



Ref. No.:- GRCD/EHS/262

Date 28.11.2023

To,

The Director,
Ministry of Environment, Forest and Climate Change,
Government of India
Vayu Wing, 3rd floor, Indira Paryavran Bhawan,
Jorbagh Road, New Delhi-110003

Sub: Reg. submission of Half yearly compliance report (April, 2023-Sep., 2023) for the Expansion project of caustic chlorine products from and value-added derivatives along with installation of new chloromethane plant at village-Birlagram, Tehsil-Nagda, District-Ujjain (MP) by **M/s. Grasim Industries Ltd. (Chemical division)**

Ref: EC Letter no. F. No. J-11011/119/2015-IA.II(I) dated 7.1.2020

Dear Sir,

With reference to aforesaid subject & reference matter, we are herewith submitting **Half yearly EC compliance report (April, 2023-Sep., 2023)** for the Expansion project of caustic chlorine products from and value-added derivatives along with installation of new chloromethane plant at village-Birlagram, Tehsil-Nagda, District-Ujjain (MP) by **M/s. Grasim Industries Ltd. (Chemical division)**

We hope you will find our reply in order

Yours Faithfully,

M/s. Grasim Industries Ltd.
(Chemical division)

A handwritten signature in blue ink, appearing to be "Prem Tiwari", is written over a blue circular stamp or watermark.

Authorised Signatory
Prem Tiwari-President

Grasim Industries Limited
Chemical Division

Birlagram - 456 331, Nagda (M.P.) INDIA Tele: +91 7366 246760-66 Fax: +91 7366 246176, 246767
E-mail: grasimchem@adityabirla.com Website: www.adityabirlachemicals.com CIN: L17124MP1947PLC000410

Regd. Office: P.O. Birlagram, Nagda - 456 331 (M.P.)

Your application has been **Submitted** with following details

Proposal No	IA/MP/IND2/26969/2015
Compliance ID	28384986
Compliance Number(For Tracking)	EC/M/COMPLIANCE/28384986/2023
Reporting Year	2023
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	01-12-2023
IRO Name	Shri Ashok Kumar Sinha
IRO Email	tg035@ifs.nic.in
State	MADHYA PRADESH
IRO Office Address	Budgam

Note:- SMS and E-Mail has been sent to Shri Ashok Kumar Sinha, MADHYA PRADESH with Notification to Project Proponent.

Name of the Project: Expansion of Caustic Chlorine products from and value-added derivatives along with installation of new chloromethane plant, at Village: Birlagram, Tehsil: Nagda, District: Ujjain, Madhya Pradesh by **M/s Grasim Industries Ltd. (Chemical Division)**

Environment Clearance letter number: J-11011/119/2015-IA. II(I) dated 07.01.2020

Period of Compliance: April 2023 to September 2023

Address for Correspondence: Grasim Industries Limited, Villages- Mehatwas, Birlagram, Tehsil- Nagda, District- Ujjain, Madhya Pradesh








No.	Environmental Clearance Conditions	Reply given by PP in compliance report																																																																																
1.0	This has reference to your online proposal No. IA/MP/IND2/26969/2015, dated 30 th September 2019 for Environmental clearance to the above project.	Noted																																																																																
2.0	<p>The details of proposed products are as under: -</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Particulars</th> <th>Existing (TPA)</th> <th>Additional (TPA)</th> <th>Total (TPA)</th> </tr> </thead> <tbody> <tr> <td colspan="5">A Main Products</td> </tr> <tr> <td>1</td> <td>Caustic Soda</td> <td>270000</td> <td>180000</td> <td>450000</td> </tr> <tr> <td>2</td> <td>Poly Aluminum Chloride</td> <td>27720</td> <td>137280</td> <td>165000</td> </tr> <tr> <td>3</td> <td>Stable Bleaching Powder</td> <td>29436</td> <td>25314</td> <td>54750</td> </tr> <tr> <td>4</td> <td>Chlorinated Paraffin</td> <td>27000</td> <td>18645</td> <td>45645</td> </tr> <tr> <td>5</td> <td>Chloromethane</td> <td>Nil</td> <td>36000</td> <td>36000</td> </tr> <tr> <td>6</td> <td>Chloro Sulphonic Acid</td> <td>23400</td> <td>NIL</td> <td>23400</td> </tr> <tr> <td>7</td> <td>Calcium Chloride (100%)</td> <td>54000</td> <td>NIL</td> <td>54000</td> </tr> <tr> <td colspan="5">B Co-products and By-products</td> </tr> <tr> <td>1</td> <td>Chlorine</td> <td>215200</td> <td>149800</td> <td>365000</td> </tr> <tr> <td>2</td> <td>Hydrochloric Acid (100%)</td> <td>79000</td> <td>56000</td> <td>135000</td> </tr> <tr> <td>3</td> <td>Sodium Hypochloride</td> <td>53520</td> <td>36480</td> <td>90000</td> </tr> <tr> <td>4</td> <td>Hydrogen</td> <td>6730</td> <td>4670</td> <td>11400</td> </tr> <tr> <td>5</td> <td>Compressed Hydrogen</td> <td>960</td> <td>500</td> <td>1460</td> </tr> <tr> <td>6</td> <td>Carbon Dioxide (By-product)</td> <td>23760</td> <td>NIL</td> <td>23760</td> </tr> </tbody> </table>	S. No.	Particulars	Existing (TPA)	Additional (TPA)	Total (TPA)	A Main Products					1	Caustic Soda	270000	180000	450000	2	Poly Aluminum Chloride	27720	137280	165000	3	Stable Bleaching Powder	29436	25314	54750	4	Chlorinated Paraffin	27000	18645	45645	5	Chloromethane	Nil	36000	36000	6	Chloro Sulphonic Acid	23400	NIL	23400	7	Calcium Chloride (100%)	54000	NIL	54000	B Co-products and By-products					1	Chlorine	215200	149800	365000	2	Hydrochloric Acid (100%)	79000	56000	135000	3	Sodium Hypochloride	53520	36480	90000	4	Hydrogen	6730	4670	11400	5	Compressed Hydrogen	960	500	1460	6	Carbon Dioxide (By-product)	23760	NIL	23760	Noted
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No.	Environmental Clearance Conditions	Reply given by PP in compliance report
3.0	The proposed project/activity is listed under category A of item 4(d) 'Chlor-Alkali Industry' and 5(f) 'Synthetic organic chemical industry' in the schedule of Environmental Impact Assessment (EIA) Notification, 2006, and requires appraisal/approval at central level by sectoral Expert Appraisal Committee (EAC).	Noted. The EC is obtained from Central level by sectoral Expert Appraisal Committee (EAC) vide letter no F. No. J-11011/119/2015-IA-II (I) dated- 7 th January, 2020.
4.0	The term of reference of the project was granted on 29 th July, 2015 followed by validity extension of ToR vide letter dated 11 th December, 2018. Public hearing for the proposed expansion project was conducted by State Pollution Control Board on 04 th June, 2019. The Public Hearing was chaired by ADM, Ujjain. The main issue raised during the public hearing are related to Employment, water source & water pollution, Effluent discharge, Gaseous Emission etc.	Duly Noted. Action plan for the issues raised during public hearing are compiled by the company. M/s Grasim has maintained the Zero liquid Discharge (ZLD) by ETP, RO MEE & ATFD and also provided employment for local peoples.
5.0	Project proponent reported that the existing land area is 61.92 Ha (619200 m ²). No additional land will be required for proposed expansion. Industry has already developed green belt in an area of 38% i.e., 23.68 Ha (236800) out of the total area of the project. Project proponent reported that there is no National Park, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves and Wildlife Corridors within 10 km distance from the project site. Dam is at a distance of 2.13 Km in NW direction, Bangerl Nadi flows at distance of 2.5 Km in West Direction, Chambal River Flow at 0.1 km in West and Bangeri Nadi flow at 1 km in West.	Duly Noted. Industry has already developed green belt in an area of 38% i.e., 23.68 Ha (236800) out of the total area of the project. The photographs of the green belt in and around the industry is given below:



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6.0	<p>Project proponent reported that the total water requirement is 6000 m³/day including fresh water requirement of 5400 m³/day proposed to be met from Chambal River. Effluent of 610 m³/day quantity is being/will be treated in Effluent Treatment Plant. The plant is being/will be based Zero Liquid discharge system. Power requirement after expansion will be 141 MW including existing 80 MW and will be met from outsource and Madhya Pradesh State Electricity board (MPSEB). Existing unit has 2 nos. of DG sets of 2000 KVA capacity each, having 30 m stack height as per CPCB norms used during power failure. Additionally, no DG sets will be required for proposed expansion project. Existing unit has 2 Hydrogen Gas fired boilers of 9 TPH capacity each. No new boiler will be installed.</p>	<p>The industry has not exceeded the total water requirement (6000 m³/day) including fresh water requirement (5400 m³/day) as per the granted EC. Permission for water drawl from Chambal River given by Water resource Department, Ujjain dated 1-06-2006 is attached as Annexure 1. Waste water effluent (610 m³/day) generated during the process is treated in Effluent Treatment Plant (ETP). The treated water is reused in the industrial process and ZLD has been achieved. Zero liquid discharge note has been attached as Annexure 2. Power requirement is 141 MW which is met from outsource and Madhya Pradesh State Electricity board (MPSEB). The company is strictly complying EC condition regarding nos. of DG sets and their stack height.</p>

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7.0	Project Proponent reported that the Ambient air quality monitoring was carried out at 8 locations during Winter Season (Dec., 2016 to Feb., 2017) and the baseline data indicates the ranges of concentrations as: PM ₁₀ (63.2 to 90.1 µg/m ³), PM _{2.5} (28.2 to 47.4 µg/m ³), SO ₂ (7.3 to 32.9 µg/m ³), NO ₂ (12.6 to 30.6 µg/m ³), respectively. AAQ modeling study for point source emissions indicates that the maximum incremental GLCS after the proposed expansion project would be 0.024 µg/m ³ , 0.085 µg/m ³ , 0.10 µg/m ³ , with respect to PM, C ₁₂ , HCl. The resultant concentration of PM is within the National Ambient Air Quality Standards (NAAQS).	No new boiler has been installed in the industry. The concentration of the PM ₁₀ , PM _{2.5} , SO ₂ and NO ₂ is within the prescribed limit of National Ambient Air Quality Standards. Copy of the reports of April 23 to September 23 is attached as annexure-3																																					
8.0	The estimated project cost for expansion of the project is 285 Crores. Total capital cost earmarked towards environmental pollution control measures is 20 Crores and the recurring cost (operation and maintenance) will be about 3.4 Crores/annum. The expenditure towards Corporate Environment Responsibility (CER) for the project would be 5 Crores of the project cost as committed by the project proponent. Total employment will be 1545 persons (Regular: 245 + Contractual: 1300) including 128 persons (Regular: 28 + Contractual: 100) after expansion of the project.	Duly Noted Employment to the persons has been given as stated in EC condition. Local people are preferred based on their skills. The Corporate Environment Responsibility activity budget and photographs of activities carried out by Grasim Pvt. Ltd. are shown below:																																					
	<table border="1"> <thead> <tr> <th rowspan="2">S. No.</th> <th rowspan="2">Activity Heads</th> <th colspan="2">Year 2023-24</th> <th rowspan="2">Total Amount (Rs. In lakhs)</th> </tr> <tr> <th>April 2023-June 2023</th> <th>July 2023-September 2023</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>educational Programme</td> <td>0</td> <td>2.95888</td> <td>2.95888</td> </tr> <tr> <td>2</td> <td>Health Care</td> <td>0</td> <td>0.22048</td> <td>0.22048</td> </tr> <tr> <td>3</td> <td>Sustainable Livelihood</td> <td>0</td> <td>0.66580</td> <td>0.66580</td> </tr> <tr> <td>4</td> <td>Infrastructure Development</td> <td>0</td> <td>9.749</td> <td>9.749</td> </tr> <tr> <td>5</td> <td>Social Development</td> <td>0</td> <td>0.17729</td> <td>0.17729</td> </tr> <tr> <td colspan="2">GRAND TOTAL</td> <td>0.0</td> <td>13.77157</td> <td>13.77157</td> </tr> </tbody> </table>	S. No.	Activity Heads	Year 2023-24		Total Amount (Rs. In lakhs)	April 2023-June 2023	July 2023-September 2023	1	educational Programme	0	2.95888	2.95888	2	Health Care	0	0.22048	0.22048	3	Sustainable Livelihood	0	0.66580	0.66580	4	Infrastructure Development	0	9.749	9.749	5	Social Development	0	0.17729	0.17729	GRAND TOTAL		0.0	13.77157	13.77157	
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Glimpse of CER activities conducted by Grasim is shown below:																																							

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	2 No's Roof Solar System 10 KW	2 No's PHC construction
		
	2 No's Aaganwadi Renovation	Hypo Spraying during Lampi Virus
		
	Plantation	Heat Pump installation in Girls Hoste
		
	NSS Camp	
9.0	<p>The project proponent has informed that a case was filed in High court and transferred to NGT (Case no.77/2017 CZ) regarding pollution being caused in the river Chambal due to effluents from the industry. As per NGT order, Grasim Industries Ltd. Chemical Division received MPPCB directions, in compliance of which</p>	<p>ZLD has been achieved from March 2018 by the company and maintained and no waste water is discharged outside the pant. The treated water is reused in the industrial processes. Zero liquid discharge note has been attached as Annexure 2.</p>

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	company has achieved ZLD in March, 2018. As on date no other case is due against the existing project.	
10.0	The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report and public hearing process. If any part of data/information submitted is found to be false/misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.	Duly Noted.
11.0	The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing has been properly addressed in the EIA/EMP report. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).	Noted.
12.0	The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held on 20-22 November, 2019, wherein the project proponent and their accredited consultant presented the EIA/EMP Report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.	Noted
13.0	The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments there to and hereby accords the environmental clearance under the provisions	Noted.

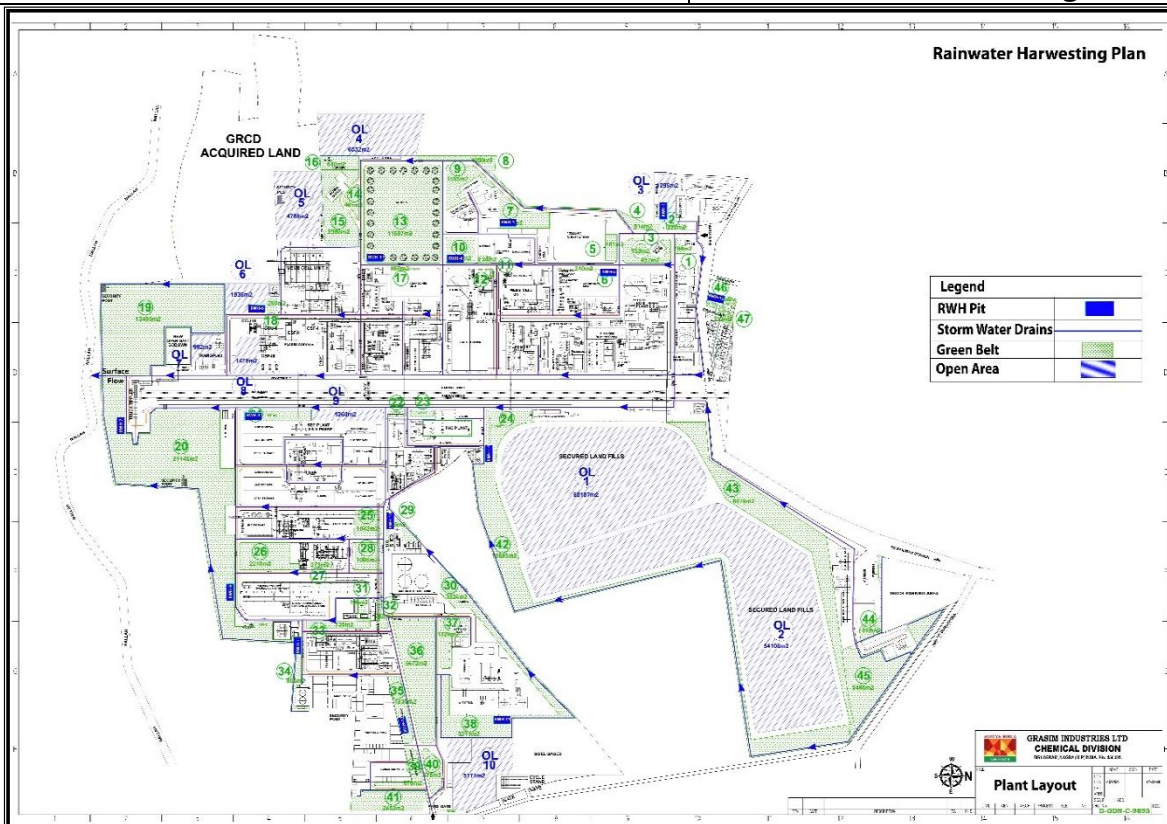
No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	thereof to the above mentioned proposal of M/s. Grasim Industries Ltd. (Chemical Division) for Expansion of Caustic Chlorine Products from 2,70,000 TPA to 4,50,000 TPA of Caustic soda and Value Added Derivatives along with installation of new Chloromethane Plant (Para 2 of Page 1), located at Birlagram, Nagda, District Ujjain, Madhya Pradesh subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:-	
A	Specific conditions	
(i)	This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, as may be applicable.	Noted.
(ii)	Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution control Board.	Industry is complying the conditions laid down by state Pollution Control Board and has valid consents & authorization issued by M.P. Pollution control board. Necessary Consents has been obtained from MPPCB under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981. The copy of consent to Operate is enclosed as Annexure 4
(iii)	As already committed by the project proponent, ZLD shall be ensured and no waste/treated water shall be discharged outside the premises.	The Unit has achieved Zero Liquid Discharge from 31st March 2018 by following stages: <ul style="list-style-type: none"> ▪ Primary Treatment: ETP System with lamella clarifier ▪ RO Systems: Brackish water RO and Sea water RO ▪ Multi Effect Evaporator (MEE) ▪ Agitated Thin Film Dryer (ATFD) Detailed note on Zero liquid discharge has been attached as Annexure 2.
(iv)	Necessary authorization required under the Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provision contained in the Rules shall be strictly adhered to.	Hazardous Waste Authorization is obtained from M.P. Pollution Control Board and has validity up to 31.01.2027. M.P. Pollution Board has issued Hazardous Waste Authorization vide consent No. AWH-55153, Outward No:114665, dated 01/02/2022 along with Consent to operate. The same is enclosed as Annexure 4
(v)	To control source and the fugitive emission, suitable pollution control devices shall be installed to meet the	To control source and the fugitive emissions suitable pollution control devices are being/will

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	prescribed norms and/ or the NAAQS. The gaseous emission shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	be installed to meet the prescribed norms and/or the NAAQS. During handling of chemicals, we have provided all the necessary arrangements to avoid fugitive emission. All the precautionary measures have been taken for storage of chemicals. The gaseous emissions are being/ will be dispersed through stack of adequate height as per CPCB/SPCB guidelines. The industry also ensures to carry out ambient air quality and stack emission monitoring to confirm the functioning of the industry within prescribed norms. The ambient air quality monitoring results April 2023 to September 2023” have been attached as Annexure 3 . The results of Stack emission monitoring “April 2023 to September 2023” have been attached as Annexure 6 . Pollution Control/ Mitigation measures adopted by M/s. Grasim are given below:
Emissions	Plant Unit	Pollution Control/ Mitigation measures adopted
STACK EMISSIONS		
Chlorine Vapors	Caustic Soda Membrane Cell	<ul style="list-style-type: none"> ▪ Alkali Scrubbers ▪ On-line monitoring sensors are installed ▪ Pollution control equipment’s interlocked with process ▪ The entire process is DCS controlled
	Stable Bleaching Powder	<ul style="list-style-type: none"> ▪ Alkali Scrubbers ▪ Chlorine feed is controlled and no excess chlorine is fed. ▪ Chlorine sensors are placed
	Chlorinated Paraffin	<ul style="list-style-type: none"> ▪ Alkali Scrubbers ▪ Chlorine feed is controlled and no excess chlorine is fed. ▪ Chlorine sensors are placed
HCL Vapors	Caustic Soda Membrane Cell	<ul style="list-style-type: none"> ▪ Water Scrubbers ▪ On-line monitoring sensors are installed ▪ Pollution control equipment’s interlocked with process ▪ The entire process is DCS controlled
	Poly Aluminum Chloride	<ul style="list-style-type: none"> ▪ Water Scrubbers for absorption of unreacted HCL vapors in water
	Chlorinated Paraffin plant	<ul style="list-style-type: none"> ▪ Water Scrubbers
	Chlorosulphonic Acid Plant	
Calcium Chloride Plant		

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SPM (Chlorine & Dust emissions)	Stable Bleaching Powder	<ul style="list-style-type: none"> ▪ Bag Filters ▪ Chlorine feed is controlled & no excess chlorine is fed ▪ Dust control systems have been provided at the filling point. ▪ De-dusting system is installed at the product filling post to minimize the SPM levels.
SO ₃ Vapors	Chlorosulphonic Acid Plant	<ul style="list-style-type: none"> ▪ Sulphuric acid scrubbers
Chlorinated Hydrocarbons, Chlorine, VOC, HCL and other gases	Chloromethane Plant	<ul style="list-style-type: none"> ▪ Gas coolers ▪ Condensers ▪ Water washers ▪ Acid stripping system ▪ Water scrubbers ▪ Alkali scrubber ▪ VRC for incineration of all the wastes and any residual carbon tetra chloride
FUGITIVE EMISSIONS		
HCl, Chlorine	<ul style="list-style-type: none"> ▪ Storage & handling of raw materials, solvents, finished products ▪ From equipment's leak valves, flanges, pump seals, compressors, sampling connections, open ended lines 	<ul style="list-style-type: none"> ▪ Liquid raw materials and intermediates charged into Reactors with pumps or under gravity through closed pipes. ▪ Suction Hoods placed near the Man-holes & Charging funnels of Reactors & Filters. ▪ All storage tanks of low boiling solvents / chemical with Conservation Vents. ▪ Vents of HCl storage tanks with a Water filled trap to prevent Acid fumes from escaping out. ▪ Mechanical seals to prevent fugitive emission. ▪ Storage tanks with level gauge, dyke wall, automated loading and unloading for the chemicals. ▪ Plugs, caps and blinds for open ended lines. ▪ Closed loop sampling systems.
CO ₂ and other gases	Vehicles, Open surfaces, ETP, retention ponds	<ul style="list-style-type: none"> ▪ Roads within the premises concreted / paved to avoid vehicular emissions. ▪ All transportation vehicles carry a valid PUC (Pollution under Control) Certificate. ▪ Proper servicing & maintenance of vehicles. ▪ Regular sweeping of all the roads & floors to avoid particulate matter dispersion.
Chloromethane traces, Methanol traces and HCl	From Hydrochlorination Reactor, From Photochlorination reactor, Distillation columns and vents of storage tanks for CMS.	<ul style="list-style-type: none"> ▪ All vents after guard condenser are directed to volatile reduction chamber (VRC Unit) where it is incinerated. HCl liberated is scrubbed in water and then with caustic solution



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(vi)	<p>Solvent management, if any, shall be carried out as follows company shall undertake waste minimization measures as below: -</p> <p>(a) Reactor shall be connected to chilled brine condenser system.</p> <p>(b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.</p> <p>(c) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 98% recovery.</p> <p>(d) Solvents shall be stored in a separate space specified with all safety measures.</p> <p>(e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.</p> <p>(f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.</p>	<p>No solvent is being used in any of the processes.</p>
(vii)	<p>Odour shall be prevented at the source and effective odour management scheme shall be implemented.</p>	<p>Duly Noted. Odour is being prevented at source and the effective Odour management scheme has been adopted and implemented.</p>
(viii)	<p>Total fresh water requirement shall not exceed 5400 m³/day proposed to be met from Chambal River. Prior permission in this regard shall be obtained from the concerned regulatory authority.</p>	<p>The Total fresh water requirement will not exceed 5400 m³/day and is met from Chambal River. The copy of the water drawl permission from Chambal River provided by Water Resource department is enclosed as Annexure 1.</p>
(ix)	<p>Rain water harvesting structures shall be provided to reduce dependency of fresh surface water for industrial purposes. In any case, no ground water shall be used for the plant.</p>	<p>Rain Water Harvesting system has been installed to reduce dependency of fresh surface water for industrial use. The details of structures for rainwater harvesting is given as under:</p> <ul style="list-style-type: none"> • To accommodate and recharge industrial premises run-off, 15 number of recharge pits/trenches (10 m length × 2.5 m width × 2 m depth) each with 4 numbers of injection wells have been prepared at suitable locations near different buildings/sections. • To accommodate and recharge staff colony run-off, 4 number of recharge pits (5 m length × 3 m width × 2 m depth) each with 4 numbers of injection wells have been prepared at suitable locations. • 2 Rain Water Harvesting Structures are also

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		<p>installed in Village Durgapura and Village Mehtawas and performance is under progress.</p> <p>No Ground water is being extracted or utilized in the plant.</p> <p>Location of Rainwater Harvesting Structures within Industrial Premises is given below:</p>









(x)	The storm water from the premises shall be collected and discharged through a separate conveyance system.	Being complied in the plant.
(xi)	Hazardous chemicals shall be stored in tanks, tanks farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.	Flame arresters has been provided on tank farm, and solvent through pumps. Hazardous Waste Authorization obtained from M.P. Pollution Control Board is enclosed as Annexure 5 . The details of Hazardous chemicals storage are given below:

Unit	Chemicals	Form of Material (Solid/Liquid/Gas)	Nature of Material (Corrosive/Flammable etc.)	Type of Storage
Membrane cell Caustic Soda	Sodium Chloride (common salt)	Solid	Corrosive	Shed

No.	Environmental Clearance Conditions		Reply given by PP in compliance report		
		Soda Ash	Solid	Corrosive	Bag
		Barium Carbonate	Solid		Bag
		Sodium Sulphite	Solid	Corrosive	Bag
		Caustic Soda	Liquid	Corrosive	MS tank
		Hydrochloric Acid	Liquid	Corrosive	MSRL Tank
		Sulphuric Acid	Liquid	Corrosive	MSRL
	Stable leaching Powder Unit	Liquid chlorine	Liquid	Corrosive	MS tank
		Hydrated lime	Solid	Corrosive	Bag
		Caustic Soda	Liquid	Corrosive	-
		Chlorine	Gas	Corrosive	-
	Poly Aluminium Chloride	Hydrochloric Acid	Liquid	Corrosive	MSRL Tank
		Sulphuric Acid	Liquid	Corrosive	MSRL Tank
		Chlorine gas	Gas	Corrosive	-
		Caustic Soda	Liquid	Corrosive	MS Tank
	Chlorosulphonic Acid	Hydrochloric acid	Liquid	Corrosive	MSRL Tank
		Sulphuric Acid	Liquid	Corrosive	MSRL Tank
Sulphur Trioxide		Gas	Corrosive	-	
Calcium chloride	HCl (33%)	Liquid	Corrosive	MSRL Tank	
Chloromethane Plant	Methanol	Liquid	Flammable and Toxic	Epoxy coated MS Tank	
	Chlorine	Gas	Corrosive	-	
(xii)	ETP Sludge, process inorganic & evaporation salt shall be disposed through Captive Secured Land fill.		ETP sludge, process inorganic waste is being disposed through Captive Secured Landfill & evaporation salt are being disposed CTSDF. Photographs are given below:		
					
	ETP Sludge		ETP Sludge		
(xiii)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended		The Company is strictly complying with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules,		

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA) 1989.	1989 as amended time to time. All the relevant provision of Motor Vehicle Act (MVA), 1989 is being strictly complied during the transportation of hazardous chemicals.
(xiv)	<p>The company shall undertake waste minimization measures as below: -</p> <ul style="list-style-type: none"> 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 vapour recovery system. f) Use of high-pressure hoses for equipment clearing to reduce wastewater generation. 	<p>Following waste minimization measures are taken in the plant-</p> <ul style="list-style-type: none"> a) All the raw materials are fed in the system through metering system to minimize the waste. Chlorine feed is controlled and no excess chlorine is fed. b) Hydrochloric acid is being used as raw material in the Chlorosulphonic acid plant, Polyaluminium Chloride plant and Calcium Chloride plant. Water Scrubber are used for absorption of HCl vapours in water is used in production of HCl. c) The automated system has been implemented in all the processes. d) The closed feed system has been implemented in all the processes. e) Vapor recovery system is installed; Paraffin vapour is being recovered in CP plant using condensers. f) High Pressure Jet cleaning practice is being adopted in ZLD plant to clean calendria.
(xv)	<p>The green belt of at least 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 as per the CPCB guidelines in consultation with the State Forest Department.</p>	<p>Regular plantation activities have been done in the Grasim complex. Out of the total plant area, 58.5 acres (~23.68 ha) i.e., 38% has already been developed under greenbelt/ plantation.</p> <p>List of the Plant Species in Greenbelt is given below:</p> <p><i>Acacia auriculiformis</i>, <i>Alstonia acholaris</i> (Devil's tree), <i>Anthocephalus cadamba</i> (Kadam), <i>Araucaria</i>, <i>Azadirachta indica</i> (Neem), <i>Butea frondose</i> (Dhak), <i>Callistemon</i> sps. (Bottle Brush), <i>Cassia fistala</i> (Amaltas), <i>Cassia siamea</i>, <i>Casurina</i>, <i>Dalbergia sissoo</i> (Shisham), <i>Delonix regia</i> (Gulmohar), <i>Dillenia indica</i> (Chalta), <i>Erythrine</i> sps. (Pangra), <i>Gliricidia</i>, <i>Ficus bengalensis</i> (Bar), <i>Ficus elastica</i>, <i>Ficus benjamina</i>, <i>Ficus</i> sps., <i>Grevillea robusta</i> (Silver oale), <i>Jacaranda</i>, <i>Kigelia pinnata</i>, <i>Lagerstromia</i> sps. (Sawani), <i>Milingtonia horstensis</i> (Akash Neem), <i>Mimusops elengi</i> (Molsari), <i>Parkia</i>, <i>Peltophorum</i>, <i>Leuceana latisiliana</i> (Subabul), <i>Polyalthia pendula</i> (Ashok),</p>

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		<p><i>Plumeria</i> sps. (Champa), <i>Saraca indica</i> (Sita Ashok), <i>Putramiva</i>, <i>Santlum album</i> (Chandan), <i>Apathodia campanuleta</i> (Fountain tree), <i>Terminalia arjuna</i> (Arjun), <i>Terminalia catappa</i>, <i>Thespesia populnea</i> (Paras Pipal), <i>Pongamia glabra</i> (Karanj), <i>Bamboo</i> sps., <i>Bauhinia</i> sps., etc. Glimpse of plantation and green belt in the complex is shown as below:</p>
		
		

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		

(xvi) As proposed Rs. 5 Crores shall be allocated for CER. The CER funds shall be utilized for greenbelt development, skill development and check dam construction, as suggested during public hearing. The CER plan shall be completed within a period of two years or before commissioning of the project.

Expenditure incurred in CER activities by the company from April 2023 to September, 2023 is shown below:

S. No.	Activity Heads	Year		Total Amount (Rs. In lakhs)
		2023-2024 April 2023-June 2023	July 2023- September 2023	
1	Educational Programme	0	2.95888	2.95888
2	Health Care	0	.22048	.22048
3	Sustainable Livelihood	0	.66580	.66580
4	Infrastructure Development	0	9.749	9.749
5	Social Development	0	.17729	.17729
GRAND TOTAL		0.00	13.77157	13.77157

Glimpse of CER activities conducted by Grasim is shown below:



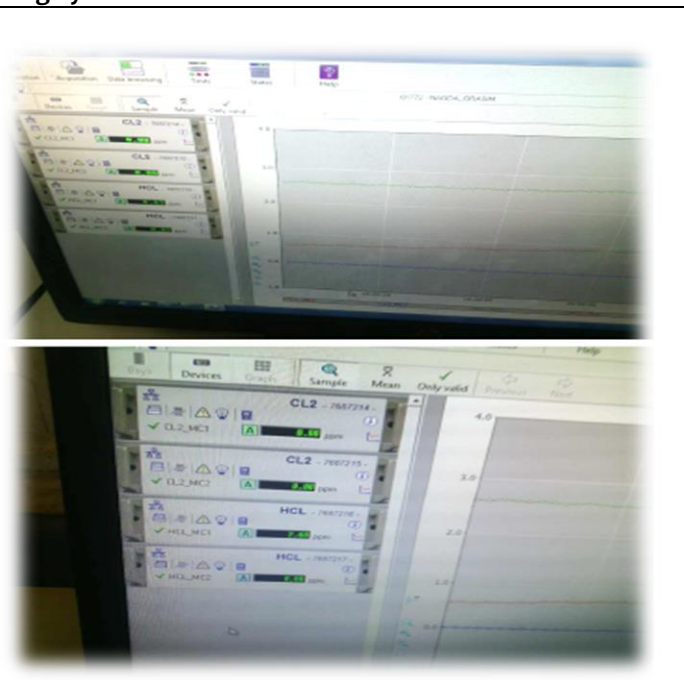
No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	 <p data-bbox="365 562 709 596">2 No's Aagwadi Renovation</p>  <p data-bbox="475 892 599 926">Plantation</p>  <p data-bbox="475 1222 599 1255">NSS Camp</p>	 <p data-bbox="940 562 1343 596">Hypo Spraying during Lampi Virus</p>  <p data-bbox="922 892 1360 926">Heat Pump installation in Girls Hoste</p>
(xvii)	<p>For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.</p>	<p>The industry has 2 DG sets of capacity 2000 KVA each with adequate stack height which are used during emergency backup. The industry timely monitors DG Set stacks. Acoustic enclosure is provided to DG set for controlling the noise pollution. For the DG sets, emission limits and the stack height are/will be in conformity with the extant regulations and the CPCB guidelines. The results of Stack emission monitoring “April 2023 to September 2023” have been attached as Annexure 7.</p>
(xviii)	<p>The unit shall make the arrangement for protection of possible fire hazardous during manufacturing process in material handling. Firefighting system shall be as per the norms.</p>	<p>Adequate arrangement for protection of possible fire hazards during manufacturing process in material handling is being made in the industry. Few precautions are as follows:</p> <ul style="list-style-type: none"> ➤ Flame arrestors are provided at various places in the system.

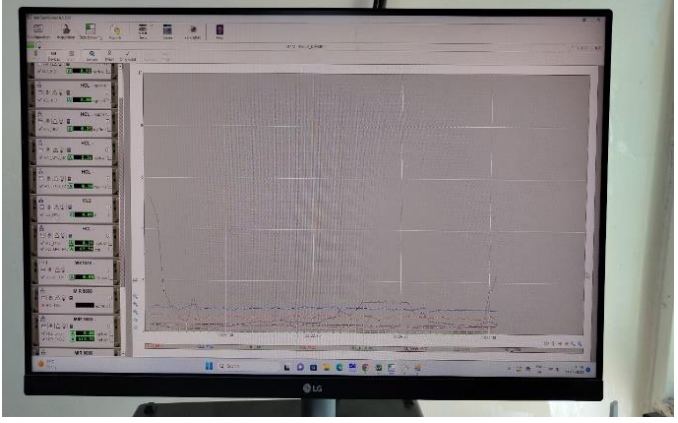
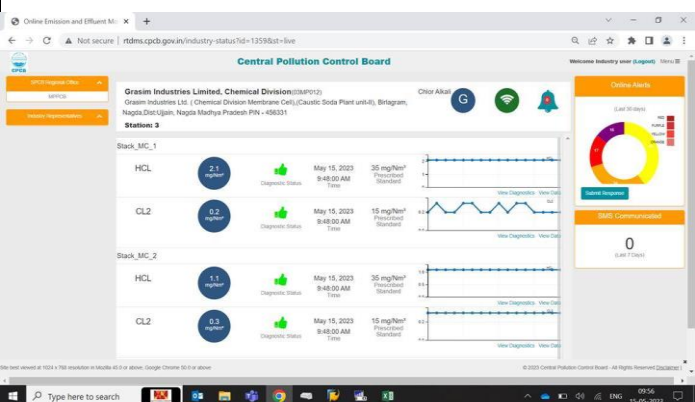
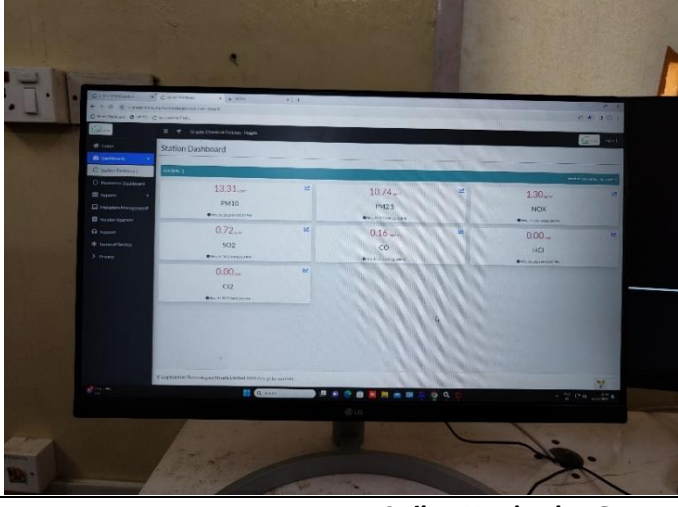
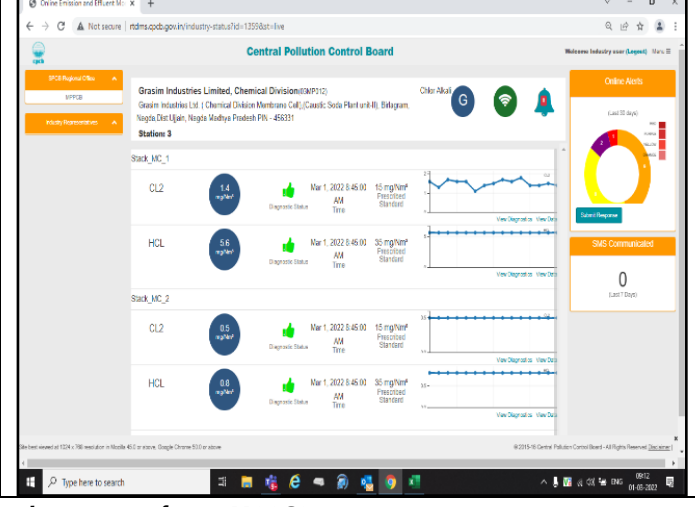
No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		<ul style="list-style-type: none"> ➤ Sufficient number of Fire Extinguishers DCP type and CO₂ type and Fire buckets are posted at many locations for fire control. Besides this, we have a Fire tender of adequate capacity with our Fire Fighting Department. ➤ Fire Hydrant Points are also located around the plant. ➤ Employees are regularly trained in firefighting.
(xix)	Storage of Raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.	All raw materials are having designated covered godown and also covered with tarpaulin. The storage details of the raw material are given below.

Unit	Chemicals	Form of Material (Solid/Liquid/ Gas)	Type of Storage
Membrane cell Caustic Soda	Sodium Chloride (common salt)	Solid	Shed
	Soda Ash	Solid	Bag
	Barium Carbonate	Solid	Bag
	Alpha Cellulose	Solid	Bag
	Sodium Sulphite	Solid	Bag
	Magna Floc	Solid	Bag/Warehouse
	Caustic Soda	Liquid	MS tank
	Hydrochloric Acid	Liquid	MSRL Tank
	Sulphuric Acid	Liquid	MSRL
Stable Bleaching Powder Unit	Liquid chlorine	Liquid	MS tank
	Hydrated lime	Solid	Bag
	Caustic Soda	Liquid	-
	Chlorine	Gas	-
Poly Aluminium Chloride	Alumina Hydrate	Solid	Bag
	Hydrochloric Acid	Liquid	MSRL Tank
	Sulphuric Acid	Liquid	MSRL Tank
Chlorinated Paraffin	Paraffin	Liquid	MS Tank
	Epoxidized soya bean oil	Liquid	HDPE Drum
	Chlorine gas	Gas	-
	Caustic Soda	Liquid	MS Tank
Chlorosulphonic Acid	Hydrochloric acid	Liquid	MSRL Tank
	Sulphuric Acid	Liquid	MSRL Tank
	Sulphur Trioxide	Gas	-
Calcium Chloride	HCl (33 %)	Liquid	MSRL Tank
	Lime Stone	Solid	Shed
Chloromethane Plant	Methanol	Liquid	Epoxy coated MS Tank

No.	Environmental Clearance Conditions	Reply given by PP in compliance report															
	Chlorine	Gas															
(xx)	<p>Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. For continuous discharge the unit shall install pH, TSS, BOD, COD and flow meter at the ETP outlet.</p>	<p>Continuous online (24x7) monitoring system for stack emissions has been installed and same is connected to MPPCB & CPCB server.</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Description of Stacks attached to</th> <th>Pollutants</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Sodium Hypo Stack; Unit 1 Caustic Soda</td> <td>Cl₂</td> </tr> <tr> <td>2.</td> <td>HCl Stack; Unit 1 Caustic Soda</td> <td>HCl</td> </tr> <tr> <td>3.</td> <td>Sodium Hypo Stack; Unit 2 Caustic Soda</td> <td>Cl₂</td> </tr> <tr> <td>4.</td> <td>HCl Stack; Unit 2 Caustic Soda</td> <td>HCl</td> </tr> </tbody> </table> <p>For ZLD, the unit has installed web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. Photographs showing online Monitoring System are given below:</p>	S. No.	Description of Stacks attached to	Pollutants	1.	Sodium Hypo Stack; Unit 1 Caustic Soda	Cl ₂	2.	HCl Stack; Unit 1 Caustic Soda	HCl	3.	Sodium Hypo Stack; Unit 2 Caustic Soda	Cl ₂	4.	HCl Stack; Unit 2 Caustic Soda	HCl
S. No.	Description of Stacks attached to	Pollutants															
1.	Sodium Hypo Stack; Unit 1 Caustic Soda	Cl ₂															
2.	HCl Stack; Unit 1 Caustic Soda	HCl															
3.	Sodium Hypo Stack; Unit 2 Caustic Soda	Cl ₂															
4.	HCl Stack; Unit 2 Caustic Soda	HCl															



Online Monitoring System



No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		
		
Online Monitoring System and Data transfer to MPPCB		
(xxi)	The energy source for lighting purposes shall preferably be LED based.	The energy source for lighting purposes is LED based both for street light and in plant premises.
(xxii)	Transportation of Hazardous materials / products should be carefully performed using GPS enabled vehicles.	For transport of hazardous material, we are engaging those transporters having valid authorization and GPS enabled vehicle.
(xxiii)	Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per the Factories Act. PP shall submit the six-monthly compliance report to the Regional Office of the Ministry.	Healthy & Safe working environment for employees is the prime concern of the company. Regular health check-up of workers and management staff is being done and records are being maintained. Medical report and medical camp photo of worker is attached as Annexure 8 for reference. Grasim Industries Ltd. commits to create & maintain safe & healthy work environment for employees, against hazards & risks through: ➤ Continuously developing & maintaining safe work practices.

Expansion of Caustic Chlorine Products from and value-added derivatives along with installation of new chloromethane plant, at Village: Birlagram, Tehsil: Nagda, District: Ujjain, Madhya Pradesh by M/s Grasim Industries Ltd. (Chemical Division)

Half Yearly Compliance Report
(April, 2023- Sep., 2023)

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		<ul style="list-style-type: none"> ➤ Focusing on operational & occupational hazards & risks. ➤ Creating awareness about preventive health & safety measures. <p>Six monthly compliance report is being/ will be submitted to the concerned offices.</p>
(xxiv)	The project proponent shall conduct 3D modeling for risk management and mitigation measures as the flammable and hazardous chemicals are being stored and processed in the Plant. PP shall conduct a study comprise the details of detectors and its locations and outcome of the study shall be implemented and the compliance shall be submitted six monthly to the Regional Office of the Ministry.	3D Risk Assessment Modeling has been carried out for the Plant and all the recommendations are being implemented.
(xxv)	There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places.	Adequate space inside the plant premises is earmarked for parking of vehicles for raw materials and finished products, and no parking is being allowed outside on public places. The photographs of parking spaces are given below:
	<div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Parking for vehicles</p>	
14.	The project proponent shall strictly comply the sector specific conditions as mentioned in the Ministry's Office Memorandum No. 22-34/2018-IA.III, dated 9th August,	Duly Noted

Expansion of Caustic Chlorine Products from and value-added derivatives along with installation of new chloromethane plant, at Village: Birlagram, Tehsil: Nagda, District: Ujjain, Madhya Pradesh by M/s Grasim Industries Ltd. (Chemical Division)

Half Yearly Compliance Report
(April, 2023- Sep., 2023)

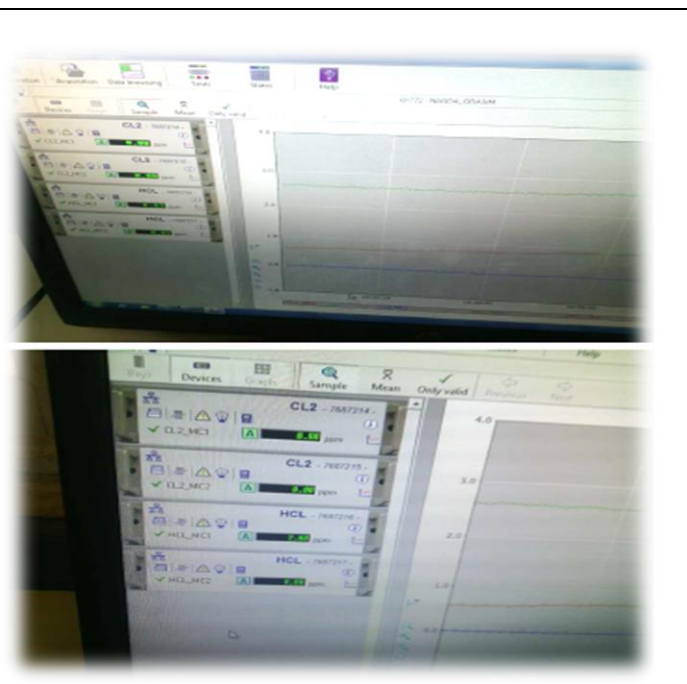
No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	2018. The said OM is available at the Ministry's website (PARIVESH portal i.e., www.parivesh.nic.in). The grant of Environmental Clearance is further subject to compliance of generic conditions as mentioned in the Ministry' Office Memorandum No. 22-34/2018-IA.III, dated 9th August, 2018.	The compliance of generic conditions as mentioned in the Ministry's Office Memorandum No. 22-34/2018-IA.III, dated 9th August, 2018 is given after compliance of specific conditions in this report.
15.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest & Climate Change, its regional office, Central Pollution Control Board and State Pollution Control Board.	Duly Noted. Six monthly compliance report is being/ will be submitted to concerned offices.
16.	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.	Duly Noted.
17.	The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.	Duly Noted.
18.	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Duly Noted.
19.	Any appeal against this environmental clearance 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.	Duly Noted.
20.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974; Air (Prevention & Control of Pollution) Act, 1981; Environment (Protection) Act, 1986; Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991, read with subsequent amendments therein and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Madhya Pradesh/Hon'ble NGT and any other Court of Law relating to the subject matter.	Duly Noted.

Expansion of Caustic Chlorine Products from and value-added derivatives along with installation of new chloromethane plant, at Village: Birlagram, Tehsil: Nagda, District: Ujjain, Madhya Pradesh by M/s Grasim Industries Ltd. (Chemical Division)

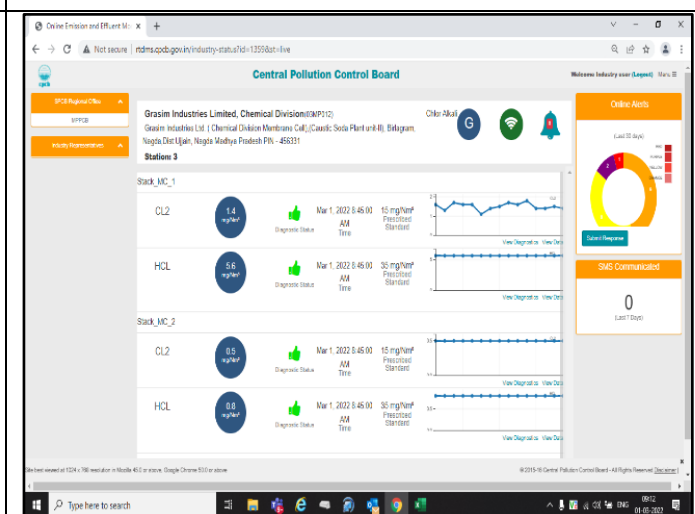
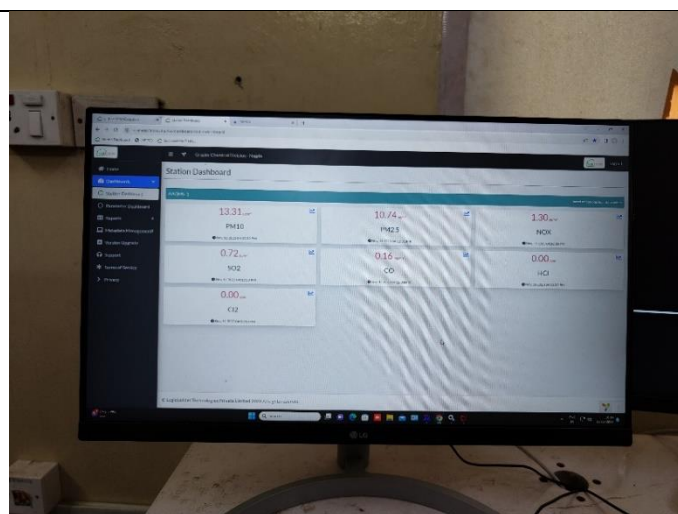
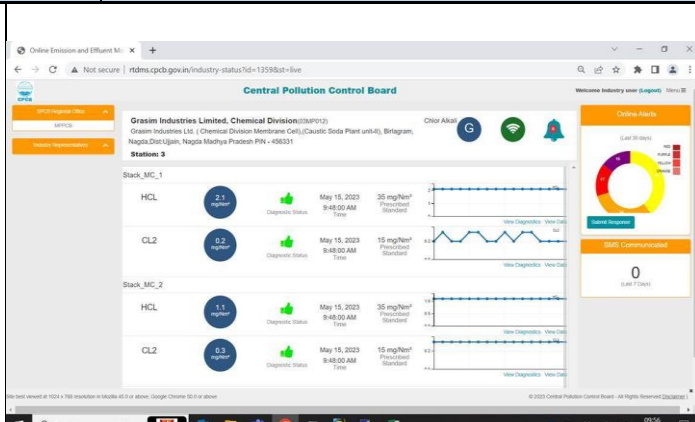
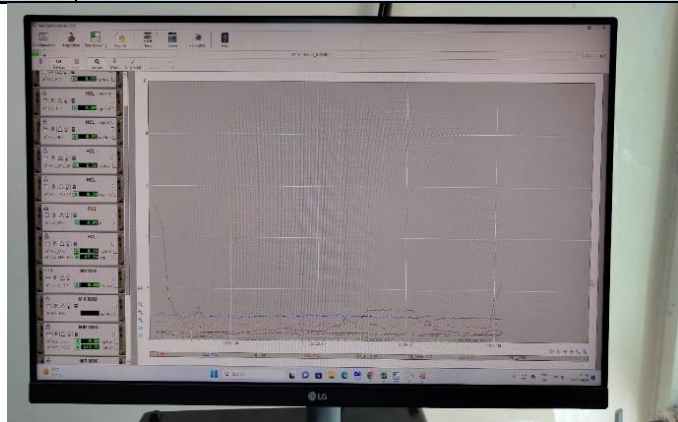
Half Yearly Compliance Report
(April, 2023- Sep., 2023)

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
21.	This issues with the approval of the competent authority.	Duly Noted.
	Sector specific conditions as per MOEFCC OM 09.08.2018	
I	Statutory compliance	
i.	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project	NA
ii.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	NA
iii.	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-1 species in the study area)	Grasim industry Limited has prepared the Site-Specific Conservation Plan & Wildlife Management Plan and the same is duly Approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan have been implemented. A letter sent to Principal Chief Conservator of Forest via letter no. 1850/Env/SFD/DFO/PCP dated: 29-12-2022, in this regard has been enclosed as Annexure 9.
iv.	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.	Industry is complying the conditions laid down by State Pollution Control Board and has valid consents & authorization issued by M.P. Pollution control board; Necessary Consents has been obtained from MPCB under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981. The copy of consent to Operate is enclosed as Annexure 4
v.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	Hazardous Waste Authorization is obtained from M.P. Pollution Control Board and has validity up to 31.01.2027. M.P. Pollution Control Board has issued Hazardous Waste Authorization letter vide consent No. AWH-55153, Outward No:114665, dated 01/02/2022 along with Consent to operate. The same is enclosed as Annexure 5
vi.	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.	The Company is strictly complying with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All the relevant provision of Motor Vehicle Act (MVA), 1989 is

No.	Environmental Clearance Conditions	Reply given by PP in compliance report															
		being strictly complied during the transportation of hazardous chemicals.															
II.	Air Quality Monitoring and Preservation																
i.	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 and connected to SPCB and CPCB online servers and calibrate this system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	<p>Noted. Online monitoring program for the existing unit has been installed and same is connected to MPPCB & CPCB server.</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Description of Stacks attached to</th> <th>Pollutants</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Sodium Hypo Stack; Unit 1 Caustic Soda</td> <td>Cl₂</td> </tr> <tr> <td>2.</td> <td>HCl Stack; Unit 1 Caustic Soda</td> <td>HCl</td> </tr> <tr> <td>3.</td> <td>Sodium Hypo Stack; Unit 2 Caustic Soda</td> <td>Cl₂</td> </tr> <tr> <td>4.</td> <td>HCl Stack; Unit 2 Caustic Soda</td> <td>HCl</td> </tr> </tbody> </table> <p>The calibration of the system installed has been done by NABL accredited laboratory. Photographs showing online Monitoring System are given below:</p>	S. No.	Description of Stacks attached to	Pollutants	1.	Sodium Hypo Stack; Unit 1 Caustic Soda	Cl ₂	2.	HCl Stack; Unit 1 Caustic Soda	HCl	3.	Sodium Hypo Stack; Unit 2 Caustic Soda	Cl ₂	4.	HCl Stack; Unit 2 Caustic Soda	HCl
S. No.	Description of Stacks attached to	Pollutants															
1.	Sodium Hypo Stack; Unit 1 Caustic Soda	Cl ₂															
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3.	Sodium Hypo Stack; Unit 2 Caustic Soda	Cl ₂															
4.	HCl Stack; Unit 2 Caustic Soda	HCl															



No.	Environmental Clearance Conditions	Reply given by PP in compliance report
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Online Monitoring System and Data transfer to MPPCB

ii. 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.

The Fugitive emission has been monitored in the plant premises every quarter through lab recognized under Environment (Protection) Act, 1986. Monitoring results of Fugitive emission are given below:

Fugitive emissions results

S. No.	Location	Result SPM ($\mu\text{g}/\text{m}^3$)	
		April-June -2023	July-Sep - 2023
1.	Membrane caustic soda plant-1 (Near HCL Plant)	189	143.0
2.	Membrane caustic soda plant-2	179	182.0

No.	Environmental Clearance Conditions				Reply given by PP in compliance report				
2.	Particulate Matter (PM ₁₀)	µg/m ³	74.7	72.5	78.3	75.7	100		
3.	Nitrogen Dioxide (NO ₂)	µg/m ³	24.7	23.2	26.1	23.2	80		
4.	Sulphur Dioxide (SO ₂)	µg/m ³	13.2	13.5	12.3	13.8	80		
5.	Ozone (O ₃)	µg/m ³	27.9	26.2	27.3	28.6	180		
6.	Lead (Pb)	µg/m ³	BDL	BDL	BDL	BDL	1		
7.	Carbon Monoxide	mg/m ³	0.86	0.84	0.79	0.82	2 (As per CTO)		
8.	Ammonia (NH ₃)	µg/m ³	25.1	18.3	22.6	15.7	400		
9.	Benzene (C ₆ H ₆)	µg/m ³	BDL	BDL	BDL	BDL	5		
10.	Benzo(a)pyrene(B(a)P)	ng/m ³	BDL	BDL	BDL	BDL	1		
11.	Arsenic (As)	µg/m ³	BDL	BDL	BDL	BDL	6		
12.	Nickel (Ni)	ng/m ³	BDL	BDL	BDL	BDL	20		
13.	TVOC	µg/m ³	25.6	20.7	14.7	21.8	--		
14.	Chlorine (Cl ₂)	µg/m ³	BDL	BDL	BDL	BDL	--		
15.	Acid Mist	µg/m ³	BDL	BDL	BDL	BDL	--		
16.	Hydrochloric Acid (HCL)	µg/m ³	BDL	BDL	BDL	BDL	--		

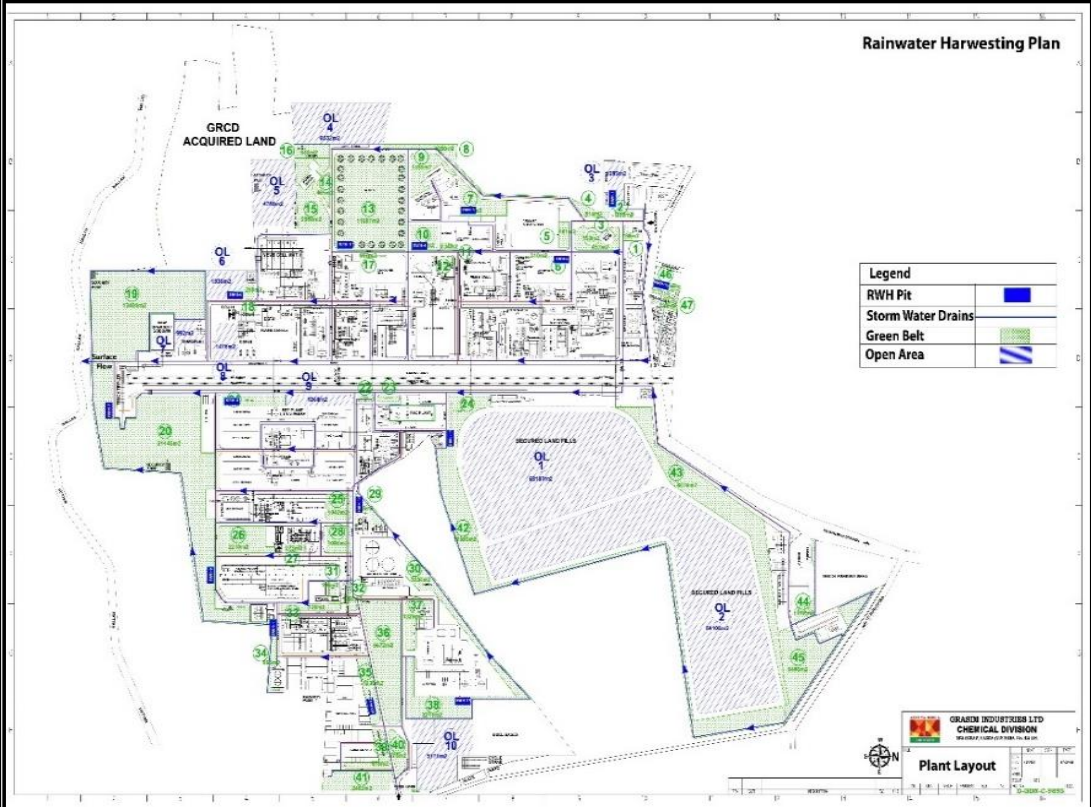
Quarterly Ambient Air Quality monitoring results (July 2023 to September 2023)

S. No.	Parameters	Unit	Gyan Kutir	Membrane Caustic Soda Plant-2	Bora Godown Area	Pardi Gate	NAAQS
1.	Particulate Matter (PM _{2.5})	µg/m ³	38.1	33.1	37.2	35.2	60
2.	Particulate Matter (PM ₁₀)	µg/m ³	75.2	79.4	77.5	76.4	100
3.	Nitrogen Dioxide (NO ₂)	µg/m ³	25.0	24.2	26.8	22.8	80
4.	Sulphur Dioxide (SO ₂)	µg/m ³	12.9	13.9	13.1	12.9	80
5.	Ozone (O ₃)	µg/m ³	26.8	27.1	28.0	27.9	180
6.	Lead (Pb)	µg/m ³	BDL (DI 0.02)	BDL (DL 0.02)	BDL (DL 0.02)	BDL (DL 0.02)	1

No.	Environmental Clearance Conditions				Reply given by PP in compliance report			
7.	Carbon Monoxide	mg/m ³	0.87	0.79	0.82	0.79	2 (As per CTO)	
8.	Ammonia (NH ₃)	µg/m ³	25.9	19.2	23.1	14.8	400	
9.	Benzene (C ₆ H ₆)	µg/m ³	BDL (DL 1.0)	BDL (DL 1.0)	BDL (DL 1.0)	BDL (DL 1.0)	5	
10.	Benzo(a)pyrene	ng/m ³	BDL (DL 0.5)	BDL (DL 0.5)	BDL (DL 0.5)	BDL (DL 0.5)	1	
11.	Arsenic (As)	µg/m ³	BDL (DL 0.5)	BDL (DL 0.5)	BDL (DL 0.5)	BDL (DL 0.5)	6	
12.	Nickel (Ni)	ng/m ³	BDL (DL 1.0)	BDL (DL 1.0)	BDL (DL 1.0)	BDL (DL 1.0)	20	
13.	TVOC	µg/m ³	26.1	21.2	15.2	20.9	--	
14.	Chlorine (Cl ₂)	µg/m ³	BDL (DL 10)	BDL (DL 10.0)	BDL (DL 10.0)	BDL (DL 10.0)	--	
15.	Acid Mist	µg/m ³	BDL (DL 5.0)	BDL (DL 5.0)	BDL (DL 5.0)	BDL (DL 5.0)	--	
16.	Hydrochloric Acid (HCL)	µg/m ³	BDL (DL 5.0)	BDL (DL 5.0)	BDL (DL 5.0)	BDL (DL 5.0)	--	
iv.	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers to control particulate emissions within permissible limits (as applicable). The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.				To control source and the fugitive emissions suitable pollution control devices are being installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions are being/ will be dispersed through stack of adequate height as per CPCB/SPCB guidelines. Stack emission monitoring results "April 2023 to September 2023" has been attached as Annexure 6 .			
v.	Storage of raw materials, coal etc. shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.				All raw materials are stored in designated closed godown and are also covered with tarpaulin to prevent dust pollution and fugitive emissions. To control the fugitive emissions suitable pollution control devices are being/will be installed to meet the prescribed norms and/or the NAAQS. During handling of chemicals, we have provided all the necessary arrangements to avoid fugitive emission. All the precautionary measures have been taken for storage of raw materials. Pollution Control/ Mitigation measures adopted by M/s. Grasim to control fugitive emissions are given below:			

No.	Environmental Clearance Conditions		Reply given by PP in compliance report
	Fugitive Emissions	Plant Unit	Pollution Control/ Mitigation measures adopted
	HCl, Chlorine	<ul style="list-style-type: none"> ▪ Storage & handling of raw materials, solvents, finished products ▪ From equipment's leak valves, flanges, pump seals, compressors, sampling connections, open ended lines 	<ul style="list-style-type: none"> ▪ Liquid raw materials and intermediates charged into Reactors with pumps or under gravity through closed pipes. ▪ Suction Hoods placed near the Man-holes & Charging funnels of Reactors & Filters. ▪ All storage tanks of low boiling solvents / chemical with Conservation Vents. ▪ Vents of HCl storage tanks with a Water filled trap to prevent Acid fumes from escaping out. ▪ Mechanical seals to prevent fugitive emission. ▪ Storage tanks with level gauge, dyke wall, automated loading and unloading for the chemicals. ▪ Plugs, caps and blinds for open ended lines. ▪ Closed loop sampling systems.
	CO ₂ and other gases	Vehicles, Open surfaces, ETP, retention ponds	<ul style="list-style-type: none"> ▪ Roads within the premises concreted / paved to avoid vehicular emissions. ▪ All transportation vehicles carry a valid PUC (Pollution under Control) Certificate. ▪ Proper servicing & maintenance of vehicles. ▪ Regular sweeping of all the roads & floors to avoid particulate matter dispersion.
	Chloromethane traces, Methanol traces and HCl	From Hydrochlorination Reactor, From Photochlorination reactor, Distillation columns and vents of storage tanks for CMS.	<ul style="list-style-type: none"> ▪ All vents after guard condenser are directed to volatile reduction chamber (VRC Unit) where it is incinerated. HCl liberated is scrubbed in water and then with caustic solution
vi.	National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.		Duly Noted
vii.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.		The NAAQS are being complied with. Results of AAQ Monitoring have been done quarterly and are attached as Annexure 3 .

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
III	Water quality Monitoring and Preservation	
i.	The project proponent shall provide online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises (applicable in case of the projects achieving ZLD)	For ZLD, the unit has installed web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises. Detailed note on Zero liquid discharge has been attached as Annexure 2
ii.	As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises (applicable in case of the projects achieving the ZLD).	Zero liquid discharge has been ensured and no waste/treated water is discharged outside the plant premises. Detailed note on Zero liquid discharge has been attached as Annexure 2
iii.	The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.	The Plant is operating on Zero liquid discharge; hence no such effluent is discharged outside the plant.
iv.	Total fresh water requirement shall not exceed the proposed quantity or as specified by the Committee. Prior permission shall be obtained from the concerned regulatory authority/CGWA in this regard.	The Total fresh water requirement does not exceed 5400 m ³ /day and is met from Chambal River. The copy of the water drawl permission is enclosed as Annexure 1 .
v.	Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system.	Waste water and all effluent from different process collected in ETP through closed conduit pipe system, while storm water connected in open drain, so there will be no mixing of effluent and storm water. The storm water is collected and discharge from premises through pumping station.
vi.	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.	Rain Water Harvesting system has been installed to reduce dependency of fresh surface water for industrial use. The details of structures for rain water harvesting is given as under: <ul style="list-style-type: none"> • To accommodate and recharge industrial premises run-off, 15 number of recharge pits/trenches (10 m length × 2.5 m width × 2 m depth) each with 4 numbers of injection wells have been prepared at suitable locations near different buildings/sections. • To accommodate and recharge staff colony run-off, 4 number of recharge pits (5 m length × 3 m width × 2 m depth) each with 4 numbers of injection wells have been prepared at suitable locations.

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		<ul style="list-style-type: none"> • 2 Rain Water Harvesting Structures are also installed in Village Durgapura and Village Mehtawas and performance is under progress. <p>Location of Rainwater Harvesting Structures within Industrial Premises is given below:</p>
		
vii.	The DG sets shall be equipped with suitable pollution control devices and the adequate stack height so that the emissions are in conformity with the extant regulations and the guidelines in this regard.	The DG sets has been equipped with suitable pollution control devices and the stack height are / will be in conformity with the extant regulations and the CPCB guidelines.
IV	Noise monitoring and prevention	
i.	Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	Acoustic enclosure is provided to DG set of the industry for controlling the noise pollution.
ii.	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 overall noise levels in and around the plant area is being/will be kept well within the standards. Adequate noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation in the industry has been provided.

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
iii.	The ambient noise levels should conform to the standards prescribed under EPA Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time	The ambient noise levels follow the standards prescribed under EPA Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time. The results of quarterly noise monitoring for different locations are shown below and also attached as Annexure 11 .



Noise monitoring results (April 2023 to June 2023)

S. no.	Location	Leq (dB(A))	
		Day time	Night time
AMBIENT NOISE LEVEL MONITORING			
1.	ZLD (Near RO Plant)	62.0	56.9
WORK PLACE NOISE LEVEL MONITORING			
Membrane Caustic Soda Plant-1 (Near HCL Plant)			
1.	Near Furnace Area (HCL Section)	66.4	61.7
2.	Near Cell House	66.0	63.0
3.	Near Electrical Work Shop	65.7	63.9
4.	Chlorine Section	64.3	60.8
5.	Brine Section	66.8	63.9
6.	Hypo Section	65.9	63.9
7.	Near Cooling Tower Area	69.6	66.6
CSA Plant (Near Tanker Filling Area)			
1.	Near Plant (2 nd Floor)	66.1	59.3
2.	Near CSA Filling Area	63.5	58.0
3.	Near Cooling Tower	67.7	65.2
4.	Near Scrubber Area (1st Floor)	66.4	63.1
Near Poly Aluminium Chloride Plant (control room)			
1.	Near Godown area	66.1	62.2
2.	Near PAC Control Room	65.2	62.7
3.	Near Mechanical Workshop	63.9	61.9
4.	Near Bleed Water Tank (Liquid Plant)	66.8	65.6
5.	Near Cooling Tower Area	68.5	65.8
Calcium chloride Plant (Near cooling Tower)			
1.	Near Control Room	65.1	61.5
2.	Near Storage Tank	62.4	58.7
3.	Near Slurry Area (Sludge Area)	65.7	63.1
4.	Near Ware House (Godown)	64.2	59.5
5.	Near Cooling Tower	67.2	65.3
Membrane Caustic Soda Plant-2			
1.	Near Furnace Area (HCL Section)	63.5	58.5
2.	Near Caustic Concentration	67.0	63.8
3.	Near Mechanical Work Shop	65.8	63.3
4.	Near Washery MCC Room (Near Cooling Tower)	68.8	66.66

No.	Environmental Clearance Conditions		Reply given by PP in compliance report	
	5.	CSF Area	64.7	60.5
	6.	Chlorine Section	67.9	64.2
	7.	Brine Section	66.2	62.3
	8.	CSF Filling (Godown Area)	65.8	62.9
	9.	Hypo Section	68.8	64.1
	Stable Bleaching Powder Plant			
	1.	Near SBP Ware House I (Near Drum)	62.1	57.7
	2.	Near SBP Ware House II (Near Drum)	61.8	58.9
	3.	Near Mechanical Workshop	64.0	59.9
	4.	Near Cooling Tower (1 st Phase)	68.5	66.7
	5.	Near Cooling Tower (2 nd Phase- Near Roadside)	69.2	64.9
	6.	Lime Godown Area (Near Hopper)	55.7	50.3
	Chlorinated Paraffin			
	1.	Near C. P. Loading Area	66.0	62.8
	2.	Near Tank Area	55.6	52.77
	3.	Near Cooling Tower	68.2	64.7
	4.	Near Ware House	58.1	52.9
	5.	Plant Area (1 st Floor)	67.6	65.5
Noise monitoring results (July 2023 to September 2023)				
	S. No.	Location	Leq (dB(A))	
			Day time	Night time
	AMBIENT NOISE LEVEL MONITORING			
	1.	ZLD (Near RD Plant)	60.4	55.2
	WORK PLACE NOISE LEVEL MONITORING			
	Membrane Caustic Soda Plant-1 (Near HCL Plant)			
	1.	Near Furnace Area (HCL Section)	67.9	58.8
	2.	Near Cell House	67.1	59.9
	3.	Near Electrical Work Shop	68.3	61.7
	4.	Chlorine Section	65.1	58.1
	5.	Brine Section	69.3	61.9
	6.	Hypo Section	68.4	60.7
	7.	Near Cooling Tower Area	71.4	65.0
	CSA Plant (Near Tanker Filling Area)			
	1.	Near Plant (2 nd Floor)	68.7	57.4
	2.	Near CSA Filling Area	64.7	55.2
	3.	Near Cooling Tower	70.5	63.2
	4.	Near Scrubber Area (1st Floor)	68.88	60.9
	Near Poly Aluminium Chloride Plant (control room)			
	1.	Near Godown area	67.4	59.3
	2.	Near PAC Control Room	66.8	59.6
	3.	Near Mechanical Workshop	66.6	58.9
	4.	Near Bleed Water Tank (Liquid Plant)	69.4	62.6
	5.	Near Cooling Tower Area	67.4	59.3





No.	Environmental Clearance Conditions	Reply given by PP in compliance report	
	Calcium chloride Plant (Near cooling Tower)		
1.	Near Control Room	66.8	48.2
2.	Near Storage Tank	63.6	57.5
3.	Near Slurry Area (Sludge Area)	68.4	61.7
4.	Near Ware House (Godown)	65.7	57.4
5.	Near Cooling Tower	70.8	63.8
	Membrane Caustic Soda Plant-2		
1.	Near Furnace Area (HCL Section)	64.0	54.7
2.	Near Caustic Concentration	68.9	61.8
3.	Near Mechanical Work Shop	68.7	61.1
4.	Near Washery MCC Room (Near Cooling Tower)	71.4	65.00
5.	CSF Area	66.3	58.5
6.	Chlorine Section	70.3	62.9
7.	Brine Section	67.7	60.4
8.	CSF Filling (Godown Area)	68.3	60.7
9.	Hypo Section	69.3	61.33
	Stable Bleaching Powder Plant		
1.	Near SBP Ware House I (Near Drum)	68.2	56.3
2.	Near SBP Ware House II (Near Drum)	64.3	57.2
3.	Near Mechanical Workshop	65.1	56.8
4.	Near Cooling Tower (1 st Phase)	71.8	64.3
5.	Near Cooling Tower (2 nd Phase- Near Roadside)	70.8	63.2
6.	Lime Godown Area (Near Hopper)	56.9	47.9
	Chlorinated Paraffin		
1.	Near C. P. Loading Area	67.5	59.9
2.	Near Tank Area	57.6	50.2
3.	Near Cooling Tower	70.7	62.6
4.	Near Ware House	59.0	51.4
5.	Plant Area (1 st Floor)	70.6	63.6
V	Energy conservation measures		
i.	The energy sources for lighting purposes shall preferably be LED based.	Duly Noted. The energy source for lighting purposes is LED based both for street light and in the plant premises.	
VI	Waste Management		
i.	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm and the solvent transfer through pumps.	The Company is strictly complying with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All the hazardous chemicals are stored in tanks, tank farms, drums, carboys etc. Flame arresters has been provided on tank farm, and solvent through pumps.	

No.	Environmental Clearance Conditions	Reply given by PP in compliance report																																																																																																		
		Hazardous Waste Authorization obtained from M.P. Pollution Control Board is enclosed as Annexure 5 . The details of Hazardous chemicals storage are given below:																																																																																																		
	<table border="1"> <thead> <tr> <th>Unit</th> <th>Chemicals</th> <th>Form of Material (Solid/Liquid/Gas)</th> <th>Nature of Material (Corrosive/Flammable etc.)</th> <th>Type of Storage</th> </tr> </thead> <tbody> <tr> <td rowspan="7">Membrane cell Caustic Soda</td> <td>Sodium Chloride (common salt)</td> <td>Solid</td> <td>Corrosive</td> <td>Shed</td> </tr> <tr> <td>Soda Ash</td> <td>Solid</td> <td>Corrosive</td> <td>Bag</td> </tr> <tr> <td>Barium Carbonate</td> <td>Solid</td> <td></td> <td>Bag</td> </tr> <tr> <td>Sodium Sulphite</td> <td>Solid</td> <td>Corrosive</td> <td>Bag</td> </tr> <tr> <td>Caustic Soda</td> <td>Liquid</td> <td>Corrosive</td> <td>MS tank</td> </tr> <tr> <td>Hydrochloric Acid</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL Tank</td> </tr> <tr> <td>Sulphuric Acid</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL</td> </tr> <tr> <td rowspan="4">Stable leaching Powder Unit</td> <td>Liquid chlorine</td> <td>Liquid</td> <td>Corrosive</td> <td>MS tank</td> </tr> <tr> <td>Hydrated lime</td> <td>Solid</td> <td>Corrosive</td> <td>Bag</td> </tr> <tr> <td>Caustic Soda</td> <td>Liquid</td> <td>Corrosive</td> <td></td> </tr> <tr> <td>Chlorine</td> <td>Gas</td> <td>Corrosive</td> <td>-</td> </tr> <tr> <td rowspan="4">Poly Aluminium Chloride</td> <td>Hydrochloric Acid</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL Tank</td> </tr> <tr> <td>Sulphuric Acid</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL Tank</td> </tr> <tr> <td>Chlorine gas</td> <td>Gas</td> <td>Corrosive</td> <td>-</td> </tr> <tr> <td>Caustic Soda</td> <td>Liquid</td> <td>Corrosive</td> <td>MS Tank</td> </tr> <tr> <td rowspan="3">Chlorosulphonic Acid</td> <td>Hydrochloric acid</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL Tank</td> </tr> <tr> <td>Sulphuric Acid</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL Tank</td> </tr> <tr> <td>Sulphur Trioxide</td> <td>Gas</td> <td>Corrosive</td> <td>-</td> </tr> <tr> <td>Calcium chloride</td> <td>HCl (33 %)</td> <td>Liquid</td> <td>Corrosive</td> <td>MSRL Tank</td> </tr> <tr> <td rowspan="2">Chloromethane Plant</td> <td>Methanol</td> <td>Liquid</td> <td>Flammable and Toxic</td> <td>Epoxy coated MS Tank</td> </tr> <tr> <td>Chlorine</td> <td>Gas</td> <td>Corrosive</td> <td>-</td> </tr> </tbody> </table>	Unit	Chemicals	Form of Material (Solid/Liquid/Gas)	Nature of Material (Corrosive/Flammable etc.)	Type of Storage	Membrane cell Caustic Soda	Sodium Chloride (common salt)	Solid	Corrosive	Shed	Soda Ash	Solid	Corrosive	Bag	Barium Carbonate	Solid		Bag	Sodium Sulphite	Solid	Corrosive	Bag	Caustic Soda	Liquid	Corrosive	MS tank	Hydrochloric Acid	Liquid	Corrosive	MSRL Tank	Sulphuric Acid	Liquid	Corrosive	MSRL	Stable leaching Powder Unit	Liquid chlorine	Liquid	Corrosive	MS tank	Hydrated lime	Solid	Corrosive	Bag	Caustic Soda	Liquid	Corrosive		Chlorine	Gas	Corrosive	-	Poly Aluminium Chloride	Hydrochloric Acid	Liquid	Corrosive	MSRL Tank	Sulphuric Acid	Liquid	Corrosive	MSRL Tank	Chlorine gas	Gas	Corrosive	-	Caustic Soda	Liquid	Corrosive	MS Tank	Chlorosulphonic Acid	Hydrochloric acid	Liquid	Corrosive	MSRL Tank	Sulphuric Acid	Liquid	Corrosive	MSRL Tank	Sulphur Trioxide	Gas	Corrosive	-	Calcium chloride	HCl (33 %)	Liquid	Corrosive	MSRL Tank	Chloromethane Plant	Methanol	Liquid	Flammable and Toxic	Epoxy coated MS Tank	Chlorine	Gas	Corrosive	-				
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ii.	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 process waste ETP sludge, process inorganic waste is being disposed through Captive Secured Landfill & evaporation salt are being disposed through CTSDF. Photographs are given below:																																																																																																		

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		
ETP Sludge		
iii.	<p>The company shall undertake waste minimization measures as below: -</p> <ol style="list-style-type: none"> Metering and control of quantities of active ingredients to minimize waste. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. Use of automated filling to minimize spillage. Use of Close Feed system into batch reactors. Venting equipment through vapour recovery system. Use of high-pressure hoses for equipment clearing to reduce wastewater generation. 	<p>The industry has taken following waste minimization measures-</p> <ol style="list-style-type: none"> All the raw materials are fed in the system through metering system to minimize the waste. Chlorine feed is controlled and no excess chlorine is fed. Hydrochloric acid is being used as raw material in Chlorosulphonic acid plant, Polyaluminium Chloride plant and Calcium Chloride plant. Water Scrubber are used for absorption of HCl vapours in water is used in production of HCl. The automated system has been implemented in all the processes. The closed feed system has been implemented in all the processes. Vapor recovery system is installed; Paraffin vapour is being recovered in CP plant using condensers. High Pressure Jet cleaning practice is being adopted in ZLD plant to clean calendria.
VII	Greenbelt	
i.	<p>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.</p>	<p>Regular plantation activities have been done in the Grasim complex. Out of the total plant area, 58.5 acres (~23.68 ha) i.e., 38% has already been developed under greenbelt/ plantation.</p> <p>List of the Plant Species in Greenbelt is given below: <i>Acacia auriculiformis</i>, <i>Alstonia acholaris</i> (Devil's tree), <i>Anthocephalus cadamba</i> (Kadam), <i>Araucaria</i>, <i>Azadirachta indica</i> (Neem), <i>Butea</i></p>

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		<p>frondose (Dhak), Callistemon sps. (Bottle Brush), Cassia fistala (Amaltas), Cassia siamea, Casurina, Dalbergia sissoo (Shisham), Delonix regia (Gulmohar), Dillenia indica (Chalta), Erythrine sps. (Pangra), Gliricidia, Ficus bengalensis (Bar), Ficus elastica, Ficus benjamina, Ficus sps., Grevillea robusta (Silver oale), Jacaranda, Kigelia pinnata, Lagerstromia sps. (Sawani), Milingtonia horstensis (Akash Neem), Mimusops elengi (Molsari), Parkia, Peltophorum, Leuceana latisiliana (Subabul), Polyalthia pendula (Ashok), Plumeria sps. (Champa), Saraca indica (Sita Ashok), Putramiva, Santalum album (Chandan), Apathodia campanuleta (Fountain tree), Terminalia arjuna (Arjun), Terminalia catappa, Thespesia populnea (Paras Pipal), Pongamia glabra (Karanj), Bamboo sps., Bauhinia sps., etc. Glimpse of plantation and green belt in the complex is shown as below:</p>





No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		
		
VIII	Safety, Public hearing and Safety issues	
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	The Emergency preparedness plan and Disaster Management Plan is being/will be implemented in the Grasim Industry Limited.
ii.	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.	Adequate arrangement for protection of possible fire hazards during manufacturing process in material handling is made in the industry. Few precautions are as follows: <ul style="list-style-type: none"> ➤ Flame arrestors are provided at various places in the system. ➤ Sufficient number of Fire Extinguishers DCP type and CO2 type and Fire buckets are posted at many locations for fire control. Besides this, we have a Fire tender of adequate capacity with our Fire Fighting Department.

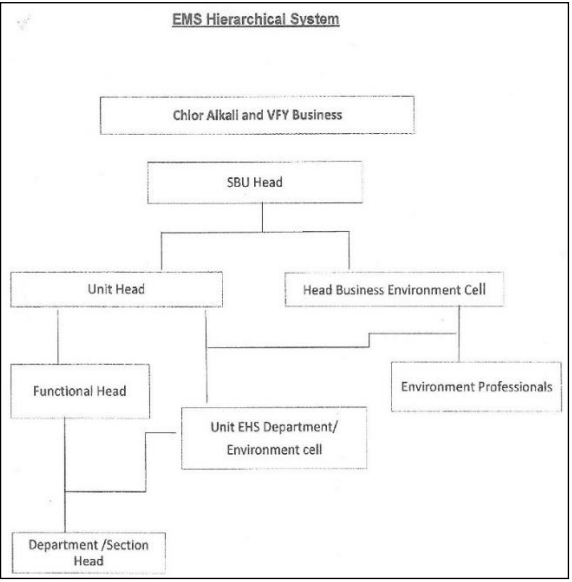
No.	Environmental Clearance Conditions	Reply given by PP in compliance report
		<ul style="list-style-type: none"> ➤ Fire Hydrant Points are also located around the plant. ➤ Employees are regularly trained in firefighting.
iii.	The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	The Personal Protection Equipment (PPE) as per the norms of Factory Act are provided to the employees by Grasim Industry Limited.
iv.	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.	Requisite training is being provided to all the employees and routine periodical medical checkup is also undertaken on regular basis. Medical checkup report of worker is attached as Annexure 8 . The images of training are given below.




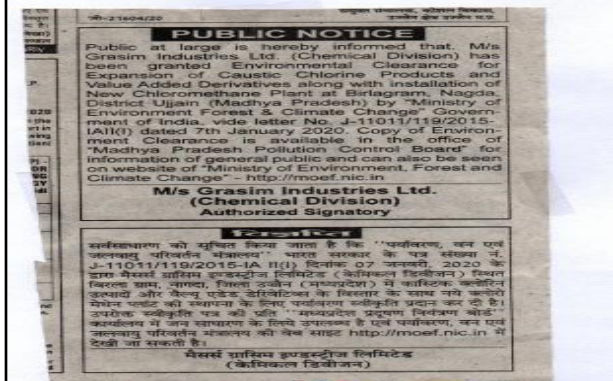


Training programs


v.	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, creche etc. The housing may be in the form of temporary	Required provision of the housing of construction labour within the site has been made as and when required, with all the necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc.
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No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	structures to be removed after the completion of the project.	However, most of the construction labour are locally hired.
vi.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	<p>Healthy & Safe working environment for employees is the prime concern of the company. Regular health check-up of workers and management staff is being done and records are being maintained.</p> <p>Medical report of one of the workers is attached as Annexure 8 for reference.</p> <p>Grasim Industries Ltd. commits to create & maintain safe & healthy work environment for employees, against hazards & risks through:</p> <ul style="list-style-type: none"> ➤ Continuously developing & maintaining safe work practices. ➤ Focusing on operational & occupational hazards & risks. ➤ Creating awareness about preventive health & safety measures.
vii.	There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products, and no parking to be allowed outside on public places	<p>Adequate space inside the plant premises is earmarked for parking of vehicles for raw materials and finished products, and no parking is being allowed outside on public places.</p> <p>The photographs of parking spaces are given below:</p>
<div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Parking space for vehicles</p>		
IX	Corporate Environmental Responsibility	

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.111 dated 1 st May 2018, as applicable, regarding Corporate Environment Responsibility.	Duly Noted.
ii.	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.	Duly Noted. The company have a well laid down environmental policy duly approve by the Board of Directors for the industry.
iii.	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 directly to the head of the organization.	Separate environmental cell has been developed in the industry having a team of qualified personnel. The Hierarchy of EMS is given below. 
iv.	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	Duly Noted. The year wise funds earmarked for environmental protection measures are being/ will be kept in separate account and will not to be diverted for any other purpose. Year wise progress of implementation of action plan will be reported to the Ministry/Regional

Expansion of Caustic Chlorine Products from and value-added derivatives along with installation of new chloromethane plant, at Village: Birlagram, Tehsil: Nagda, District: Ujjain, Madhya Pradesh by M/s Grasim Industries Ltd. (Chemical Division)	Half Yearly Compliance Report (April, 2023- Sep., 2023)
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No.	Environmental Clearance Conditions	Reply given by PP in compliance report
	action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.	Office along with the Six-Monthly Compliance Report.
v.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall he carried out.	Duly Noted The Self environmental audit is conducted annually. The recent Audit is being conducted by NEERI, Nagpur in June 2021. The conclusion report of NEERI Audit is attached as Annexure 12 .
X	Miscellaneous	
i.	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 or 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.	Grasim Industry Limited has advertised in local newspaper regarding the receipt of EC from MoEFCC. The copy of newspaper advertisement is enclosed below. The copy of EC has been uploaded on the Company's website. (www.grasim.com)
	 	 
ii.	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.	The copies of environmental clearance are being submitted to the concerned offices.
iii.	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.	Duly Noted. The same shall be done.

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
iv.	The project proponent shall monitor the criteria pollutants level namely; PM ₁₀ , SO ₂ , NO _x (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.	<p>The display board showing criteria pollutants level namely; PM₁₀, SO₂, NO_x is located at the convenient location for disclosure to the public, and also put on the company's website. The photographs of the same is shown below:</p>  <p style="text-align: center;">Display board showing criteria pollutants</p>
v.	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 environment clearance portal.	Duly Noted.
vi.	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.	Duly Noted.
vii.	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.	Duly Noted.
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Duly Noted.
ix.	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.	Duly Noted.

Expansion of Caustic Chlorine Products from and value-added derivatives along with installation of new chloromethane plant, at Village: Birlagram, Tehsil: Nagda, District: Ujjain, Madhya Pradesh by **M/s Grasim Industries Ltd. (Chemical Division)**

Half Yearly Compliance Report
(April, 2023- Sep., 2023)

No.	Environmental Clearance Conditions	Reply given by PP in compliance report
x.	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).	Duly Noted.
xi.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Duly Noted.
xii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Duly Noted.
xiii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Duly Noted.
xiv.	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.	Duly Noted.
xv.	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 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.	Duly Noted.
xvi.	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.	Duly Noted.

