is discharged outside the plant premises.
6	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	A 15 KL STP is there within the plant premises to treat domestic waste water.

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7	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	The water seepage near the storage yard is being collected through garland drains and routed to a concrete pit. The treated water is recycled into the process.
8	Tyre washing facilities shall be provided at the entrance of the plant gates.	Not yet installed but we have initiated the process to install it.
9	The project proponent shall practice rainwater harvesting to maximum possible extent.	Rain Water Harvesting and Ground Water Recharge Plan for our plant has been prepared.
10	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Digital Flow Meters have been installed at the inlet of all 3 units since 6th November, 2020. Copy of certificates of all 3 units are attached as <a href="#">Annexure - 10</a> .
11	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Agreed.
<b>D</b>	<b>NOISE MONITORING AND PREVENTION:</b>	
1	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	The noise level monitoring result during this six month period is within the standards stipulated by CPCB. Attached in <a href="#">Annexure – 11</a> .
2	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Accepted. The monitoring result of noise shows that the levels are under 75 dB(A) during day time and 70 dB(A) during night time.



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<b>E</b>	<b>ENERGY CONSERVATION MEASURES:</b>	
<b>1</b>	Use hot charging of slabs and billets/blooms as far as possible.	Not applicable.
<b>2</b>	Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.	In our case the flue gas temperature from the pellet plant does not exceed 300°C. Hence no waste heat recovery boiler has been installed.
<b>3</b>	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; iv. Provide LED lights in their offices and residential areas.	We have initiated the process to install Solar power generation on roof tops of buildings. Order has been placed for procurement. Yes, LED lights are provided in our offices and residential areas.
<b>F</b>	<b>WASTE MANAGEMENT:</b>	
<b>1</b>	Used refractories shall be recycled as far as possible	Agreed.
<b>2</b>	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil.	Negligible quantity of coal ash is generated from the plant process, which is used to backfill the low laying areas of within the plant premises.  5 nos. of oil collection pits at 3 locations are provided, which has a total capacity 83.58 KL.
<b>3</b>	The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanizing, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.	The hazardous wastes (HW) generated in plant are used oil and oil sludge. These wastes are collected and stored in HW storage area marked as per Hazardous and other waste Management and Transboundary Movement) Rule 2016. Coal ash which is a solid waste has been analyzed and found that it does not contain any hazardous waste. The HW waste authorization certificate issues by the SPCB, Odisha is attached as <a href="#">Annexure – 4</a> . This certificate is valid up to 31.03.2022.

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4	Kitchen waste shall be composted or converted to biogas for further use.	The biodegradable material including kitchen waste are composted and used as manure inside the premises.
<b>G GREEN BELT:</b>		
1	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Out of total plant area of 36.781ha, around 12.13 ha (32.98% of total area) of land has green belt cover. During the present six month period 300 saplings are planted in the plant campus and 1700 saplings are distributed to villagers of Andharikhaman, Phuljhar, Chhatna, Dhaladihi, Kasia, etc to plant in their unused land. These saplings of Amla, Neem, Mahaneem, Guava, Bel, Mango, Jamun, Chhatina, Kendu, etc are procured form Forest Dept. nursery at Anjar, Belda, Telkoi & Jhumpura.
2	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	Agreed. We are preparing it.
<b>H PUBLIC HEARING AND HUMAN HEALTH ISSUES:</b>		
1	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	We have already submitted On Site Emergency Plan for the existing plant.
2	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	Agreed; We will care carry out the heat stress analysis for the workmen. Operators are provided with ear muffs and ear plugs. Full body Asbestos Apron issued to employees working at heat zone.
3	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the	The present EC is for enhancement in production capacity of pelletizing plant of 6, 00,000 TPA to 6, 90,000 TPA buy using the 4th unused filter press. Other sections of the plant will be able to cope up with the expanded capacity due to inherent design margin to the tune of extra 20%.

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	form of temporary structures to be removed after the completion of the project.	Thus no new construction is required and hence no housing facility for labourer arises.
4	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Agreed. Occupational Health Surveillance of the workers has been done on a regular basis. We have appointed a qualified doctor on adhoc basis to do medical checkup of the workers working in our plant ones in every six-month. During this six-month period, there was health check up for 350 numbers of direct employees and 300 numbers of contractual workers. Few such examination reports are attached as <a href="#">Annexure – 12</a> for reference.
I	<b>CORPORATE ENVIRONMENT RESPONSIBILITY (CER):</b>	
1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	Agreed. We will comply to the provision of Corporate Environment Responsibility.
2	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/ violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Yes, we have a well laid down environmental policy, which is given in detail in the EAI /EMP report.

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3	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will report directly to the head of the organization.	Yes, an Environment Cell is operating at the Plant, which is headed by Dr. Subhasish Das (Director) and he is assisted by the Plant Manager. Other members of the cell area DGM – Process, DGM – Mechanical, DGM – Electrical, DGM – Safety & Environment, AGM –HR, IR & Admin. & Environment, Manager Q.C. and Asst. Manager Q.C.
4	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Agreed. An effective Environment Management Plan (EMP) is developed for the project. Details in the approved EIA /EMP report.
5	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	We will abide by it.
6	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.	Agreed.
J	<b>MISCELLANEOUS:</b>	
1	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District of State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Yes, it has already been intimated to public and also submitted a copy to the State Pollution Control Board, Odisha. The news of obtaining EC was published in two local newspapers.

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2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied. The compliance report, monitoring report, CSR Activities are being uploaded on company's website (ardentsteel.com) regularly.
4	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Agreed.
5	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environmental clearance portal.	Complied. The six monthly EC compliance report is being submitted regularly.
6	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	The environmental statement for each financial year is submitted regularly to SPCB, Odisha. The copy of the environmental statement for the year 2020-21 is attached as <a href="#">Annexure – 13</a> .
7	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	The project has been completed before obtaining the EC. Financial Closure : 21 .10.2008 Financial approval : 21.10.2008 Purchase of 1st land : 31.05.2008 Proof for the above already submitted earlier.

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8	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Yes, we are following the stipulations of SPCB, Odisha strictly.
9	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agreed. In a phase wise manner as per CER we will implement them.
10	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF & CC).	Agreed, our future expansion will only be carried out after prior approval of MoEF & CC.
11	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under provisions of Environment (Protection) Act, 1986.	Agreed.
12	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed.
13	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement the conditions.	Agreed.
14	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Agreed. All cooperation shall be extended to the officer(s) of the Regional Office during any visit in future.
15	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary	Agreed.

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	Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	
16	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	There is no appeal against this EC near the National Green Tribunal.

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