



BY E-Mail / R.P.A.D

Date: 27th May 2023

Ref.: SAC-SHE-E-FL-08/MAY'23/01

To,
The Member Secretary,
State Level Environment Impact Assessment Authority,
Gujarat Pollution Control Board,
Sector-10A,
Gandhinagar-382010.

Subject: Six Monthly Environmental clearance compliance status (October'22 to March'23)

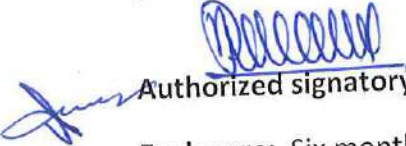
Reference: 1. Environmental Clearance letter no.: SEIAA/GUJ/EC/1(d)/925/2020 dated 28th July-2020 &
2. Environmental Clearance letter no.: SEIAA/GUJ/EC/5(f)/1597 /2022 dated 31st May -2022.

Dear Sir,

We are enclosing herewith the six monthly compliance status above referred of environmental clearances for the period of October'22 to March'23.
The same has also been sent through mail as soft copy, as per the requirements.
Hope, you will find the same in order.

Thanking you.
Yours faithfully

For DCM SHRIRAM LIMITED
(Unit: Shriram Alkali & Chemicals)


Authorized signatory

Enclosure: Six monthly compliance status of the environmental clearance with all Annexure.

CC to:

MoEFCC-RO, Gandhinagar, Gujarat
CPCB-ZO, Vadodara
GPCB Gandhinagar
GPCB RO Ankleshwar
District Collector Bharuch

SHRIRAM ALKALI & CHEMICALS

749, GIDC Industrial Estate, Jhagadia, Dist. Bharuch, Gujarat-393110 Tel : +91 2645 222000
Registered Office: DCM Shriram Ltd, 2nd Floor, (West Wing), Worldmark 1, Aerocity, New Delhi - 110037, India.

www.dcmshriram.com
CIN No. L74899DL1989PLC034923

DCM Shriram Limited

(Unit: Shriram Alkali and Chemicals, Jhagadia)

SIX MONTHLY ENVIRONMENT CLEARANCE COMPLIANCE REPORT

For the period of October'22 to March'23.

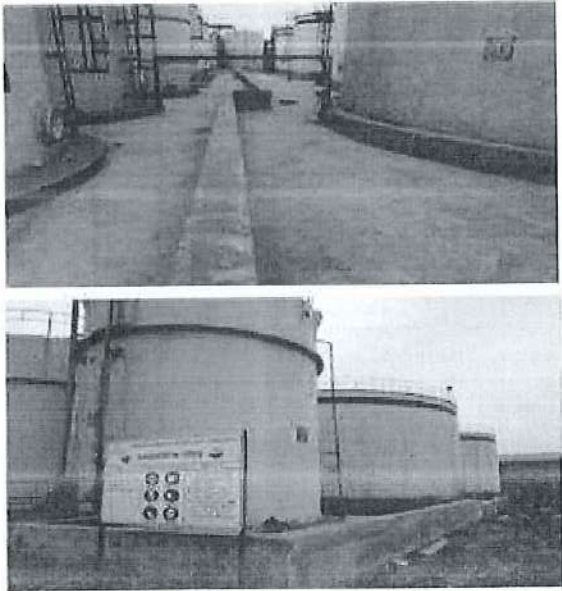
[Letter no. SEIAA/GUJ/EC/1(d)/925/2020 dated 28th July-2020]

S. no.	CONDITIONS/RECOMMENDATION	STATUS																																																																								
A	Conditions																																																																									
	<p>The proposal is for environment Clearance to M/s. DCM Shriram limited for expansion of "Chlor-Alkali Industry" and "Thermal Power Plant" at Plot No.749/GIDC, Jhagadia, Bharuch. It is an existing unit for manufacturing following Products.</p> <p>Qua</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Product</th> <th>Existing MT/Annum</th> <th>Proposed MT/Annum</th> <th>Total MT/Annum</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Caustic soda (Lye & Flakes)</td> <td>508000</td> <td>305000</td> <td>813000</td> </tr> <tr> <td>2</td> <td>Chlorine</td> <td>447200</td> <td>268496</td> <td>715696</td> </tr> <tr> <td>3</td> <td>Hydrochloric Acid (100 %) On 33% basis</td> <td>120000=363636</td> <td>36500=1106066</td> <td>156500=474242</td> </tr> <tr> <td>4</td> <td>Hydrogen</td> <td>13541</td> <td>8130</td> <td>21671</td> </tr> <tr> <td>5</td> <td>Sodium hypo chlorite</td> <td>24360</td> <td>14626</td> <td>38986</td> </tr> <tr> <td>6</td> <td>Steam for CPP</td> <td>105120</td> <td>105120</td> <td>210240</td> </tr> <tr> <td>7</td> <td>CPP from coal based power plant(122 MW)</td> <td>1220 MWh</td> <td>120 MWh</td> <td>242 MWh</td> </tr> <tr> <td>8</td> <td>Aluminium chloride</td> <td>36500</td> <td>---</td> <td>36500</td> </tr> </tbody> </table>	Sr. No.	Product	Existing MT/Annum	Proposed MT/Annum	Total MT/Annum	1	Caustic soda (Lye & Flakes)	508000	305000	813000	2	Chlorine	447200	268496	715696	3	Hydrochloric Acid (100 %) On 33% basis	120000=363636	36500=1106066	156500=474242	4	Hydrogen	13541	8130	21671	5	Sodium hypo chlorite	24360	14626	38986	6	Steam for CPP	105120	105120	210240	7	CPP from coal based power plant(122 MW)	1220 MWh	120 MWh	242 MWh	8	Aluminium chloride	36500	---	36500	<p>Complied.</p> <p>The production of each item is maintained within the environment clearance quantity. Details of production for last 06 months are tabulated as below:</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Product</th> <th>Oct'22 to March'23 (Quantity In MT)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Caustic soda (Lye & Flakes)</td> <td>2,05,701</td> </tr> <tr> <td>2</td> <td>Chlorine</td> <td>1,62,909</td> </tr> <tr> <td>3</td> <td>Hydrochloric Acid (100 %) On 33% basis</td> <td>18445=55893</td> </tr> <tr> <td>4</td> <td>Hydrogen</td> <td>3,390</td> </tr> <tr> <td>5</td> <td>Sodium hypo chlorite</td> <td>1,150</td> </tr> <tr> <td>6</td> <td>Steam from CPP</td> <td>40740</td> </tr> <tr> <td>7</td> <td>CPP from coal based power plant(122MW)</td> <td>83.34 MWh</td> </tr> <tr> <td>8</td> <td>Aluminium chloride</td> <td>7,513</td> </tr> </tbody> </table>	Sr. No.	Product	Oct'22 to March'23 (Quantity In MT)	1	Caustic soda (Lye & Flakes)	2,05,701	2	Chlorine	1,62,909	3	Hydrochloric Acid (100 %) On 33% basis	18445=55893	4	Hydrogen	3,390	5	Sodium hypo chlorite	1,150	6	Steam from CPP	40740	7	CPP from coal based power plant(122MW)	83.34 MWh	8	Aluminium chloride	7,513
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A.1 : Specific Condition:																																																																										
1	Project proponent (PP) shall explore the possibilities for HCL Synthesis furnace for purification of spent HCL as per the commitment made before SEAC/SEIAA for purification of spent HCL with the budgetary provision of at least -2.5 Crores. [Excluding CER activity]	Noted. It shall be complied after commissioning of the project, this project is currently under erection.																																																																								



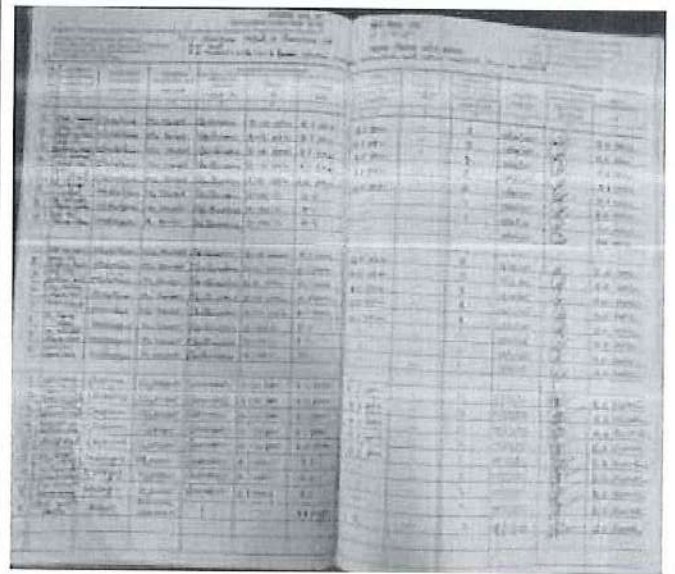
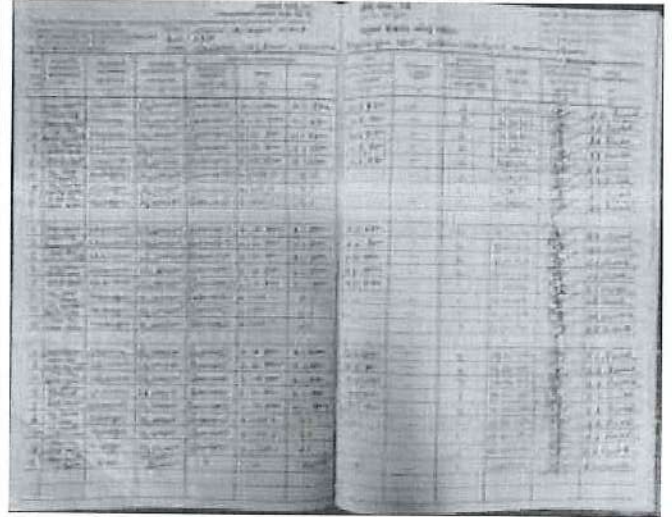
2	PP shall spent budgetary provision of 0.5 Crores [Excluding CER activity] as per the commitments made before SEAC/SEIAA for R&D activity in Partnership with reputed research Institutes like National Chemical Laboratory, Pune for Research & Development activities to identify a viable product with HCl or for suggestions for HCl purification and reuse in future.	Noted for compliance. We have signed NDA with National Chemical Laboratory on dated 21.04.2023 and include the following scopes. 1) Detailed product landscaping and value chain of HCl, 2) Impurity profiling of HCl from our customers (few of our customers obtain 30% of HCl as a by-product with organic & inorganic contaminants) 3) Purification of contaminated HCl to obtain virgin grade HCl NDA copy is attached as Annexure-1
3	PP shall initiate the proposal with Alkali Manufacturer's Association of India to study and derive a common formula / process for the purpose of purifying spent HCL: [Excluding CER activity]	As suggested by the SEIAA, we have initiated discussion with Alkali Manufacturer's Association of India to study and derive a common formula / process for the purpose of purifying spent HCL during last AMAI meeting and their response is awaited. Correspondence with AMAI Technical Sub-Committee team is attached as Annexure-2 .
4	PP shall discard the existing 5 number of DG based power plants and one auxiliary Boiler as proposed.	Complied. We have discarded all 5 numbers of DG based power plants and one auxiliary boiler as per the requirement.
5	Unit shall not use Furnace Oil" (FO) as fuel as per Gujarat Pollution Control Board (GPCB) Notification dated 12 th December, 2019.	Complied. FO is not used as regular fuel in line with GPCB Notification dated 12 th December, 2019. Except only for power plant startup activity for which permissions have been obtained in EC as per Boiler technology requirement.
6	Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the GPCB guideline.	Complied. Preventive maintenance schedule is in place for block valve, Control valve, Pressure relief device, pump seal, compressor seal and maintenance has been done as per schedule. All Critical valves are checked once in a year & records of the same are maintained.
7	Intermediate products /By – products mentioned in the product list qualifying the hazardous and other wastes (Management and Trans boundary Movement) Rules, 2016 and its amendment time to time shall be sold only to the potential users who are authorized by the competent authority (MoEF/CPCB/SPCB) and provision of said rules shall be complied in letter and spirit.	Complied All Hazardous Waste are disposed of as per HWM Rules 2016 requirements through Manifest. Copy of sample Manifest from GPCB XGN is attached as Annexure-3 .
8	The company shall submit the list of authorized end users of above mentioned wastes along with MoU	Complied We have made MOU with the following recyclers for



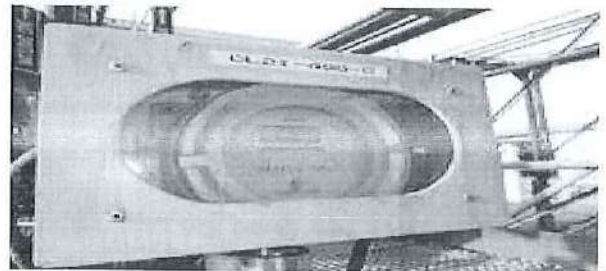
	<p>signed with them at least two month in advance prior to commencement of production. In absence of potential buyers of these items. The unit shall restrict the production of respective item.</p>	<p>our existing Chlor-Alkali plant. Existing MOU Buyers:</p> <ol style="list-style-type: none"> 1. Ambica Chemical Industries, Ankleshwar 2. Ambica Metallic Chemical, Ankleshwar. 3. Varahi Chemical Industries, Ankleshwar. 4. Vivan Industries Ankleshwar 5. Devam alum Ankleshwar <p>Copy of sample MoU is attached as Annexure-4 for your reference.</p>
<p>9</p>	<p>The Company shall install online chlorine gas detectors to detect leakage of chlorine at liquid chlorine storage tank, chlorine bottling area/sodium hypo plant at vent pipe, HCl synthesis unit and Electrolysers area. Caustic scrubber shall be provided in the HCL plant for absorption of chlorine /HCL form the stack. Dykes of adequate height shall be provided around the HCL acid tanks to collect the acid within the dyke walls in the event of catastrophic failure of the tank.</p>	<p>Complied 45 no's of Chlorine sensors have been provided (20 number of chlorine sensors for proposed expansion) at strategic locations within the plant premises. The alarm is provided in DCS for the values above TLV of each gas. All such instruments are being calibrated by recognized 3rd party as per their defined frequency. The calibration certificates are maintained by the site. Refer Annexure-5 Caustic scrubber is provided in the HCl stack for absorption of chlorine / HCl from the stack Adequate dyke wall (of Height: 1.3 meter) have been provided around the Hydrochloric acid tanks. Refer photographs below:</p> <div style="text-align: center;">  </div>
<p>10</p>	<p>Fugitive emissions shall be regularly monitored and data recording chlorine sensors shall be installed in the chlorine storage area at lower level between the tanks.</p>	<p>Complied Fugitive emission monitoring at work place is carried out once in a month by third party competent person. Adequate numbers of online Chlorine sensors are also</p>




installed in chlorine storage area. Sensors are being monitored through DCS and record is also maintained in Form No. 37, Under the Gujarat Factory Rule 12-B. Record copy for the same is attached as under:



A reference photograph of sensor located on Chlorine storage Tank-C is shown below:



11	All measures shall be taken to prevent soil and ground water contamination.	<p>Complied</p> <p>All roads and working areas are either of RCC or asphalt covered to make it impervious in order to prevent soil contamination.</p> <p>All the work areas, storage areas are of RCC. Waste storage areas are also covered as per standard guidelines so as to prevent soil contamination.</p> <p>Acid / alkali proof bricks provided at HCL plant & Caustic concentration unit. A reference photograph of the same is shown below:</p>  <p>Any civil activity occurring due to project activities is finally covered with pucca floor only.</p>																														
12	Necessary approvals from PESO and concerned Government Authorities shall be obtained before commissioning of the project	<p>Complied</p> <p>We have obtained necessary approvals from GPCB, DISH, CCE, etc. to operate the facilities in the plant</p> <table border="1" data-bbox="853 1097 1492 1243"> <thead> <tr> <th>Licence & Authority</th> <th>Reference No.</th> <th>Valid up to</th> </tr> </thead> <tbody> <tr> <td>Factory License from DISH</td> <td>24315</td> <td>31.12.2026</td> </tr> </tbody> </table> <p>Licenses issued by PESO</p> <table border="1" data-bbox="853 1321 1524 1915"> <thead> <tr> <th>Name of the Chemical</th> <th>Type of Storage</th> <th>Quantity</th> <th>Nos. of Storage</th> <th>License No.</th> <th>Valid up to</th> </tr> </thead> <tbody> <tr> <td>Chlorine</td> <td>Cylinders</td> <td>-</td> <td>2016 Nos.</td> <td>G/HO/GJ/06/191 (G1346)</td> <td>30.09.2023</td> </tr> <tr> <td>Chlorine</td> <td>Storage tanks</td> <td>492.5 MT</td> <td>05 tanks</td> <td>S/HO/GJ/03/320 (S1605)</td> <td>30.09.2023</td> </tr> <tr> <td>Hydrogen</td> <td>Filling Cylinders</td> <td>-</td> <td>1080 Nos</td> <td>G/HO/GJ/05/350, G/HO/GJ/06/335 (G1545)</td> <td>30.09.2025</td> </tr> </tbody> </table>	Licence & Authority	Reference No.	Valid up to	Factory License from DISH	24315	31.12.2026	Name of the Chemical	Type of Storage	Quantity	Nos. of Storage	License No.	Valid up to	Chlorine	Cylinders	-	2016 Nos.	G/HO/GJ/06/191 (G1346)	30.09.2023	Chlorine	Storage tanks	492.5 MT	05 tanks	S/HO/GJ/03/320 (S1605)	30.09.2023	Hydrogen	Filling Cylinders	-	1080 Nos	G/HO/GJ/05/350, G/HO/GJ/06/335 (G1545)	30.09.2025
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		Petroleum-Class-B	Tanks	800 KL	01 tank	P/HQ/GJ/15 /1740 (P12101)	Applied for renewal 14.12.2022
		Class-C	Tanks	270 KL	01 Tank		
13	Unit shall comply the emission standards mentioned in the Notification by MoEF&CC vide no. S.O. 3305 (E) dated 07/12/2015.	Complied We are complying with the emission standards in our existing operations and same will be continued					
14	The Unit shall comply with the Provisions with reference to stack height for power plant as and when the MoEF&CC Notification vide no. G.S.R. 593 (E) dated 28th June, 2018.	The stack height for new power plant is 140 meter as per the MoEF&CC notification requirements. All process vents are min 30m in height as per the notification.					
15	Unit shall install 24 X 7 Continuous Emission Monitoring System [CEMS] in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for monitoring of effluent discharge and air emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and an arrangement shall also be done for rejecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. Unit shall calibrate this system from time to time according to equipment supplier specification through labs recognized under EPA, 1986 or NABL accredited laboratories.	CEMS for all applicable parameters is already installed in existing plant and the results are communicated to CPCB and GPCB servers on real-time basis. The same will be continued in the upcoming new plant. The instruments are calibrated on regular intervals through 3 rd party accredited laboratories.					
16	Unit shall comply all the applicable standard conditions prescribed in Office Memorandum (OM) published by MOEF&CC vide no. F. No, 22-34/2018-IA.III dated 09/08/2018 for Chlor Alkali Industries as mentioned at Sr. no. 26.	Complied The Office memorandum (OM) is regarding general condition as per EC, We are complying the requirements as follows: 1. Statutory Compliance: a) We are complying with all the applicable statutory requirements and have received all the applicable permissions for our site. 2. Air Quality monitoring & Preservation: a) We have installed online CEMS (connected to CPCB / GPCB servers) in all our process stacks to monitor the stack emissions. Preventive maintenance and regular calibration is ensured. b) We are monitoring fugitive emissions through recognized labs every month, sample reports attached as Annexure-6. c) Regular ambient air quality monitoring facility					



	<p>has been established at site as per the requirements and monitoring is being done for applicable parameters.</p> <ul style="list-style-type: none">d) We ensure to use coal having less than 0.5% sulfur content and all the emission sources are connected to stacks having adequate height as per CPCB guidelines.e) We have covered storage yards for storage of chemicals and coal.f) We are complying with the national ambient air quality emission standards <p>3. Water Quality Monitoring & Preservation</p> <ul style="list-style-type: none">a) We have installed online CEMS (connected to CPCB / GPCB servers) in our ETP discharge.b) All our effluent discharge parameters are conforming to the standards prescribed by GPCB, effluent monitoring sample report attached as Annexure:7c) Total fresh water requirement is always within the proposed quantity and have not exceeded.d) We have separate process and storm water drains in our premises and process effluent are not allowed to mix with storm water.e) We have implemented rainwater harvesting system in our unit and use the harvested rain water for green belt irrigation.f) Our emergency DG sets are equipped with adequate stack height and the emissions are conforming to the applicable standards. <p>4. Noise Monitoring & Prevention:</p> <ul style="list-style-type: none">a) Acoustic enclosure has been provided for emergency DG sets.b) We have provided acoustic hoods; silencer and enclosure etc to ensure to comply with the noise standards and overall noise level in and around the plant area are always within the standards.c) Ambient noise levels are as per EPA Rules 1986, result are within range as prescribed. <p>5. Energy Conservation Measures</p> <ul style="list-style-type: none">a) We have changed our lighting fixture to LED resulting in saving of 2.07 KWH per day.b) We have received recently Green maple award for Energy Conservation (platinum) Copy attached as Annexure:8 <p>6. Waste Management</p> <ul style="list-style-type: none">a) Hazardous chemicals are stored in tank farms and flame arrestors are provided on the tank
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		<p>farm.</p> <p>b) We are sending our process inorganic waste to TSDF.</p> <p>c) We are undertaking waste minimization by metering and control of quantities in all our processes,</p> <p>d) We have taken up implementation of project for product recovery from our waste sodium rich stream from SRS to recover ANSS.</p> <p>7. Green Belt</p> <p>a) We have a well developed green belt all around our plant area and further enhancing it</p> <p>8. Safety, Public Hearing and Human Health Issues</p> <p>a) We have a well defined emergency preparedness plan bases on the inputs from HIRA and quantitative risk assessment and same has been implemented at our site.</p> <p>b) Unit has well laid fire hydrant network in the premises with sufficient nos. of Fire Extinguishers at strategic locations to mitigate the fire risks.</p> <p>c) PPE's are provided to all employees and regular training for use of PPE's is provided to all employees.</p> <p>d) Regular training is imparted to all employees on safety and health aspects of chemical handling. Pre- employment medical checkup is conducted for all the employees (including workers) and six monthly medical checkup is also being done. Records of the above are being maintained with OHC.</p> <p>e) Form no-32 is being maintained by Unit as a record of Occupational health surveillance of all employees (including workers). Sample copy of the record is attached as Annexure-9.</p> <p>f) We have adequate parking space for vehicles of raw materials and finished goods additionally GIDC parking space is available for vehicles during night time. Also working on improving Turn Around Time (TAT) to minimize waiting of vehicles.</p> <p>9. Corporate Environment Responsibility.</p> <p>a) Our unit has an EHS policy duly signed by our Occupier, which is followed.</p> <p>b) We are in compliance with the applicable provisions of CREP guidelines for Chlor-alkali plants and thermal power plants, The chlor-alkali process used in the plant is a Membrane</p>
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cell based process. Hence, as applicable, in the guideline, the unit has adopted the pollution and safety aspects for Cl2 handling to prevent any accident / release of Cl2.

- c) The fly ash generated in the Captive Power plant is completely reused for Fly ash brick & cement manufacturing as per Fly ash notification.
- d) Our unit is recertified for Responsible Care Logo with validity of Dec 2025
- e) Environment cell developed for environmental monitoring of various parameters as required.
- f) The year wise environmental expenses are in line with the funds earmarked for environment protection measures.
The Funds for environmental expenses are not diverted for any other purpose.
- g) We are conducting 3rd party environment audit through an external agency appointed by GPCB on yearly basis.

10. Miscellaneous

- a) All environment clearances granted to us have been made public by giving advertisement in local daily newspapers and all our EC's are in public domain on website.
- b) We have provided the copies of environment clearance to local sarpanch.
- c) Our six monthly EC compliance reports along with all monitoring results are published on company website.
- d) We are displaying the AAQM results on digital display boards displayed outside our main gate at prominent locations.
- e) We are submitting six-monthly compliance report to the ministry offices.
- f) We are submitting the environment statement in Form-V to GPCB on annual basis.
- g) We are complying with all the requirements of GPCB and other regulatory bodies.
- h) We are complying with the commitment and recommendations of EIA/EMP and submitting are compliance reports as required.
- i) We comply with the ministry requirements and have sought EC from ministry for further expansion of products.

We ensure to comply with all the other requirements of office memorandum (OM) published by MoEF&CC



		vide no.F.No.22-34/2018-IA,III dated 09/08/2018.
	A2 WATER	
17	Total water requirement for the project shall not exceed 25,767 KL/day Unit shall reuse 776 KLD, comprising of (300 KLD) of RO Permeate treated water after treatment of effluent coming from cooling tower blow down, (476 KLD) of boiler blow down directly to be reused] Hence, fresh water requirement shall not exceed 24,991 KLD and it shall be met through GIDC water supply only.	Our average water consumption for last 6 months is around 9909 KLD. Thus we are not exceeding the total water requirements as recommended. Project activities are in progress.
18	Reuse/Recycle of (776 KLD) water shall be done in Cooling Tower with in Premises. - RO will be installed for recycle / reuse of waste water.	RO plant for project is under installation for recycle / reuse of waste water and permeate water will be recycled to cooling towers.
19	Total effluent generation from Cooling Tower Blow Down after proposed expansion shall not exceed (1808 KLD), (700 KLD) from the same shall be treated in in-house RO, RO - Permeate (300 KLD) shall be reused in Cooling Tower while RO - Reject (400 KLD) shall be sent to in-house ETP comprising of Primary treatment facility along with remaining cooling tower blow down effluent (1108 KLD)	Our average effluent generation for last 6 months is around 909 KLD We shall not exceed total effluent quantity of 1728 KLD after the commissioning of the new projects.
20	Process effluent generation after proposed expansion shall not exceed (220 KLD) and shall be sent into in - house ETP comprising of Primary treatment facility.	Process effluent generation will not exceed 220KLD, which will be treated in-house in ETP
21	Effluent generation after proposed expansion shall not exceed (1728 KLD) which shall be treated in in-house ETP comprising of Primary treatment facility which includes effluent from Process (220 KLD), RO - Reject (400 KLD) and Cooling Tower Blow Down (1108 KLD) and after treatment its shall be disposed into Narmada Clean Tech (NCT) pipeline of Jhagadia GIDC for final disposal into deep sea after meeting deep sea discharge norm s prescribed by concern authority.	Effluents will be limited to 1728 KLD. It shall be disposed into Narmada Clean Tech (NCT) pipeline of Jhagadia GIDC for final disposal into deep sea after meeting deep sea discharge norm as prescribed by GPCB.
22	Prior permission from the concerned authority shall be obtained for withdrawal of water.	Complied. Water is sourced from GIDC water supply. The copy of approval letter (Reference no. GIDC/DEE/JHA/234 dated 16.07.2018) is attached as Annexure-10 .
23	No ground water shall be tapped for the project	Complied. No ground water is tapped for the project purpose.



	requirements.	We are using water sourced from GIDC.
24	The water meter shall be installed and records of daily and monthly water consumption shall be maintained.	Complied Water meters are already installed in Our existing plant and records maintained. The same practice will be continued for the new project.
25	All efforts shall be made to optimize water consumption by exploring Best Available Technology (BAT).	Noted, We have adopted the best available technology for electrolysis, brine purification and ion exchange processes, which consumes minimum water. Thus we are able to achieve the minimum specified target of water consumption for power plant and chlor alkali plants.
26	The unit shall continuously strive to reduce recycle and reuse the treated effluent.	RO installed for recycling of CPP blow down effluent, also treated water from STP is used for green belt. In Process area, water conservation thro reuse of DM regeneration back wash for process is also practiced. Such opportunities are identified to follow the best practices to reduce recycle and reuse the treated effluent. As part of the new projects an additional Effluent treatment plan is being setup, which will help to further improve on treated effluent utilization.
27	The company shall provide adequate effluent treatment plants for the effluent generated as mentioned above and it shall be operated regularly and efficiently so as to achieve the GPCB/CPCB/MoEF&CC norms.	We have adequate ETP plants with primary and secondary treatment facilities. They are in operation on continuous basis and online monitoring instruments with auto control systems have been provided at the discharge outlet for our existing plant. Effluent discharged only when it meets the requirements of GPCB/CPCB/MoEF&CC norms.
28	The treated effluent for final disposal shall not exceed (1728 KLD) and it shall be conveyed to GIDC drain for deep Sea disposal al after ensuring that it meets with the discharge norms prescribed by GPCB.	We shall ensure that the treated effluent for final disposal shall not exceed (1728 KLD) and it will be disposed to GIDC drain for final disposal to deep sea through NCT pipeline. Approval from NCT has been obtained. Copy of the approval letter is attached as Annexure-11 for your reference. Sea disposal norms as prescribed by PCB being maintained.
29	The unit shall provide continuous online monitoring system at the outlet of the ETP system & maintain the record for the same.	CEMS at the outlet of the ETP system has already been provided and records of the CEMS values maintained.
30	Unit shall take steps/measures for reuse/recycle of waste	We are recycling RO permeate in cooling tower for makeup, steam condensate for boiler water makeup,



	water as proposed in EIA/EMP report.	blow down for soot blowing, ion exchange regeneration water for brine preparation, etc. and finally discharging less than 1728 KLD treated waste water to deep sea through Narmada Clean Tech pipeline network																																	
31	Domestic sewage generation shall not exceed (15 KLD) after proposed expansion and it shall be treated in in-house STP and after treatment it shall be used for gardening within premises.	We are treating sewage water in our in-house STP and treated water is used for gardening purpose.																																	
32	Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.	We are having adequate buffer water storage capacity for the storage of treated waste water and the same shall be proportionately increased in the upcoming project.																																	
33	The unit shall join and participate financially and technically for any common environmental facility / infrastructure as and when the same is taken up either by the GIDC or GPCB or any such authority created for this purpose by the Govt. / GIDC.	We are partnering with GIDC, NCT for various common environmental facilities like, Jhagadia pipeline project, buffer storage, etc. We are an active member of Jhagadia industrial Association and BEIL. We shall continue our active participation in any such upcoming requirements.																																	
34	Proper logbooks of ETP, Chemical consumption, quantities and qualities of effluent discharge and reuse, power consumption etc shall be maintained and shall be furnished to the GPCB from time to time.	<p>Complied, Logbook of the ETP is maintained. Monthly data of Production, Power consumption, ETP discharge etc. is uploaded in XGN and hard copy also submitted to GPCB. Details of treated effluent discharge for the period October-22 to March-23 is given as following;</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Effluent Discharge (KL/M)</th> <th>Avg. Effluent Discharge (KLD)</th> </tr> </thead> <tbody> <tr> <td>Quantity As per EC</td> <td>-</td> <td>1080</td> </tr> <tr> <td>Oct'22</td> <td>29320</td> <td>946</td> </tr> <tr> <td>Nov'22</td> <td>21670</td> <td>722</td> </tr> <tr> <td>Dec'22</td> <td>29500</td> <td>952</td> </tr> <tr> <td>Jan'23</td> <td>29730</td> <td>959</td> </tr> <tr> <td>Feb'23</td> <td>24480</td> <td>874</td> </tr> <tr> <td>March'23</td> <td>30940</td> <td>998</td> </tr> <tr> <td>Minimum</td> <td>21670</td> <td>722</td> </tr> <tr> <td>Maximum</td> <td>30940</td> <td>998</td> </tr> <tr> <td>Average</td> <td>27607</td> <td>909</td> </tr> </tbody> </table>	Month	Effluent Discharge (KL/M)	Avg. Effluent Discharge (KLD)	Quantity As per EC	-	1080	Oct'22	29320	946	Nov'22	21670	722	Dec'22	29500	952	Jan'23	29730	959	Feb'23	24480	874	March'23	30940	998	Minimum	21670	722	Maximum	30940	998	Average	27607	909
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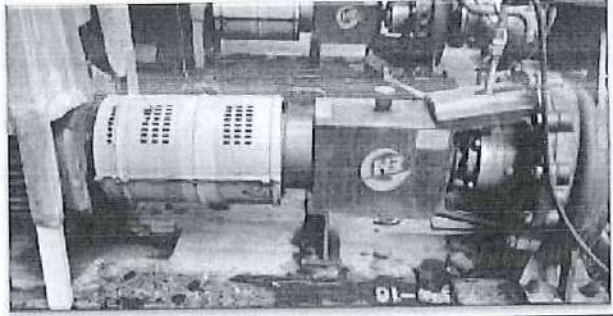


		<p>We are doing 3rd party analysis on monthly basis by QCI-NABET accredited and MoEF approved laboratory M/S Unistar Environment and Research Labs Pvt. Ltd. Vapi. Sample Report of analysis results of the treated effluent is attached is attached as Annexure-7, Record of Electricity consumption for ETP is maintained and same uploaded in GPCB website of XGN, Power Consumption of ETP for the period of October-22 to March-23 is as follows:</p> <table border="1" data-bbox="861 616 1508 974"> <thead> <tr> <th>Month</th> <th>Electricity consumed for ETP (KWH)</th> </tr> </thead> <tbody> <tr> <td>Oct'22</td> <td>8696</td> </tr> <tr> <td>Nov'22</td> <td>3471</td> </tr> <tr> <td>Dec'22</td> <td>6516</td> </tr> <tr> <td>Jan'23</td> <td>9554</td> </tr> <tr> <td>Feb'23</td> <td>8211</td> </tr> <tr> <td>March'23</td> <td>7034</td> </tr> </tbody> </table>	Month	Electricity consumed for ETP (KWH)	Oct'22	8696	Nov'22	3471	Dec'22	6516	Jan'23	9554	Feb'23	8211	March'23	7034
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35	Unit shall not exceed fuel consumption as mentioned in the table below provided that Lignite and Bio -mass (Agro waste) shall not exceed 60% and 20% respectively of total Blended Coal Imported Coal/indigenous Lignite/ Bio-mass (Agro waste).	Complied. Our average coal consumption for last 6 months is 1487 TPD which also includes Biomass. Thus Fuel consumption is well within the prescribed limits. We are also using Hydrogen gas as alternate fuel in the molten salt heater. By now we have permission for use this green fuel in flaker plant and in boilers also.														
36	Unit shall provide adequate APCM as mentioned in the above table.	We have provided the APCMs in existing stacks and their performance is being monitored and shared to CPCB /GPCB on real time basis. We shall provide the desired APCMs in our upcoming stacks also.														
37	Unit shall provide adequate APCM with process gas emission as mentioned below.	The APCMs as mentioned in the order are being maintained. We are regularly monitoring our process stack emissions and all the parameters are observed within specified limits. We have provided the desired APCMs for existing plant and are integrating similar controls for upcoming plants too.														
38	Sulfur and ash content of the fuel to be used shall be analyzed and its record shall be maintained.	We are analyzing the sulfur and ash content of fuel in our existing power plant and will implement the same for upcoming plant and records be maintained.														
39	A long term study of radio activity and heavy metals contents on coal/lignite to be used shall be carried out through a reputed institute and results there of analyzed regularly and reported along with monitoring reports.	Complied, Reports are obtained as required and same will be continued in our upcoming project also.														




	There after mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal/Lignite and fly ash (Including bottom ash) shall be put in place.	
40	A flue gas stack of 140m height shall be provided with continuous online monitoring system (CEMS) to proposed CPP Boiler. Mercury emissions from stacks shall also be monitored on periodic basis	A flue gas stack of 140m height is already installed and continuous online monitoring system (CEMS) is procured and under installation for proposed power plant Boiler. Mercury emissions shall be also monitored on periodic basis
41	High efficiency Electro Static Precipitators (ESP) with efficiency not less than 99.9% shall be installed for control of flue gas emission from the proposed Boilers. The ESP shall be operated efficiently to ensure that particulate matter emission does not exceed the GPCB norms. The control system shall be designed and integrated in plant DCS in such a way that if emission from ESP exceeds the specified standard prescribed in the Environment (Protection) Rules, 1986 as amended from time to time, utilization of boiler capacity shall reduce so that flue gas emission from the stack meets with the specified standards or boiler shall shut down totally.	Complied. Efficiency of the ESPs will meet the required norms. We shall provide 2 streams each of 5 fields including 1 field standby ESP as APCM in 455 TPH boiler. The ESP shall be operating efficiently to ensure that particulate matter emission does not exceed the GPCB norms. The control system shall be designed and integrated in plant DCS in such a way that if emission from ESP exceeds the specified standard prescribed in the Environment (Protection) Rules, 1986 as amended from time to time, utilization of boiler capacity shall reduce so that flue gas emission from the stack meets with the specified standards or boiler shall shut down totally.
42	Third party monitoring of the functioning of the ESP along with its efficiency shall be carried out once in a year through a reputed institute / organization.	We are already monitoring the ESP efficiency of our existing plant through 3 rd party and will implement the same for upcoming plant also. Attached Annexure -13 attached
43	Lime stone injection technology shall be adopted to control SO ₂ and it shall be ensured that SO ₂ levels in the ambient air do not exceed the prescribed standards.	Lime dosing system is already provided in our CFBC boiler to control SO ₂ emissions and ambient air quality is maintained, the same shall be implemented in upcoming 120 MW plant.
44	The company shall prepare schedule and carry out regular preventive maintenance of mechanical and electrical parts of ESPs and assign responsibility of preventive maintenance to the senior officer of the company.	We have a preventive maintenance philosophy at our site and all pollution control equipments are part of maintenance schedule, we shall ensure to carry out regular maintenance of ESP's.
45	Adequate Air Pollution Control Measures [APCM] shall be provided.	2 streams each of 5 fields including 1 field standby are provided as APCM in 455 TPH boiler. Lime dosing system for Boiler is implemented for existing and new Boilers. Dry fog dust suppression system is implemented in coal handling plant.



		Dust extraction / Bag filters will be provided in fly ash and bed ash silos.
46	Flue gas emission & Process gas emission (Whichever is applicable) shall conform to the standards prescribed by the GPCB/CPCB/MoEF&CC. At no time, emission level should go beyond the stipulated standards.	We are complying with emission standards as prescribed by GPCB in the existing plants. 3rd party monitoring sample report of all our existing stacks is attached in Annexure 12 (Flue gas emission stack reports) & Annexure 14 (Process gas emission stack reports) We shall adhere to all applicable standards in our upcoming plant also
47	The National ambient air quality emission standard issues by the Ministry vide G.S.R. No. 826 (E) DATED 16th November, 2009 shall be followed.	We are following the ambient air monitoring standards at our site. The sample report is attached as Annexure 6 for your reference. They shall be continued
48	<p>Unit shall take adequate measure to control fugitive emission as below.</p> <p>All the joints, flanges pumps, glands. Seals valves shall be maintained in good conditions through timely predictive and preventive maintenance.</p> <p>Regular workplace monitoring shall be carried out for HCl & Cl₂ at various locations within plant.</p> <p>Boundary wall as Wind breaker shall be provided to restrict the dispersion of odor dust from the site. – enclosure for fly ash handling will be provided</p> <p>Well developed green belt is provide at the existing site and shall be maintained for the proposed project.</p> <p>All tanks being used for storage of odorous chemicals/ products shall be connected to vacuum system. Manometer shall be provided on these tanks the vacuum shall be monitored on daily basis and actions shall be taken accordingly.</p> <p>All pumps handling hazardous chemicals shall be provided with mechanical seals to prevent fugitive emission wherever possible magnetic coupled pumps shall be used.</p>	<p>Preventive maintenance schedule for all such equipments will be prepared and adhered to regular workplace monitoring for HCl & Cl₂ is carried out and will be continued.</p> <p>We already have a boundary wall and green belt developed all around our site.</p> <p>We already have a greenbelt at our site and we shall ensure further enhancing the same.</p> <p>Any odorous chemical / product tank shall be connected to vacuum system and shall be monitored on daily basis.</p> <p>We are providing mechanical seals in all pumps handling hazardous chemicals to prevent fugitive emission.</p> 



	<p>Any spillage from drums etc shall be absorbed with saw dust / soda ash and moped clean the contaminated absorbent shall be safety disposed off along with hazardous waste.</p> <p>Manual handling of various chemicals shall be avoided and shall be designed by implementing latest automation technology.</p> <p>All venting equipment shall have vapor recovery system Measuring Instruments with sound alarm and having strategically placed sensing elements shall be provided for alerting the personnel in case of any escape of gases like Chlorine Interlock with blower shall be provided.</p>	<p>We are having spill management plan in place and spill kits are also provided at strategically identified places. Any such spill shall be managed accordingly. Hazardous waste, if any will be disposed to TSDF.</p> <p>We will minimize manual handling of chemicals at site and use mechanized system for chemical handling.</p>  <p>We have installed multi-racking system in our chemical warehouse and use mechanized system for storage and loading from warehouse.</p> <p>Vapor recovery system along with interlock shall be provided for all venting equipments. Similar to our existing plant</p>
49	<p>Measures shall be taken to reduce the process vapors emissions as far as possible. Use of toxic solvents shall be minimum All venting equipment shall have vapor recovery system.</p>	<p>Complied.</p> <p>HCl vents and Hypo vents have been provided with caustic scrubbers to ensure absorption of all vent gases. They are recovered in Hypo system and Brine system. The same will be continued for upcoming projects.</p>
50	<p>The fugitive emission in the work zone environment shall be monitored the emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health). Following indicative guidelines shall also be followed to reduce the fugitive emission.</p> <p>Internal roads shall be either concreted or asphalted</p>	<p>Complied</p> <p>Fugitive emission monitoring at work place is carried out regular basis by third party competent person.</p> <p>All roads and working areas are either of RCC or asphalt covered. Water sprinkling being done to suppress airborne dust as required.</p>



	<p>or paved properly to reduce the fugitive emission during vehicular movement.</p> <p>Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.</p> <p>A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.</p>	<p>Greenbelt has already been developed at site and in GIDC land adjacent to the boundary to mitigate fugitive and transport dust emission.</p> <p>We have further expanded the greenbelt in dedicated plot within GIDC estate.</p>
51	<p>Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.</p>	<p>Ours is a Chlor alkali plant and do not use organic compounds, hence no VOC emissions are expected in work zone. It shall be continued in expansion projects.</p>
52	<p>Airborne dust at all transfers operations/ points shall be controlled either by spraying water or providing enclosures.</p>	<p>All coal transfer points and coal shed are provided with water spraying arrangements and storage facilities covered to reduce the dust / fugitive emissions. They shall be continued in expansion projects also.</p>
53	<p>The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e g Directors of Industrial Safety & Health) Following indicative guidelines shall also be followed to reduce the fugitive emission.</p> <ul style="list-style-type: none"> • All handling & transport of coal shall be exercised through covered coal conveyors only. • Enclosure shall be provided at Coal loading and unloading operations. • Water shall be sprinkled on Coal stock piles periodically to retain some moisture in top layer and also while compacting to reduce the fugitive emission. • All transfer points shall be fully enclosed. Adequate dust suppression/extraction system at crusher house as well as for the Coal/Lignite stock yard and other vulnerable areas shall be provided to abate dust nuisance. • Accumulated coal dust /fly ash on the ground and other surfaces shall be removed / swept regularly and water the area after sweeping. 	<p>Similar to existing plant we shall ensure implementation of all guidelines in our upcoming plants also.</p> <p>Covered coal conveyors provided in existing plant and same shall be done in upcoming project</p> <p>Enclosures are provided at Coal loading and unloading operations in existing plant and same shall be extended in upcoming project.</p> <p>Water sprinklers are provided in existing coal yard for sprinkling water on Coal stock piles periodically to retain some moisture in top layer and also while compacting to reduce the fugitive emission.</p> <p>All transfer points are enclosed and adequate dust suppression/extraction system at crusher house as well as for the Coal/Lignite stock yard and other vulnerable areas have been provided in existing plant and same shall be provided in upcoming project.</p> <p>We have proper housekeeping system for accumulated coal dust /fly ash on the ground and other surfaces in existing plant and the same shall be</p>



	<ul style="list-style-type: none"> • Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement. • Air borne dust shall be controlled with water sprinklers at suitable locations in the plant. • Coal/Lignite shall be transported through covered trucks only whereas fly ash shall be transported through closed trucks only. • A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission. 	<p>implemented for upcoming project.</p> <p>Internal roads are all concreted or asphalted and there is no fugitive emission during vehicular movement due to road conditions.</p> <p>Sprinklers at suitable locations have been provided in the plant to control air borne dust.</p> <p>Coal/Lignite is being transported through covered trucks only and fly ash is transported through bulkers / closed trucks only.</p> <p>We have existing green belt all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission, we will further enhance the same.</p>
54	<p>Regular monitoring of ground level concentration of PM10, PM2.5, SO2, NOx, Cl2, HCl, HC, Dioxin and VOC shall be carried out in the impact zone and its records shall be maintained Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.</p>	<p>We are following the ambient air monitoring standards at our site and shall follow the same for new plant also, summary of 3rd party monitoring are attached as Annexure 6.</p> <p>They are meeting GPCB prescribed norms. The location of AAQMSs have been decided in consultation with GPCB and authorized by GPCB approved auditors.</p>
55	<p>Stack / Vents (Whichever is applicable) of adequate height shall be provided as per the prevailing norms for flue gas emission/Process gas emission.</p>	<p>We have provided the APCMs in existing stacks and their performance is being monitored and shared to CPCB /GPCB on real time basis. We are in stage of providing the desired APCMs in upcoming projects too</p>
56	<p>All the reactor / vessels used in the manufacturing process shall be closed to reduce the fugitive emission.</p>	<p>Our process is closed cycle and the tanks/enclosures are covered/ sealed. And the same shall will be maintained in upcoming projects also</p>
57	<p>The company shall strictly comply with the rules and regulations with regards to handling and disposal of Hazardous waste in accordance with the Hazardous and Other Wastes (Management and Tran boundary Movement) Rules 2016, as may be amended from time to time Authorization of the GPCB shall be obtained for collection / treatment / storage / disposal of hazardous wastes.</p>	<p>We are complying with the rules and regulation of HWM Rules 2016 and maintaining Form -3 and submitting form-4 as per the requirements.</p>




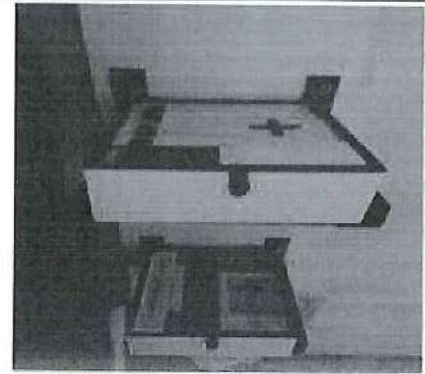
58	Any by-products which fall under the purview of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016 shall be handed as per the said rules and necessary permissions from the Concern authority shall be obtained.	We have taken necessary permissions for all such wastes and will ensure to dispose them as per the requirements of the Rule.
59	Hazardous wastes shall be dried, packed and stored in separate designated hazardous waste storage facility with pucca bottom and Leachate collection facility, before its disposal.	Complied. We are being dried, packed and stored hazardous waste at designated storage facility with pucca bottom and Leachate collection facility, before its disposal.
60	Management of Hazardous waste generation as mention in EC to be complied with	Complied. We are complying with requirement for management of Haz waste and other waste as per the given directions and applicable regulations and same will be continued.
61	The unit shall obtain necessary permission from the nearby TSDF site and CHWIF.	Complied. We already have necessary permissions from BEIL Infrastructure Limited, Safe Enviro Private Limited (SEPL) & Hindustan Enviro Life Protection Services Ltd. (HEPL) TSDF, copy of membership attached as Annexure 15 .
62	Trucks/Tankers used for transportation of hazardous waste shall be in accordance with the provisions under the Motor Vehicle Act, 1988, and rules made there under.	Noted for compliance. We are ensuring that all vehicles used transportation of hazardous waste are in accordance with applicable rules.
63	The design of the Trucks/bankers shall be such that there is no spillage during transportation.	Noted for compliance & Being ensured
64	All possible efforts shall be made for Co-Processing of the Hazardous waste prior to disposal into TSDF/CHWIF.	Noted for compliance & Being ensured
	A -5 SAFETY	
65	The occupier/project proponent shall strictly comply the provisions under the Factories Act 1948 and the Gujarat Factories Rules 1963.	Complied. we have obtained Factory license and Complying with the provisions under the Factories Act 1948 and the Gujarat Factories Rules 1963.
66	The project authorities shall strictly comply with the provisions made in Manufacture Storage and Import of Hazardous Chemicals Rules (MSIHC) 1989, as amended time to time and the Public Liability Insurance Act for handling of hazardous chemicals etc Necessary approvals from the Chief Controller of Explosives and concerned Govt. Authorities shall be obtained before commissioning of the project Requisite On -site and Off-site Disaster Management Plans have to be prepared and	Complied Unit has complied all the required provision made under Manufacture, Storage and Import of Hazardous Chemicals Rules (MSIHC) 1989 and the Public Liability Insurance Act, for handling of hazardous chemicals etc. Unit has obtained all required approval from the Directorate of Factories, Chief controller of explosive and concerned government authorities as per details included in the sr. no.12



	implemented.	
67	Main entry and exit shall be separate and clearly marked in the facility.	Complied. We have separate entry and exist at our site.
68	Sufficient peripheral open passage shall be kept in the margin area for free movement of fire tender/ emergency vehicle around the premises.	Complied. We have earmarked margin area all around our plant for emergency services.
69	Storage of flammable chemicals shall be sufficiently away from the production area.	Complied. In our existing facility, Hydrogen storages (banks and holder) are kept separate from production area with all necessary statutory provisions and the same shall be extended to the project also.
70	Sufficient number of fire extinguishers shall be provided near the plant and storage area.	Complied. In our existing plant Fire extinguisher are provided as per the requirement of BIS 2190 Sufficient nos. of Fire Extinguisher i.e Mechanical foam type, Dry Chemical powder type, Carbon dioxide type are provided at strategic locations in the plant. Fire dept. is ensuring upkeep of the equipment and record is being maintained. Same shall be extended in project also.
71	All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic / hazardous chemicals.	Unit is having a well-defined, active and passive control to mitigate any risk of handling and storage of hazardous chemicals. Necessary engineering control, Relief systems, Early detection through strategically located sensors, 24 x 7 dedicated emergency handling crew, emergency responders, water sprinkler and curtain system, fire hydrant network, emergency preparedness plan and PPE's management are the part of safety management system.
72	All the toxic/hazardous chemicals shall be stored in optimum quantity and all necessary permissions in this regard shall be obtained before commencing the expansion activities.	Being followed and shall be continued
73	The project management shall ensure to comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report.	We shall comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report Copy of the Risk assessment report with their compliance status is attached as Annexure-16
74	Only flame proof electrical fittings shall be provided in the plant premises.	Flame proof electrical fitting are provided in the plant premises as per requirement and same will be continued in new projects.
75	Storage of hazardous chemicals shall be minimized and it shall be in multiple small capacity tanks / containers	Complied. We are having multiple storage of chemicals with dyke facility. Adequate dyke wall (of Height: 1.3 meter) have been provided around the



	instead of one single large capacity tank / containers.	Hydrochloric acid tanks. Kindly refer photographs attached in point no. sr. no. 09
76	All the storage tanks shall be fitted with appropriate controls to avoid any leak ages Bund/dyke walls shall be provided for storage tanks for Hazardous Chemicals.	Complied. Bond /dyke walls have been provided for all the storage tanks of Caustic, HCl, H2SO4, Hypo and they shall be maintained
77	Handling and charging of the chemicals shall be done in closed manner by pumping or by vacuum transfer so that minimal human exposure occurs.	Complied. Being followed and shall be continued
78	Tie up shall be done with nearby health care unit / doctor for seeking immediate medical attention in the case of emergency.	Unit maintains an Occupational Health Centre within the complex round the clock base for immediate first aid. The OHC is manned by 02 nos of regular qualified doctors and 5 nos of qualified paramedic staff. Besides that unit has tied up with the nearest health care units at Bharuch, Ankleshwar, Jhagadia and Vadodara for immediate medical support.
79	Personal Protective Equipments (PPEs) shall be provided to workers and its usage shall be ensured and supervised.	All necessary PPEs have been provided to workers and they are continuously encouraged for their use. PPE boxes are kept in different strategic locations of the existing plant. The same methodology shall be followed in upcoming plant as well. 
80	First Aid Box and required Antidotes for the chemicals used in the unit shall be made readily available in adequate quantity.	A. First Aid box details: First aid boxes are kept in strategic locations in existing plant and same shall be continued for proposed expansion. Sample photograph of First aid box.



The OHC staff of the Unit is inspecting the contents of the First Aid box on monthly basis. The records of the same are available with OHC.

B. Antidote details:

The List of Chemicals used, their corresponding antidotes and quantities of antidotes are given as follows:

Sr. No	Chemical	Antidote / Symptomatic Treatment
1	Caustic soda	Lemon juice, Charcoal powder, Soda
2	Chlorine	No antidote
3	Hydrochloric acid	Magnesia, soap, any diluted alkali
4	Sulphuric acid	Magnesia, soap, chalk, lime water
5	Sodium hypochlorite	No antidote

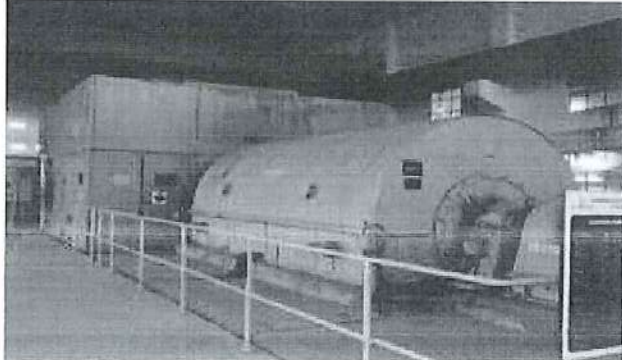
Sr. No.	Injectable Antidote	Antidote For
1	Inj Atropin Sulphet	Vaso vagal attack
2	Inj – A.S.V.	Snake Venom
3	Inj Avil	Anti-histaminic/ Anti allergic
4	Inj- Tetanus Toxide	Tetanus
5	Inj Phenergan	Sedative, Anti emetic
6	Inj Deriphyllin	Broncho dilator
7	Inj Avil	Anti histaminic/ Anti allergic
8	Inj Dexona	Anti inflammatory/ Anti allergic
9	Charcol Powder	Over Uses of Drugs

All the above antidotes are available in OHC and will



		further update the requirements based on our upcoming project requirements.
81	Occupational health surveillance of the workers shall be done and its records shall be maintained Pre - employment and periodical medical examination for all the workers shall be undertaken as per the Factories Act & Rules.	Complied. Unit is maintaining Pre and Periodic medical examination record for all workers as prescribed in Factories act. We Shall ensure the same for our upcoming project as well.
82	Transportation of hazardous chemicals shall be done as per the provisions of the Motor Vehicle Act & Rules.	Complied. Regular trainings are being imparted to the drivers of the hazardous chemical transporting vehicles. Records of such training are well maintained. TREM card and MSDS are provided with each vehicle transporting the hazardous chemicals. Unit is also taking care to verify valid registration, Driving License, PUC, First aid, safety equipment's, TREM card, Spark arrestor & vehicle condition also as required under "The Central Motor Vehicle Act 2019"
83	The company shall implement all preventive and mitigation measures suggested in the Risk Assessment report.	Risk Assessment Report, Risk mitigation measures and safeguards recommended in the EMP report and RISK Assessment study report recommendation are being complied in time.
84	Necessary permissions from various statutory authorities like PESO, Factory Inspectorate and others shall be obtained prior to commissioning of the project.	We have necessary permission for existing plant and will ensure for proposed expansion projects prior to commissioning.
85	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 maintained.	We are providing trainings on chemical handling including training by an external expert under rule 111 of GFR for concerned employees. We conduct pre-employment medical checkup and six monthly medical checkup of our employees. Copies of the training attendance sheet and medical checkup record are attached as Annexures-17 .
86	Effective safety precaution shall be taken for chemical storage, process handling and transportation hazard.	Unit has taken all necessary active and passive controls for storage the chemical like, Sufficient storage capacity tank with dyke wall with collection pit. Unit also provide all required documents such as TREM card, MSDS etc. to drivers while transporting our material and training program is also imparted for Drivers.
87	Unit shall prepare and Implement SOP for safe operation of the works.	Unit has prepared and implemented all the required SOPs for different plant activities. Unit is having a well-defined structure of Integrated Management System in place. All the SOP's and work instructions are the past of Integrated Management System under ISO



		9001, ISO 14001, ISO 45001 with valid certificate till 15.03.2026. Annexure-18.
88	The unit shall comply the statutory provision of safety audit & its compliance report.	Safety audit as per statutory requirement was carried out by competent person in Feb'22 and the suggestions made were implemented. The compliance report of the same was submitted to DISH. Same shall be followed for new projects.
89	Effective step shall be taken for prevention of fire, explosion & toxic release.	Unit has taken adequate measures on Active and Passive controls to take care of any emergency situation. Early detection, Dedicated fire water network, Emergency preparedness plan, Installation of Fire Fighting equipment, Emergency responders and Dedicated fire crew are part of safety management system. Also, we are planning to implement HAZMAT Van for quick response.
A 6 NOISE		
90	The overall noise level in and around the plant area shall be kept well within the standards by providing noise control measures including engineering controls like acoustic Insulation hoods, silencers. Enclosures etc on all sources of noise generation the ambient noise level shall confirm to the standards prescribed under The Environment (Protection) Act, 1986 & Rule. Acoustic enclosure for turbine and generator for new plant. Silencer for drum and final super heater header safety valves.	All possible noise control measures like acoustic insulation, hoods, silencers, enclosures, vibration dampers etc. are provided on all sources of noise generation like Compressors, Turbine etc. have been adopted. Ambient noise level measurement is being taken by 3 rd Party and all are within prescribed limit. Sample photographs of noise control at source are attached as under. Acoustic hood is provided at turbine to control noise for existing and new power plant.  Silencers are provided to high pressure steam vents (as per photograph below) to control noise.



A.7 CLEANER PRODUCTION AND WASTE MINIMISATION

91	The unit shall undertake the Cleaner Production Assessment study through a reputed institute / organization and shall- form a CP team in the company the recommendations thereof along with the compliance shall be furnished to the GPCB.	Complied. As per the assessment and recommendation of CP team membrane technology process for caustic production, Fluidized Bed combustion in boiler & using of hydrogen for caustic concentration are few example of recommendations adopted for cleaner production method.
92	<p>The company shall undertake various waste minimization measures such as: recycle of steam condensate and boiler continuous blow down.</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 materials. c) Substitutes. d) Use of automated and close filling to minimize spillages. e) Use of close feed system in to batch reactors. f) Venting equipment through vapor recovery system. g) Use of high pressure hoses for cleaning to reduce wastewater generation. h) Recycling of washes to subsequent batches. i) Recycling of steam condensate. j) Sweeping / mopping of door instead of floor washing to avoid effluent generation k) Regular preventive maintenance for avoiding Leakage, spillage etc. 	<p>Complied.</p> <ul style="list-style-type: none"> a) Metering of quantities of each active ingredient being done and optimized to reduce waste b) Hydrogen is reused in making HCl, and as fuel substitute. Chlorine is reused for making Sodium Hypochlorite c) We are using SRS technology to reduce the chemicals consumption. d) Caustic lye is filled by automatic filling and chlorine tonners are also filled with automatic filling with cut-off adjustment and overfilling alarm e) Not Applicable f) We have installed hypo scrubber for all chlorine vents. g) Dry cleaning of floor is done h) Not applicable i) We are collecting and recycling all our steam condensates j) Cleaning is done with high pressure hoses only k) Preventive maintenance schedule is in place and being followed

A.8 GREEN BELT AND OTHER PLANTAION

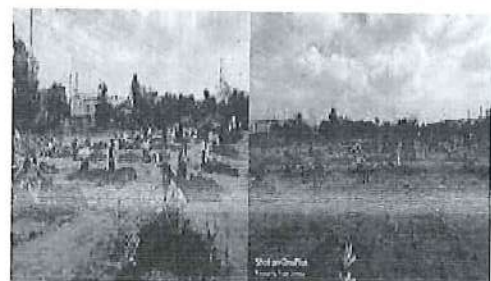


93 The unit shall develop green belt within premises as per the CPCB guidelines. However if the adequate land is not available within the premises, the unit shall take up adequate plantation on road sides and suitable open areas in GIDC estate or any other open areas in consultation with the GIDC / GPCB and submit an action plan of plantation for next three years to the GPGB.

Unit has developed a green belt within premises as per directions issued by GPCB. Type of trees planted is silver oak, poplar, Neem, platform, palm etc.



World Environment Day'22 celebration.



We have also expanded the greenbelt in GIDC estate. On occasion of celebration of World Environment

		Week-2022 mass tree plantation done by GIDC Officers, employees and contract employees at our site.
94	Drip irrigation / low-volume, low-angle sprinkler system shall be used for the green belt development within the premises.	Drip system & Sprinkler system used for watering at Green belt within premises
B. OTHER CONDITION		
95	Unit shall comply all the applicable standard conditions prescribed in Office Memorandum (OM) published by MoEF&CC vide no. F No. 22-34/2018 IA III dated 09/08/2018.	<p>The Office memorandum (OM) is regarding general condition as per EC, We are complying the requirements as follows:</p> <p>11. Statutory Compliance:</p> <p>b) We are complying with all the applicable statutory requirements and have received all the applicable permissions / licenses for our site.</p> <p>12. Air Quality monitoring & Preservation:</p> <p>g) We have installed online CEMS (connected to CPCB / GPCB servers) in all our process stacks to monitor the stack emissions. Preventive maintenance and regular calibration is ensured.</p> <p>h) We are monitoring fugitive emissions through recognized labs every month, Regular ambient air quality monitoring facility has been established at site as per the requirements and monitoring is being done for applicable parameters.</p> <p>i) We ensure to use coal having less than 0.5% sulfur content and all the emission sources are connected to stacks having adequate height as per CPCB guidelines.</p> <p>j) We have covered storage yards for storage of chemicals and coal.</p> <p>k) We are complying with the national ambient air quality emission standards</p> <p>13. Water Quality Monitoring & Preservation</p> <p>g) We have installed online CEMS (connected to CPCB / GPCB servers) in our ETP discharge.</p> <p>h) All our effluent discharge parameters are conforming to the standards prescribed by GPCB, effluent monitoring reports. Total fresh water requirement is always within the proposed quantity and have not exceeded.</p> <p>i) We have separate process and storm water drains in our premises and process effluent are not allowed to mix with storm water.</p>



- j) We have implemented rainwater harvesting system in our unit and use the harvested rain water for green belt irrigation.
 - k) Our emergency DG sets are equipped with adequate stack height and the emissions are conforming to the applicable standards.
14. Noise Monitoring & Prevention:
- d) Acoustic enclosure has been provided for emergency DG sets.
 - e) We have provided acoustic hoods, silencer and enclosure etc to ensure to comply with the noise standards and overall noise level in and around the plant area are always within the standards.
 - f) Ambient noise levels are as per EPA Rules 1986, result are within range as prescribed.
15. Energy Conservation Measures
- c) We have changed our lighting fixture to LED resulting in saving of 2.07 KWH per day.
 - d) We have signed an agreement for 50 MW of hybrid wind / solar renewable energy from renew power for its chlor-alkali manufacturing facility in Bharuch copy attached as **Annexure-19**
16. Waste Management
- e) Hazardous chemicals are stored in tank farms and flame arrestors are provided on the tank farm.
 - f) We are sending our process inorganic waste to TSDF.
 - g) We are undertaking waste minimization by metering and control of quantities in all our processes,
 - h) We have proposed for product recovery from our waste sodium rich stream from SRS to recover ANSS.
17. Green Belt
- b) We have a well developed green belt all around our plant area and further enhancing the same as per CPCB guidelines.
18. Safety, Public Hearing and Human Health Issues
- g) We have a well defined emergency preparedness plan bases on the inputs from HIRA and quantitative risk assessment and same has been implemented at our site.
 - h) Unit has well laid fire hydrant network in the premises with sufficient nos. of Fire




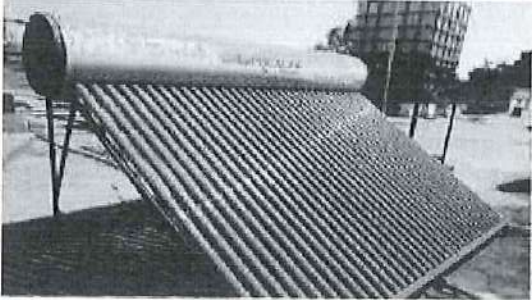


	<p>Extinguishers at strategic locations to mitigate the fire risks.</p> <ul style="list-style-type: none"> i) PPE's are provided to all employees and regular training for use of PPE's is provided to all employees. j) Regular training is imparted to all employees on safety and health aspects of chemical handling. Pre- employment medical checkup is conducted for all the employees (including workers) and six monthly medical checkup is also being done. Records of the above are being maintained with OHC. k) Form no-32 is being maintained by Unit as a record of Occupational health surveillance of all employees (including workers. We have adequate parking space for all our vehicles of raw materials and finished goods additionally GIDC parking space is available for vehicles during night time <p>19. Corporate Environment Responsibility.</p> <ul style="list-style-type: none"> h) We are in compliance with the applicable provisions of CREP guidelines for Chlor-alkali plants and thermal power plants, The chlor-alkali process used in the plant is a Membrane cell based process. Hence, as applicable, in the guideline, the unit has adopted the pollution and safety aspects for Cl₂ handling to prevent any accident / release of Cl₂. i) The fly ash generated in the Captive Power plant is provided to Fly ash brick & cement manufacturers. j) The unit has a EHS policy duly signed by Occupier. k) Environment lab for analysis and monitoring of all environmental parameters. l) The year wise environmental expenses are in line with the funds earmarked for environment protection measures. The Funds for environmental expenses are not diverted for any other purpose. m) We are conducting 3rd party environment audit through an external agency appointed by GPCB on yearly basis. <p>20. Miscellaneous</p> <ul style="list-style-type: none"> j) All environment clearances granted to us have been made public by giving advertisement in local daily newspapers and all our EC's are in
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		<p>public domain on website.</p> <p>k) We have provided the copies of environment clearance to local sarpanch.</p> <p>l) Our six monthly EC compliance reports along with all monitoring results are published on company website.</p> <p>m) We are displaying the AAQM results on digital display boards displayed outside our material gate at prominent locations.</p> <p>n) We are submitting six-monthly compliance report to the ministry offices.</p> <p>o) We are submitting the environment statement in Form-V to GPCB offices.</p> <p>p) We are complying with all the requirements of GPCB and other regulatory bodies.</p> <p>q) We are strictly abiding by the commitment and recommendations of EIA/EMP and are providing the compliance reports to all regulatory bodies on regular basis.</p> <p>r) We comply with the ministry requirements and have sought EC from ministry for further expansion of products.</p>
96	In case of use of spray dryer, the unit shall provide the adequate & efficient APCMS with spray dryer so that there should not be any adverse impact on human health & environment. Unit shall carry out third party monitoring of the proposed Spray dryer & it's APCM through the credible institutes and study report for impacts on Environment and Human Health shall be submitted to GPCB every year along with half yearly compliance report.	Not applicable We do not have spray dryers in our process.
97	The project proponent shall allocate the separate fund of Rs. 2.675 Crores i.e 0.25 % of the capital investment for the activities in accordance to the MoEFCC's Office Memorandum No. F.No.22 -65/2017-IA. III dated 01/05/2018. The entire activities proposed Under CER shall be monitored and the monitoring report shall be submitted to the regional office of MOEF&CC as a part of half-yearly compliance report and to district collector. The monitoring report shall be posted on the website of the project proponent.	CER expenses have been fixed and communicated to the concerned offices. The entire activities proposed under CER are being monitored and the monitoring report is submitted to the regional office of MoEFCC as a part of half-yearly compliance report and to district collector. The monitoring report is also being posted on the website of the project proponent.
98	All the recommendations mitigation measures environmental protection measures and safeguards proposed in the EIA report of the project prepared by	Noted. The recommendations have been strictly adhered to. Kadam environmental consultants have monitored the implementation status and given the



	M/s Kadam Environmental Consultants, Vadodara and submitted by project proponent online application vide no SIA/GJ/IND2/2 1625/2016 dated 24/01/2018 and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.	compliance status report. We are committed to adhere recommendations in our project also.
99	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, the Construction and Demolition Waste Management Rules, 2016 and the Plastics Waste Management Rules, 2016 shall be followed.	Solid waste management rules, e-waste management Rules, C&D Rules and Plastic waste management rules being followed and requirements under these rules are being complied.
100	Rain water harvesting of surface as well as rooftop runoff shall be undertaken and the same water shall be used for the various activities of the project to conserve fresh water as well as to recharge ground water as per the commitments and prevailing guidelines. Before recharging the surface run off, pre-treatment must be done to remove suspended matter.	Complied. We have implemented rainwater harvesting system at site and harvested rain water is being used for green belt irrigation.
101	The unit shall and participate financially and technically for any common environmental facility / infrastructure as and when the same is taken up either by the Industrial Association or GIDC or GPCB or any such authority created for this purpose by the Govt. / GIDC.	Noted. We are an active member of Jhagadia Industrial Association and participating in all common facilities being developed by GIDC and NCT or any such authorities.
102	Application of solar energy shall be incorporated for illumination of common areas lighting for gardens and street lighting in addition the provision for solar water heating system shall also be provided.	<p>Complied.</p> <p>Unit has installed solar lights on internal roads and solar water heaters in the canteen.</p> <p>Implementation of Solar lights is ongoing in premises. The photographs below show installations of solar lights within the premises.</p> <p>We have signed an agreement for 50 MW of hybrid wind / solar renewable energy from renew power for its chlor-alkali manufacturing facility in Bharuch.</p> <div style="text-align: center;">  <p>Near Power plant</p> </div>

		 <p>Solar water heater installed above canteen</p>
103	<p>The area earmarked as green area shall be used only for plantation and shall not be altered for any other purpose.</p>	<p>Complied. We shall ensure to use the green belt area specifically for greenbelt development.</p>  
104	<p>All the commitments / undertakings given to the SEAC during the appraisal process for the purpose of environmental protection and management shall be strictly adhered to.</p>	<p>Noted Unit is complying with all the point given by SEAC</p>
105	<p>In the event of failure of any pollution control system adopted by the unit, the unit shall be safely closed down and shall not be restarted until the desired efficiency of the control equipment has been achieved.</p>	<p>Noted. SOPs have been developed and implemented such that in case of failure of any pollution control device, the concerned equipment/ plant will be stopped and will not be started till the concerned device is rectified.</p>
106	<p>All the recommendations / commitments made in the EIA/EMP report of the project shall be implemented.</p>	<p>Noted, we shall implement all the recommendations / commitments made in the EIA/EMP report of the project.</p>
107	<p>The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board</p>	<p>Noted, We shall comply all the requirements</p>



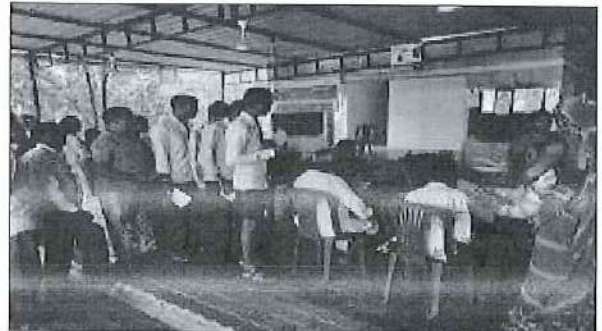
	(G PCB), State Government and any statutory authority.	
108	During material transfer, spillages shall be avoided and garland drain be constructed to avoid mixing of accidental spillage with domestic wastewater or storm water.	Garland drain have been provided in all areas to avoid mixing of accidental spillage in storm drain or domestic water.
109	Pucca flooring / impervious layer shall be provided in the work areas chemical storage areas and chemical handling areas to minimize soil contamination.	Complied. All the work areas, storage areas are RCC and waste storage areas are also covered as per standard guidelines so as to prevent soil contamination. In Chemical storage area and chemical handling area, the RCC floor and collection & recovery system with bond walls are in place.
110	The funds earmarked for environment protection measures shall be maintained in a separate account and there shall not be any diversion of these funds for any other purpose A year-wise expenditure on environmental safeguards shall be reported.	Shall be ensured.
111	Leakages from the pipes pumps, shall be minimal and if occurs. Shall be arrested promptly.	Complied
112	No further expansion or modifications in the plant likely to cause environmental impacts shall be carried out without obtaining prior Environment Clearance from the concerned authority.	Complied
113	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 1 98 1, the Environment (Protection) Act, 1986, Hazardous Waste s (Management, Handling and Transboundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted. We have obtained CCA valid till 03.07.2026 from GPCB under the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act) Act, 1981, The Environment (Protection) Act, 1986, Hazardous & other wastes (Management, Handling & Transboundary movement) rules, 2016 for existing plants & same shall be taken up for projects in due course of time. We are complying with the Public Liability Insurance Act, 1991, as well as above referred Acts / Rules along with their amendments and they are valid for the existing operations.
114	The project proponent shall comply all the conditions mentioned in "the Companies (Corporate Social Responsibility Policy) Rule s, 2014 " and its amendments from time to time in a letter and spirit.	Noted & being complied with The Companies (Corporate Social Responsibility Policy) Rules, 2014, Unit is conducting various social development activities in villages as a part of Corporate Social Responsibility (CSR). These activities are being implemented in association with partner agencies. The Company is making a positive impact on society by implementing programs on Preventive Health Care &



Sanitation, Environment Sustainability, Education & Literacy, Skill Development & Livelihood, and Rural Development.

Eye Cataract Screening and Surgery Camp

Eye camps have been organized in Sardarpura & Kapalsadi villages. Total 386 patients screened and 20 have been referred for surgery. Spectacles have been provided to 276 patients. We at DCM Shriram organizing regular eye check-up camps in surrounding villages since 10 years now and till date more than 2300 people have taken benefits of the same. These camps being organized in close coordination with local gram panchayat and beneficiaries are consulted by ophthalmologist. People are getting medicine, spectacles and support to cataract operation at Sewa Rural hospital in Jhagadia.



Sickle Cell Awareness & Screening Camps:

Sickle Cell is incurable disease and screening and awareness are only solution available for prevention



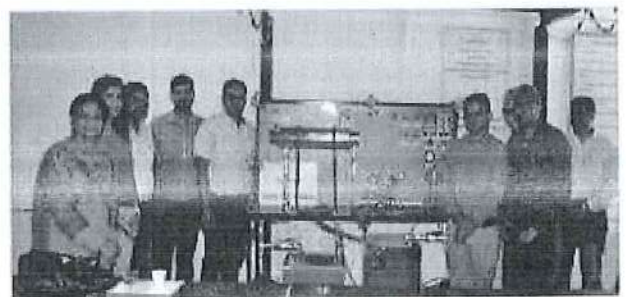
of the disease. To address the same camp has been organized in Primary school of Selod village and 100 Nos of patients screened in the same. 19 students have detected with sickle cell trait and 2 with disease. Individual cards and reports provided to parents and school for regular treatment.



Scholarship distribution to School Children by DDO




Donation of Equipment



Donation of AED to JIA to handle cardiac emergency.



		
115	The project management shall ensure that unit complies with all the environment protection measures, risk mitigation measures and safeguards recommended in the EMP report and Risk Assessment study report as well as proposed by project proponent.	Complied Unit is complying all the recommendation mentioned in EMP Report and Risk assessment study report as well as proposed by project proponent.
116	The project authorities shall earmark adequate funds to implement the conditions stipulated by SEIAA as well as GPCB along with the implementation schedule for all the conditions stipulated here in The funds so provided shall not be diverted for any other purpose.	Complied There is no fund constraint for carrying out any Environment project / assignment. Management is committed to comply all the requirements. Environment funds are not diverted for any other purpose
117	The applicant shall inform the public that the project has been accorded environmental clearance by the SEIAA and that the copies of the clearance letter are available with the GPCB and may also be seen at the Website of SEIAA/ S EAC/ GPCB. This shall be advertised within seven days from the date of the clearance letter, in at least two local newspapers that are widely circulated in the region, one of which shall be in the Gujarati language and the other in English. A copy each of the same shall be forwarded to the concerned Regional Office of the Ministry.	The Public has been informed about development through local newspapers. Copy of the paper cuttings have been submitted to your good office.
118	The project proponent shall also comply with any additional condition that may be imposed by the SEAC or the SEIAA or any other competent authority for the purpose of the environmental protection and management.	Noted
119	It Shall be mandatory for the project management to submit half- yearly compliance report in respect of the stipulated prior environmental clearance terms and conditions in soft copies IO the regulatory authority concerned, on 1st June and 1st December of each calendar year.	Noted for compliance. Regular Half yearly compliance report is submitted to MoEFCC-RO, CPCB-ZO, SEIAA (Gujarat) and GPCB by mail and hardcopies before 1st June and 1st December every year as per the requirement. Last report for the period April'22 to Sept-22 was submitted, vide our letter no. SAC-SHE-E-FL-08/22-23/01, on 29.11.2022
120	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions	Noted. The above information provided is true to the best of


	mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	our knowledge.
121	The project authorities shall also adhere to the stipulations made by the Gujarat Pollution control Board.	Noted and Complied
122	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.	Noted Implementation of the conditions is satisfactory and duly verified by the authorities, like-GPCB and MoEFCC from time to time.
123	The company in a time bound manner shall implement these conditions The SEIAA reserves the right to stipulate additional conditions, if the same is found necessary.	Noted
124	The project authorities shall inform the GPCB, Regional Office of MoEF and SEIAA about the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Noted & Complied, Details were already submitted
125	This environmental clearance is valid for seven years from the date of issue.	Noted.
126	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.	Noted.
127	Submission of any false or misleading information or data which is material to screening or scoping or appraisal or decision on the application makes this environment clearance cancelled.	Noted. We do not conceal any information from the authorities and abide by any direction.



DCM Shriram Limited
 (Unit: Shriram Alkali and Chemicals, Jhagadia)
SIX MONTHLY ENVIRONMENT CLEARANCE COMPLIANCE REPORT
 For the period of October'22 to March'23.
 [Letter no. SEIAA/GUJ/EC/5(f)/1597/2022 dated 31st May-2022]

S. no.	CONDITIONS/RECOMMENDATION	STATUS
A	Conditions	
	A.1 : Specific Condition:	
1	Unit shall install CEMS {Continuous Emission Monitoring System} in line to CPCB directions to all SPCB vide letter no. B- 29016/04/06 PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/ emission from respective project and an arrangement shall also be done for reflecting the online monitoring results on the company's server which can be assessable by the GPCB/CPCB on real time basis. [For Small/Large/Medium (Red Category) & Whichever, (Air emission & Effluent discharge) is applicable].	Complied. CEMS for all applicable parameters is already installed in existing plant and the results are communicated to CPCB and GPCB servers on real-time basis. The same will be continued in the upcoming new plant.
2	Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapors in such manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.	Noted. It shall be Complied after commissioning of the project.
3	Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.	Complied Preventive maintenance schedule is in place for block valve, Control valve, Pressure relief device, pump seal, compressor seal and maintenance has been done as per schedule. All Critical valves are checked once in a year & records of the same are maintained. The same will be continued in the upcoming new plant.
4	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.	Complied. We are following the ambient air monitoring standards at our site. The sample report is attached as Annexure 6 for your reference. They shall be continued
5	National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G. S. R. 608 (E) dated 21/07/2010 and amended from time to time shall be followed.	Complied. AAQ monitoring is carried out once in a month. Monitoring and testing is carried out by GPCB and MoEF & NABL approved laboratory Unistar Environment and Research Labs Pvt. Ltd. Vapi.



6	Unit shall have to adhere to the prevailing area specific policies of GPCB with respect to the discharge of pollutants, and shall carry out the project development in accordance & consistence with the same.	Complied. Unit has provided continuous online monitoring system at the outlet of the ETP system and record is maintained. Online flow meter, pH meter, TSS meter & TOC meter have been provided in Effluent discharge line and the data is monitored through the DCS and transmitted to CPCB & GPCB server, as per the requirement. The same will be continued in the upcoming new plant.																		
7	All measures shall be taken to avoid soil and ground water contamination within premises.	Complied All roads and working areas are either of RCC or asphalt covered to make it impervious in order to prevent soil contamination. All the work areas, storage areas are of RCC. Waste storage areas are also covered as per standard guidelines so as to prevent soil contamination. Acid / alkali proof bricks provided at HCL plant & Caustic concentration unit. A reference photograph of the same is shown below:  Any civil activity occurring due to project activities is finally covered with pucca floor only.																		
8	Safety & health																			
a	PP shall obtain PESO permission for the storage and handling of hazardous chemicals.	Complied We have obtained necessary approvals from GPCB, DISH, CCE, etc. to operate the facilities in the plant <table border="1" data-bbox="858 1487 1501 1637"> <thead> <tr> <th>Licence & Authority</th> <th>Reference No.</th> <th>Valid up to</th> </tr> </thead> <tbody> <tr> <td>Factory License from DISH</td> <td>24315</td> <td>31.12.2026</td> </tr> </tbody> </table> Licenses issued by PESO <table border="1" data-bbox="858 1704 1533 1868"> <thead> <tr> <th>Name of the Chemical</th> <th>Type of Storage</th> <th>Quantity</th> <th>Nos. of Storage</th> <th>License No.</th> <th>Valid up to</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Licence & Authority	Reference No.	Valid up to	Factory License from DISH	24315	31.12.2026	Name of the Chemical	Type of Storage	Quantity	Nos. of Storage	License No.	Valid up to						
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		Chlorine	Cylinders	-	2016 Nos.	G/HO/GJ/06/191 (G1346)	30.09.23
		Chlorine	Storage tanks	492.5 MT	05 tanks	S/HO/GJ/03/320 (S 1605)	30.09.23
		Hydrogen	Filling Cylinders	-	-	G/HO/GJ/05/350, G/HO/GJ/06/335 (G1545)	30.09.25
		Petroleum-Class-B	Tanks	800 KL	01 tank	P/HQ/GJ/15/1740 (P12101)	Applied on 14.12.22, for renewal.
		Class-C	Tanks	270 KL	01 Tank		
b	PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.	Complied. Unit is maintaining Pre and Periodic medical examination record for all workers as prescribed in Factories act. Sample of Form no-32 is attached as Annexure-9 We shall ensure the same for our upcoming project as well.					
c	PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.	Complied					
d	Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.	Complied. Necessary engineering control have been provided, PPE's are used by the person handling the chemical and Unit has On site Emergency plan with defined roles and responsibility to handle incidents & accidents. The last date of revision of plan is December-2022; the periodic mock drills are carried out. <ul style="list-style-type: none"> Hydrogen & Chlorine sensors with alarm installed at plant area and monitoring done through DCS 45 Chlorine sensors have been installed for work place chlorine monitoring at strategic places in factory with display and alarm indication at DCS. All Chlorine system connected to vacuum & 					



		<p>diverted to the neutralization system. Waste Chlorine is absorbed in Dilute sodium hypochlorite solution and Sodium Hypo is produced</p> <ul style="list-style-type: none"> • Effective water spraying done on chlorine storage tank. • Non sparking tools used for hydrogen compressor, flammable material handling area • Unit also has well designed Fire hydrant system with stand-by pump facility and reservoir. • Unit has one fire tender with well-trained firefighting staff to control fire. <p>Unit also installed different types of fire extinguishers at strategic locations as per standards. The same will be continued in the upcoming new plant.</p>
e	PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.	<p>Complied.</p> <p>The Onsite emergency plan is in place with defined roles and responsibilities to handle incidents & accidents and periodic mock drills are carried out as per the requirement.</p> <p>The last revision of plan was done in December-2022. The last mock drill was conducted in 29th March'23</p> <p>Unit has separate entry and exit gates clearly marked within the facility.</p> <p>All the Internal roads are sufficiently wide for movement of emergency vehicles.</p>
f	PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.	<p>Complied</p> <p>SAC already has well laid fire hydrant network & separate water storage in the premises. It is being expanded for proposed expansion projects</p>
g	PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.	<p>Noted.</p> <p>Shall be Complied after commissioning of the project.</p>
h	PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.	Noted.
i	Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.	Noted.
j	Unit shall never store drum/barrels/carboys of incompatible material/chemical together.	Noted.
k	Unit shall provide effective fire hydrants, water monitors & foam application system at solvent storage area and unit shall provide adequate safety system	<p>Noted.</p> <p>Shall be Complied after commissioning of the project.</p>



	such as water sprinklers, water curtains, foam pouring system etc. to restrict cascade fire emergency in solvent storage area.	
l	Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.	Noted.
m	Unit shall provide all safety controls (including DCS) for Epichlorohydrin Handling during production, handling, storage & transportation. Necessary Safety requirements like interlock system etc. shall be designed to take care control of any situation including plant shutdown.	Noted. It shall be Complied after commissioning of the project.
n	Unit shall install adequate number of chlorine sensors in manufacturing plant area for detection of "Chlorinated compound" when ECH decompose in atmosphere and Alarm will be provided to alert the Shift In charge to take corrective measures if any leakage of Epichlorohydrin (a Chlorinated compound) in atmosphere from plant as per assurance given to SEAC.	Complied. 45 Chlorine sensors have been installed for work place chlorine monitoring at strategic places in factory with display and alarm indication at DCS in existing plant. The same will be continued in the upcoming new plant.
o	The unit shall implement various risk mitigation measures mentioned in EIA report prepared by Kadam Environmental Consultants.	Yes
p	The unit shall follow Standard operating procedure (SOP) for storage and handling of Epichlorohydrin and such Hazardous chemicals and implement all safety details and control measures. The unit shall develop additional SOPs if required.	Noted. Shall be Complied after commissioning of the project
A.2	Water	
9	Total water requirement for the project shall not exceed 26500 KLD. Unit shall recycle a total of 2000 KLD cooling tower blow down water in existing & proposed cooling towers. Hence, fresh water requirement shall not exceed 26500 KLD and it shall be met through GIDC supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.	Noted and complied. Our average water consumption for last 6 months is around 9909 KLD. Thus we are not exceeding the total water requirements as recommended. Project activities are in progress.
10	The unit shall install latest technology cooling tower for further minimizing evaporation & drift losses in captive power plant and cooling tower as per commitment given to SEAC.	Noted Shall be Complied after commissioning of the project.



11	Management of Industrial effluent shall be as under:	
a	Stream A: Refined Glycerin, ECH Plant (325 KLD)	
	325 KLD, organic industrial effluent shall be treated in in-house biological effluent treatment plant. The units of this ETP comprise of Oil & Grease Tank, Equalization Tanks, Flash Mixer, Flocculator, Primary Tube Settler Tank, Aeration Tank - I, 1st Stage Secondary Tube Settler Tank, Aeration Tank - II, Final Tube Settler Tank, Intermediate Collection Tank, Pressure Sand Filter, Activated Carbon Filter, Sludge Collection Sump, Leachate Collection Sump, Treated Water Tank.	Complied. We have already initiated implementation of Effluent treatment plant and designing is completed. ETP will be implemented along with other project activities as per plan.
	The treated effluent from outlet of this plant shall be taken to In-house ETP / RO Plant / MEE plant / ATFD plant.	Noted, ETP is designed to meet with the treated effluent norms as required.
	Unit shall feed wastewater to in-house MEE only after ensuring content of effluent for COD/VOC so as not to get air borne during evaporation in order to achieve no adverse impacts on Environment and Human Health.	Noted, ETP is designed to meet with the treated effluent norms as required.
b	Stream B: H2O2 and Other Utilities Blow downs/Back washes (759 KLD):	
	759 KLD inorganic industrial effluent from process generated from H2O2 plant, other utilities blow downs / back washes, shall be taken to in-house ETP / RO Plant / MEE plant / ATFD plant.	Noted, ETP is designed to meet with the treated effluent norms as required.
	Treated waste water shall be sent to NCT only after complying with the inlet norms of NCT prescribed by GPCB to ensure no adverse impact on Human Health and Environment.	Complied. Effluent discharge into Narmada Clean Tech (NCT) pipeline of Jhagadia GIDC for final disposal into deep sea after meeting deep sea discharge norm as prescribed by GPCB. The same will be continued in the upcoming new plant.
12	The total additional industrial effluent from both (1084 KLD) from proposed project shall be treated in effluent treatment plant / RO / MEE / ATFD plant thereby achieving Zero Liquid Discharge (ZLD). There will be no additional effluent discharged in NCT pipeline due to the proposed project	Noted Shall be Complied after commissioning of the project.
13	Unit shall discharge wastewater to NCT pipeline only after complying with inlet norms prescribed by GPCB and ensuring content of effluent for COD/VOC so as not to get air borne during evaporation in order to	Noted Shall be Complied after commissioning of the project.



	achieve no adverse impacts on Environment and Human Health.	
14	The total Domestic wastewater generation shall not exceed 80 KL/day and it shall be treated STP & treated domestic wastewater will be reused in flushing, greenbelt / gardening & irrigation purpose within premises.	Complied. Separate modular Sewage treatment plants are installed for domestic wastewater treatment, treated sewage is being reused in greenbelt development.
15	Total effluent discharged from project will be reduced to 1607 KLD and will not exceed maximum permitted quantity of 1800 KLD as per commitments to SEAC during presentation.	Noted Shall be Complied after commissioning of the project.
16	The unit shall provide metering facility at the inlet and outlet of ETPs and maintain records for the same.	Complied Already installed in existing plant and the results are communicated to CPCB and GPCB servers on real-time basis. The same will be continued in the upcoming new plant.
17	Proper logbooks of ETP; reuse/ recycle of treated/ untreated effluent; chemical consumption in effluent treatment; quantity & quality of treated effluent; power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.	Complied Logbook of the existing ETP is maintained. Monthly data of Production, Power consumption, ETP discharge etc. is uploaded in XGN and hard copy also submitted to GPCB. We are doing 3 rd party analysis on monthly basis by QCI-NABET accredited and MoEF approved laboratory M/S Unistar Environment and Research Labs Pvt. Ltd. Vapi. Sample report of analysis results of the treated effluent is attached as Annexure-7 . Record of Electricity consumption for ETP is maintained as required.
18	Unit shall not exceed fuel consumption for Boiler, Heater, Incinerator and DG Set as mentioned.	Complied. Fuel consumption is well within the prescribed limits. We are using Hydrogen gas as alternate fuel in the molten salt heater. By now we have permission for use this green fuel in flaker plant and in boilers also. We have provided the APCMs in existing stacks and their performance is being monitored and shared to CPCB /GPCB on real time basis. We shall provide the desired APCMs in our upcoming stacks also.
19	Unit shall provide adequate APCM with flue gas generation sources to achieve the norms prescribed by GPCB.	Complied We have provided the APCMs in existing stacks and their performance is being monitored and shared to CPCB /GPCB on real time basis. We shall provide the desired APCMs in our upcoming stacks also.



20	Unit shall provide adequate APCM with process gas generation sources as mentioned.	Complied The APCMs as mentioned in the order are being maintained. We are regularly monitoring our process stack emissions and all the parameters are observed within specified limits. We shall provide the desired APCMs in our upcoming stacks also.
21	PP shall use approved fuels only as fuel in boilers.	Complied.
22	The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health) Following indicative guidelines shall also be followed to reduce the fugitive emission.	Complied Fugitive emission monitoring at work place is carried out once in a month. Under the Gujarat Factory Rule 12-B form no. 37 is maintained.
a	Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	Complied All roads and working areas are either of RCC or asphalt covered to make it impervious in order to reduce the fugitive emission during vehicular movement. The same will be continued in the upcoming new plant.
b	Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.	Complied Already installed water sprinklers system installed in existing plant. The same will be continued in the upcoming new plant.
c	A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.	Complied Greenbelt has already been developed at site and in GIDC land adjacent to the boundary to mitigate the effect of fugitive emission all around the plant. We have further expanded the greenbelt in GIDC estate and have planted in GIDC area close to our boundary. We have further expanded the greenbelt in GIDC .
23	Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air	Notes, Ours is a Chlor alkali plant and there is no chance of VOC emissions in work zone. Still regular monitoring being done for the same. Shall be Complied after commissioning of the ECH & H ₂ O ₂ project.
24	For control of fugitive emission, VOCs, following steps shall be followed:	
a	Closed handling and charging system shall be provided for chemicals.	Noted, it is under implementation as part of ECH & H ₂ O ₂ project.

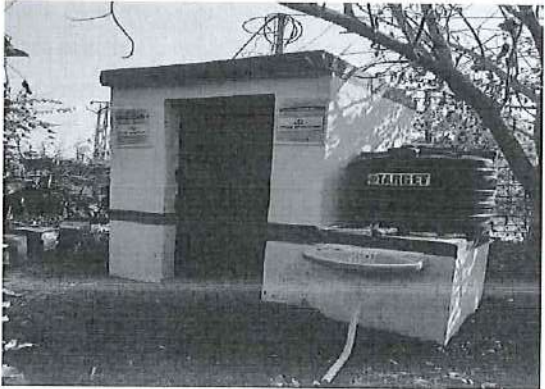




b	Reflux condenser shall be provided over Reactors / 'Vessels.	Noted and will be complied
c	Pumps shall be provided with mechanical seals to prevent leakages.	Noted and considered as part of project implementation
d	Air borne dust at all transfers operations/ points shall be controlled either by spraying water or providing enclosures.	Noted, Shall be Complied after commissioning of the project.
25	Solvent management shall be carried out as follows:	
a	Measures shall be taken to reduce the process vapors emissions as far as possible. Use of toxic solvents shall be minimum. All venting equipment shall have vapour recovery system.	Noted and considered as part of project implementation
b	Reactor shall be connected to adequate chilling system to condensate solvent vapors and reduce solvent losses	Noted and considered as part of project implementation
c	Reactor and solvent handling pump shall have mechanical seals to prevent leakages.	Noted and considered as part of project implementation
d	The condensers shall be provided with sufficient HTA and residence time so as to achieve maximum solvent recovery.	Noted and considered as part of project implementation
e	Solvents shall be stored in a separate space specified with all safety measures.	Noted and considered as part of project implementation. Specific safety measures are also taken up for storage.
f	Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.	Noted and considered as part of project implementation
g	Solvent storage and handling area shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.	Noted and considered as part of project implementation
26	Regular monitoring of ground level concentration of PM10, PM2.5, SOx, NOx, Cl2, HCl and HC shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.	Complied, AAQ monitoring is carried out once in a month. Monitoring and testing is carried out by GPCB and MoEF approved laboratory Unistar Environment and Research Labs Pvt. Ltd. Vapi. Ambient air quality results are well within standard prescribed limits.
A.4	Solid / Hazardous waste	



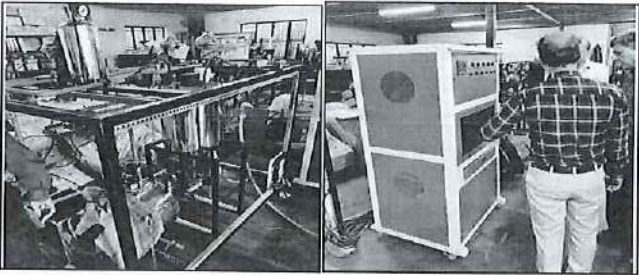
27	All the hazardous/ solid waste management shall be taken care as mentioned.	Complied We are complying to the Hazardous waste management and handling rules 2016 as amended. SAC has obtained Combined Consent and Authorization (CC&A) from GPCB for collection/ treatment / storage disposal of hazardous waste. This is valid till 03.07.2026. Copy of the latest CCA no.: AWH-117635 valid till 03.07.2026
28	Authorized end-users shall have permissions from the concerned authorities under the Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.	Complied We are complying with the Hazardous waste management and handling rules 2016 as amended.
29	Unit shall explore the possibilities for environment friendly methods like co-processing of hazardous waste for disposal of Incinerable & land fillable wastes before sending to CHWIF & TSDF sites respectively.	Noted. No Hazardous waste generated for Co –processing in the existing plant. Shall be Complied after commissioning of the ECH & H ₂ O ₂ project.
30	The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.	Complied.
31	The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.	Complied, We are selling Dilute sulfuric acid (listed as hazardous waste) to authorized end users only. As per Rule-9, MoU done with authorize end users with proper manifest system as per the requirement.
A.5	OTHER	
32	The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.	Noted for compliance.
A	Environment Infrastructure Development:	
1	Repairing & Desilting of existing check dams; Construction of new check dams at Boridra DU, Fulwadi, Selod villages.	Point noted and being complied with. For all the water and soil related work a baseline study has been completed by BISLD and as per findings plan has been prepared and in management's approval. Structures and interventions have been identified and action will start post approval. We will update the



		progress in next report.
2	Provision of Ambient Air Monitoring Facility (01 No.) in GIDC Jhagadia	Point noted and being complied with. We have already purchased and yet to install. We will update the progress in next report.
3	Reclamation and Construction of wall around the ponds, plantation around the ponds, cleaning of the ponds at Kharachi, Sardarpura, Talodra, Vakhatpura villages	Noted with compliance. We have provided 3 new ponds at Limet, Selod, Kharchi Bhilwada, 2 desilting ponds at Limet and Untia. And we have done individual ponds recharge at Boridra.
4	Providing waste management facility along with sound garbage management in Fulwadi, Kapalsadi, Talodara villages	Complied. Identified 5 surrounding villages for initiating the program. Rapid need assessment completed by FINISH society. Proposal awaited. Additionally, we have donated tractor for door to door waste collection in Fulwadi and Dadheda. We will update the progress in next report.
5	Rain water harvesting system (Recharge Structures) at Dadhal, Kapalsadi, Limet villages.	Complied. For all the water and soil related work a baseline study has been completed by BISLD and as per findings plan has been prepared and in management's approval. Structures and interventions have been identified and action will start post approval. 29 Hand Pumps recharge is done in Selod, Limet, Untia and Sardarpura, Boridra and Kapalsadi. We will update the progress in next report.
6	Provide new structures for sanitation & toilets at Kharachi, Bhilwada, Navagam Kararwel, Untia villages	Complied. Already constructed more than 450 toilets in surrounding villages. Recently completed construction of 40 household toilets in Kharchi
		
B	Soil & Water Conservation:	
1.	Land gradation work for preparing the irrigation plot for uniform distribution of irrigation water on the field and ensuring the optimal slope for water movement	Complied. For all the water and soil related work a baseline study has been completed by BISLD and as per findings plan has been prepared and in management's

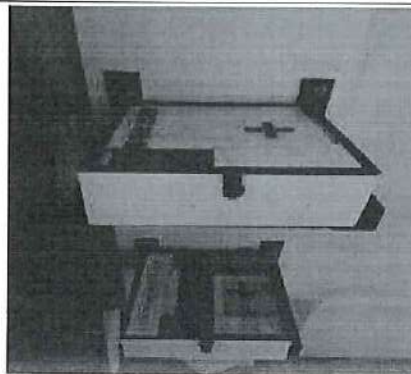
	across a field resulting in water and energy saving through efficient irrigation at Gumanpura & Motipura villages	approval. Structures and interventions have been identified and action will start post approval. Moreover, we have installed 5 drip irrigation systems at Untia. We will update the progress in next report.
2	Farm bunding and farm pond at Limet, Nikoli, Randeri villages	For all the water and soil related work a baseline study has been completed by BISLD and as per findings plan has been prepared and in management's approval. Structures and interventions have been identified and action will start post approval. We will update the progress in next report.
C	Green Belt Plantation & Maintenance:	
1	Tree Plantation & Green belt development (10 to 15 Acre land will be taken on rent from nearby village Gram Panchayat for plantation) at Fulwadi, Selod, Talodara, Dadheda, Kapalsadi, villages etc.	<p>Complied</p> <p>Tree plantation using Miyawaki Method: Completed plantation of 10000 saplings using Miyawaki method. Remaining 5000 will be completed by December 2023.</p>  <p>We have also expanded the greenbelt in GIDC estate and have planted 5000 saplings in GIDC area.</p> 
D	Education & Skill development - Environment	
1	Skill Development — Imparting Training / Contribution @ ITI (Govt. Undertaking — Director General of Training) Towards Training of ETP, STP Operators, Boiler Operator / Attendant, Fitters, Welders, AOC	<p>Complied</p> <p>Support to Vivekanand Gramin Takniki Kendra for skill training</p> <p>Start DCS plant operator course in their premises in FY</p>



	<p>etc. at Fulwadi, Selod, Talodara, Dadheda, Kapalsadi villages etc.</p>	<p>2021-22 and continuing the support by providing Education fees, lodging and boarding for 15 students in current FY. The equipment has been installed and new batch has started for the course. These students will be placed in surrounding chemical industries in Bharuch district. Also We have donated DCS system and sponsored 15 students for skill training at VGTK, Gumandev. We will update the upcoming initiatives in next report.</p> 
<p>E</p>	<p>Health and Hygiene:</p>	
<p>1</p>	<p>Provision of Ambulance van with medical equipments and awareness programs on prevailing diseases at Navagam Mota, Selod, Dadhal, Sardarpura, Vakhatpura, Fulwadi villages.</p>	<p>Complied. Ambulance has been ordered and will be delivered by December. This will be utilised as mobile medical unit in 123 villages of Jhagadia Taluka. We have purchased Mobile Medical Unit and operating in Jhagadia block to extend medical services to mothers and lactating women as well as children for overall health improvement.</p>
<p>33</p>	<p>The unit shall implement the project of HCl Synthesis furnace for purification of spent HCl (as per technology supplied by Graphite India Ltd. as per commitments to SEAC. The status and progress of this activity shall be reflected in the compliance of EC conditions.</p>	<p>Noted & it shall be Complied after commissioning of the project.</p>
<p>34</p>	<p>The unit shall continue efforts in R & D activities (excluding CER activities) in partnership with reputed research institutes like National Chemical Laboratory, Pune for Research in future & Development activities to identify a viable product with HCl or for suggestions for HCl purification and reuse in future, as committed to SEAC. The status and progress of this activities shall be reflected in the compliance of EC conditions</p>	<p>Noted for compliance. We have signed NDA with National Chemical Laboratory on dated 21.04.2023 and include the following scopes.</p> <ol style="list-style-type: none"> 1) Detailed product landscaping and value chain of HCl, 2) Impurity profiling of HCl from our customers (few of our customers obtain 30% of HCl as a by-product with organic & inorganic contaminants) 3) Purification of contaminated HCl to obtain virgin grade HCl <p>NDA copy is attached as Annexure-1</p>

35	The unit shall continue initiating & developing proposal with Alkali Manufactures Association of India (AMAI) to study and derive a common formula process for the purpose of purifying spent HCl. (Excluding CER activities as per commitments to SEAC The status and progress of this activity shall be reflected in the compliance of EC conditions.	Noted. As suggested by the SEIAA, we have initiated discussion with Alkali Manufacturer's Association of India to study and derive a common formula / process for the purpose of purifying spent HCL during last AMAI meeting and their response is awaited. Correspondence with AMAI Technical Sub-Committee is attached as Annexure-2.
36	All the recommendations, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project prepared by M/s. Kadam Environmental Consultants and submitted by the project proponent and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and Spirit.	Noted.
B. GENERAL CONDITIONS: B.1 CONSTRUCTION PHASE		
37	Water demand during construction shall be reduced by use of curing agents, super plasticizers and other best construction practices.	Noted.
38	Project proponent shall ensure that surrounding environment shall not be affected due to construction activity. Construction materials shall be covered during transportation and regular water sprinkling shall be done in vulnerable areas for controlling fugitive emission.	Complied. Greenbelt has already been developed at site and in GIDC land adjacent to the boundary to mitigate the effect of fugitive emission all around the plant. We have further expanded the greenbelt in GIDC estate. Water sprinkler being done to suppress airborne dust. All roads and working areas are either of RCC or asphalt covered.
39	All required sanitary and hygienic measures shall be provided before starting the construction activities and to be maintained throughout the construction phase.	Noted for compliance.
40	First Aid Box shall be made readily available in adequate quantity at all the times.	Complied C. First Aid box details: First aid boxes are kept in strategic locations in existing plant and same shall be continued for proposed expansion. Sample photograph of First aid box in one of the locations (PMCC) is as under:-





The OHC staff of the Unit is inspecting the contents of the First Aid box on monthly basis. The records of the same are available with OHC.

D. Antidote details:

The List of Chemicals used and their corresponding antidotes with sufficient quantities are being maintained by OHC.

Sr. No	Chemical	Antidote / Symptomatic Tre
1	Caustic soda	Lemon juice, Charcoal powder
2	Chlorine	No antidote, Symptomatic tre
3	Hydrochloric acid	Magnesia, soap, any diluted al
4	Sulphuric acid	Magnesia, soap, chalk, lime wa
5	Sodium hypochlorite	No antidote, Symptomatic tre

Sr. No.	Injectable Antidote	Antidote For
1	Inj Atropin Sulphet	Vaso vagal attack
2	Inj – A.S.V.	Snake Venom
3	Inj Avil	Anti-histaminic/ Anti allergic
4	Inj- Tetanus Toxide	Tetanus
5	Inj Phenergan	Sedative, Anti emetic
6	Inj Deriphyllin	Broncho dilator
7	Inj Avil	Anti histaminic/ Anti allergic
8	Inj Dexona	Anti inflammatory/ Anti allergic
9	Charcol	Over Uses of Drugs

		Powder
41	The project proponent shall strictly comply with the Building and other Construction Workers (Regulation of Employment & Conditions of Service) Act 1996 and Gujarat rules made there under and their subsequent amendments Local bye-laws of concern authority shall be complied in letter and spirit.	Point noted and being complied with.
42	Ambient noise levels shall conform to residential standards both during day and night. Incremental pollution load on the ambient air and noise quality shall be closely monitored during construction phase.	Point noted and being complied with.
43	Use of Diesel Generator (DG) sets during construction phase shall be strictly equipped with acoustic enclosure and shall conform to the EPA Rules for air and noise emission standards.	Noted for compliance.
44	Safe disposal of waste water and municipal solid wastes generated during the construction phase shall be ensured.	Point noted and being complied with.
45	All topsoil excavated during construction activity shall be used in horticultural / landscape development within the project site	Point noted and being complied with.
46	Excavated earth to be generated during the construction phase shall be utilized within the premises to the maximum extent possible and balance quantity of excavated earth shall be disposed off with the approval of the competent authority after taking the necessary precautions for general safety and health aspects Disposal of the excavated earth during construction phase shall not create adverse effect on neighboring communities	Point noted and being complied with.
47	Project proponent shall ensure use of eco-friendly building materials including fly ash bricks, fly ash paver blocks, Concrete [RMC] and lead free paints in the project.	Point noted and being complied with.
48	Fly ash shall be used in construction wherever applicable as per provisions of Fly Ash Notification under the E.P. Act 1986 and its subsequent amendments from time to time	Point noted and being complied with.
49	Wind — breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be	Point noted and being complied with.



	provided. Individual building within the project site shall also be provided with barricades	
50	"No uncovered vehicles carrying construction material and waste shall be permitted "	Point noted and being complied with.
51	"No loose soil or sand or construction & demolition waste or any other construction material that cause dust shall be left uncovered. Uniform piling and proper storage of sand to avoid fugitive emissions shall be ensured."	Point noted and being complied with.
52	Roads leading to or at construction site must be paved and blacktopped (i.e. - metallic roads).	Point noted and being complied with.
53	No excavation of soil shall be carried out without adequate dust mitigation measures in place.	Point noted and being complied with.
54	Dust mitigation measure shall be displayed prominently at the construction site for easy public viewing.	Point noted and being complied with.
55	Grinding and cutting of building materials in open area shall be prohibited.	Point noted and being complied with.
56	Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited	Point noted and being complied with.
57	Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site. (If applicable)	Point noted and being complied with.
	B.2 Operation Phase B.2 .1 Water	
58	The water meter shall be installed and records of daily and monthly water consumption shall be maintained.	Point noted and being complied with.
59	All efforts shall be made to optimize water consumption by exploring Best Available Technology (BAT) The unit shall continuously strive to reduce, recycle and reuse the treated effluent.	Point noted and being complied with.
	B.2.2 AIR:	
60	In case of use of spray dryer, the unit shall provide the adequate & efficient APCMs with spray dryer so that there should not be any adverse impact on human health & environment. Unit shall carry out third party monitoring of the proposed Spray dryer & it's APCM through the credible institutes and study report for impacts on Environment and Human Health shall be	Not Applicable, As we don't have spray drier in our operation.






	submitted to GPCB every year along with half yearly compliance report.	
61	Acoustic enclosure shall be provided to the DG sets (If applicable) to mitigate the noise pollution and shall conform to the EPA Rules for air and noise emission standards.	Complied All possible noise control measures like acoustic insulation, hoods, silencers, enclosures, vibration dampers etc. are provided on all sources of noise generation like Compressors, Turbine etc.
62	Stack/Vents (Whichever is applicable) of adequate height shall be provided as per the prevailing norms for flue gas emission / process gas emission.	Complied. We have provided the APCMs in existing stacks and their performance is being monitored and shared to CPCB /GPCB on real time basis. We shall provide the desired APCMs in our upcoming stacks also.
63	Flue gas emission & Process gas emission (If any) shall conform to the standards prescribed by the GPCB/CPCB/ MoEF&CC. At no time, emission level should go beyond the stipulated standards.	Complied We are complying with the emission standards in our existing operations and they will be continued
64	All the reactors / vessels used in the manufacturing process shall be closed to reduce the fugitive emission.	Complied. Our process is closed cycle and the tanks/enclosures are covered/ sealed. They will be maintained in upcoming projects also
B.2.3 HAZARDOUS /SOLID WASTE		
65	The company shall strictly comply with the rules and regulations with regards to handling and disposal of Hazardous waste in accordance with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016, as may be amended from time to time. Authorization of the GPCB shall be obtained for collection / treatment / storage / disposal of hazardous wastes.	Complied We are complying with the rules and regulation of HWM Rules 2016 and maintaining Form -3 and submitting form-4 as per the requirements.
66	Hazardous wastes shall be dried, packed and stored in separate designated hazardous waste storage facility with pucca bottom and leachate collection facility, before its disposal.	Complied, We have taken necessary permissions for all such wastes and will ensure to dispose them as per the requirements of the Rule.
67	The unit shall obtain necessary permission from the nearby TSDF site and CHWIF. (Whichever is applicable)	Complied. We already have necessary permissions from BEIL Infrastructure Limited , Safe Enviro Private Limited (SEPL) & Hindustan Enviro Life Protection Services Ltd. (HEPL) TSDF, copy of membership attached as Annexure 15 .
68	Trucks/Tankers used for transportation of hazardous waste shall be in accordance with the provisions under the Motor Vehicle Act, 1988, and rules made there under.	Noted for compliance. We are ensuring that all vehicles used transportation of hazardous waste are in accordance with applicable rules.



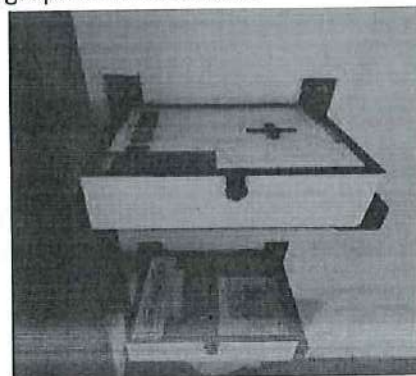
69	The design of the Trucks/tankers shall be such that there is no spillage during transportation	Noted & Being ensured.						
70	All possible efforts shall be made for Co-Processing of the Hazardous waste prior to disposal into TSDF/CHWIF	Noted & Being ensured						
71	Management of fly ash (If any) shall be as per the Fly ash Notification 2009 & its amendment time to time and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit	Complied, Last report for the period April-22 to March-23 was submitted annual return of fly ash, vide our letter no. SAC-SHE-E-FL-26/APRIL'23/01 dated 13.04.2023.						
	B.2.4 SAFETY							
72	The occupier/manager shall strictly comply the provisions under the Factories Act 1948 and the Gujarat Factories Rules 1963.	Noted. We have obtained necessary approvals from DISH, to install and operate the facilities in the plant. The authorities have approved the proposed and as built drawings and issued License to operate the plant. The approvals have been granted with certain conditions by each agency, which are monitored and compliance report submitted periodically. The concerned authorities also conduct inspections of the compliance from time to time. Details of approvals are as below:						
		<table border="1"> <thead> <tr> <th>Authority & licence</th> <th>Reference No.</th> <th>Valid up to</th> </tr> </thead> <tbody> <tr> <td>Factory License by DISH</td> <td>24315</td> <td>31.12.2026</td> </tr> </tbody> </table>	Authority & licence	Reference No.	Valid up to	Factory License by DISH	24315	31.12.2026
Authority & licence	Reference No.	Valid up to						
Factory License by DISH	24315	31.12.2026						
73	The project authorities shall strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules (MSIHC) 1989, as amended time to time and the Public Liability Insurance Act for handling of hazardous chemicals etc. Necessary approvals from the Chief Controller of Explosives and concerned Govt. Authorities shall be obtained before commissioning of the project Requisite On-site and Off-site Disaster Management Plans have to be prepared and implemented	Noted. We are complying with the provisions made in MSIHC Rules 1989. We have got the PLI policy for handling and transportation of Hazardous goods. Necessary approvals from Chief controller of explosive and concerned government authorities as per details included in the sr. no. 8 (A).						
74	Main entry and exit shall be separate and clearly marked in the facility.	Noted for compliance. We have separate entry and exist at our site.						
75	Sufficient peripheral open passage shall be kept in the margin area for free movement of fire tender/ emergency vehicle around the premises.	Complied. We have earmarked margin area all around our plant for emergency services.						
76	Storage of flammable chemicals shall be sufficiently away from the production area.	Complied. In our existing facility, Hydrogen storages (banks and holder) are kept separate from production area with all necessary statutory precautions and it will						



		be maintained.
77	Sufficient number of fire extinguishers shall be provided near the plant and storage area.	Complied. Sufficient nos. of Fire Extinguisher i.e Mechanical foam type, Dry Chemical powder type, Carbon dioxide type are provided at strategic locations in the plant. This is as per the suggestions made by experts in Fire Risk Assessment. Fire & security dept. periodically check and maintains the records.
78	All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic / hazardous chemicals.	Complied. Necessary engineering control have been provided, PPE's are used by the person handling the chemical and Unit has On site Emergency plan with defined roles and responsibility to handle incidents & accidents.
79	All the toxic/hazardous chemicals shall be stored in optimum quantity and all necessary permissions in this regard shall be obtained before commencing the expansion activities.	Noted. Being followed and will be continued
80	The project management shall ensure to comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report	Noted for compliance. We are being comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report Copy of the Risk assessment report with their compliance status is attached as Annexure-16 .
81	Only flame proof electrical fittings shall be provided in the plant premises	Complied. Flame proof electrical fitting is provided in the plant premises of the upcoming plant.
82	Storage of hazardous chemicals shall be minimized and it shall be in multiple small capacity tanks / containers instead of one single large capacity tank / containers.	Complied. We are having multiple storage of chemicals with dyke facility. Adequate dyke wall (of Height: 1.3 meter) have been provided around the Hydrochloric acid tanks. Refer photographs below: 

		
83	<p>All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Bund/dyke walls shall be provided for storage tanks for Hazardous Chemicals.</p>	<p>Complied. Bond /dyke walls have been provided for all the storage tanks of Caustic, HCl, H2SO4, Hypo and it is being maintained</p>
84	<p>Handling and charging of the chemicals shall be done in closed manner by pumping or by vacuum transfer so that minimal human exposure occurs.</p>	<p>Noted. Being followed and will be continued</p>
85	<p>Tie up shall be done with nearby health care unit / doctor for seeking immediate medical attention in the case of emergency.</p>	<p>Complied. Unit maintains an Occupational Health Centre within the complex round the clock base for immediate first aid. The OHC is manned by 02 nos of regular qualified doctors and 5 nos of qualified paramedic staff. Besides that unit has tied up with the nearest health care units at Bharuch, Ankleshwar, Jhagadia and Vadodara for immediate medical support.</p>
86	<p>Personal Protective Equipment's (PPEs) shall be provided to workers and its usage shall be ensured and supervised.</p>	<p>Complied. All necessary PPEs have been provided to workers and they are continuously encouraged for their use. PPE boxes are kept in different sections of the existing plant with all necessary PPEs and will provide the same in our upcoming plant as well</p> 
87	<p>First Aid Box and required Antidotes for the chemicals used in the unit shall be made readily available in adequate quantity.</p>	<p>Complied. First Aid box details: First aid boxes are kept in strategic locations in existing plant and same shall be continued for proposed expansion.</p>

Sample photograph of First aid box.



The OHC staff of the Unit is inspecting the contents of the First Aid box on monthly basis. The records of the same are available with OHC.

A. Antidote details:


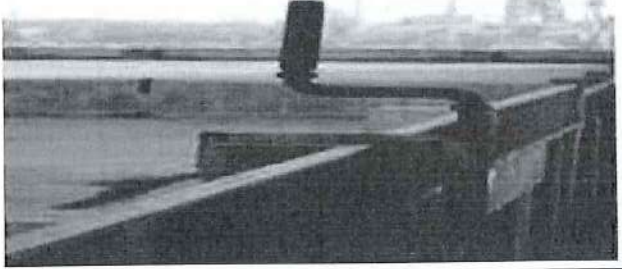
The List of Chemicals used, their corresponding antidotes and quantities of antidotes are given as follows:

Sr. No	Chemical	Antidote / Symptomatic Treatment
1	Caustic soda	Lemon juice, Charcoal powder, Soda
2	Chlorine	No antidote
3	Hydrochloric acid	Magnesia, soap, any diluted alkali
4	Sulphuric acid	Magnesia, soap, chalk, lime water
5	Sodium hypochlorite	No antidote

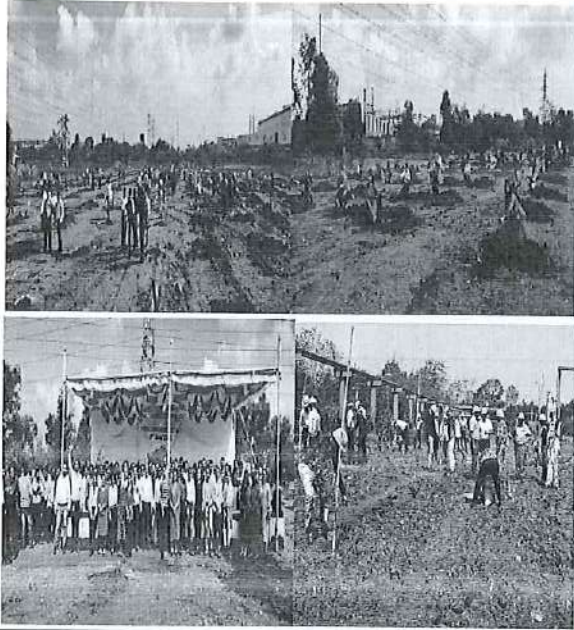
Sr. No.	Injectable Antidote	Antidote For
1	Inj Atropin Sulphet	Vaso vagal attack
2	Inj - A.S.V.	Snake Venom
3	Inj Avil	Anti-histaminic/ Anti allergic
4	Inj- Tetanus Toxide	Tetanus
5	Inj Phenergan	Sedative, Anti emetic
6	Inj Deriphyllin	Broncho dilator
7	Inj Avil	Anti histaminic/ Anti allergic
8	Inj Dexona	Anti inflammatory/ Anti

		<table border="1"> <tr> <td></td> <td></td> <td>allergic</td> </tr> <tr> <td>9</td> <td>Charcol Powder</td> <td>Over Uses of Drugs</td> </tr> </table> <p>All the above antidotes are available in OHC and will further update the requirements based on our upcoming project requirements.</p>			allergic	9	Charcol Powder	Over Uses of Drugs
		allergic						
9	Charcol Powder	Over Uses of Drugs						
88	Training shall be imparted to all the workers on safety and health aspects of chemicals handling.	Complied. We are providing trainings on chemical handling. We conduct pre-employment medical checkup and six monthly medical checkup of our employees. Copies of the training attendance sheet and medical checkup record are attached as Annexures-17. for your reference						
89	Occupational health surveillance of the workers shall be done and its records shall be maintained. Pre-employment and periodical medical examination for all the workers shall be undertaken as per the Factories Act & Rules.	Complied. Form no-32 is being maintained by DCM-SAC as a record of Occupational health surveillance of all employees (including workers). Sample copy of the record is attached as Annexure-9. Pre- employment medical checkup is conducted for all the employees (including workers) and six monthly medical checkup is also being done. Records of the above are being maintained with OHC. Sample copy of the record is attached as Annexure-17. We will ensure the same for our upcoming project as well.						
90	Transportation of hazardous chemicals shall be done as per the provisions of the Motor Vehicle Act & Rules.	Complied. We are a Responsible Care Unit and have engaged an expert agency for monitoring the same and ensure their compliance.						
91	The company shall implement all preventive and mitigation measures suggested in the Risk Assessment Report.	Complied. We are ensured to implement all preventive and mitigation measures suggested in the Risk Assessment report.						
92	Necessary permissions from various statutory authorities like PESO, Factory Inspectorate and others shall be obtained prior to commissioning of the project.	Complied. We are being ensured to have all necessary permissions from various statutory authorities like PESO, Factory Inspectorate and others shall be obtained prior to commissioning of the project						
	B.2 .5 Noise							
93	The overall noise level in and around the plant area shall be kept well within the standards by providing noise control measures including engineering controls like acoustic insulation hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise level shall confirm to the standards prescribed under The Environment (Protection) Act, 1986 & Rules.	Complied. We have provided acoustic enclosures in turbines and monitor the work place noise on regular basis. Silencers have been provided at the steam exit points as per the requirements. We will ensure to follow the prescribed standards and guidelines for controlling the noise in our upcoming plants also. Acoustic hood have been provided to turbine (as per						



	<p>photograph below) to minimize noise.</p>  <p>Silencers are provided to high pressure steam vents (as per photograph below) to control noise.</p> 
<p>B.2 .6 Cleaner Production and Waste Minimization</p>	
<p>94 The unit shall undertake the Cleaner Production Assessment study through a reputed institute / organization and shall form a CP team in the company. The recommendations thereof along with the compliance shall be furnished to the GPCB.</p>	<p>Noted & Complied. Cleaner Production Team is established at our site. As per their recommendations, Unit has adopted membrane technology process for caustic production & Fluidized Bed combustion in boiler, using hydrogen for caustic concentration purpose, which are cleaner production method available as on date</p>
<p>95 The company shall undertake various waste minimization measures such as -</p>	
<p>a Metering and control of quantities of active ingredients to minimize waste.</p>	<p>Complied. Metering of quantities of each active ingredient is being done and optimized to reduce waste Hydrogen is reused in making HCl, and as fuel substitute. Chlorine is reused for making Sodium Hypochlorite</p>
<p>b Reuse of by-products from the process as raw materials or as raw materials substitutes.</p>	<p>Noted & Complied. We are using SRS technology to reduce the chemicals consumption.</p>
<p>c Use of automated and close filling to minimize spillages.</p>	<p>Noted. caustic lye is filled by automatic filling and chlorine tonners are Complied. also filled with automatic filling with cut-off adjustment and overfilling alarm</p>



d	Use of close feed system into batch reactors.	Not Applicable.
e	Venting equipment through vapor recovery system.	Complied. We have installed hypo scrubber for all chlorine vents.
f	Use of high pressure hoses for cleaning to reduce wastewater generation.	Noted for compliance
g	Recycling of washes to subsequent batches.	Not applicable
h	Recycling of steam condensate.	Complied. We are collecting and recycling all our steam condensates
i	Sweeping / mopping of floor instead of floor washing to avoid effluent generation.	Noted & complied. Cleaning is done with high pressure hoses only.
j	Regular preventive maintenance for avoiding leakage, spillage etc.	Noted. Preventive maintenance schedule is in place and being followed
B.2 .7 Green Belt and Other Plantation		
96	The unit shall develop green belt within premises as per the CPCB guidelines. However, if the adequate land is not available within the premises, the unit shall take up adequate plantation on road sides and suitable open areas in GIDC estate or any other open areas in consultation with the GIDC / GPCB and submit an action plan of plantation for next three years to the GPCB.	<p>Complied. We have a well-developed green belt at our site and are continuously working for further enhancing the same. We have developed greenbelt in GIDC area, road sides and in Bharuch. We are further exploring empty GIDC land for plantation. A reference photograph of the same is shown below:</p> 
97	Drips irrigation / low-volume, low-angle sprinkler system shall be used for the green belt development within the premises.	<p>Complied, We have implemented low volume water sprinkler systems in greenbelt. Tree plantation using Miyawaki Method</p>

		conserve environment by enhancing green cover plantation has been initiated using Miyawaki method in GIDC area. 10000 saplings is planted which will have great environmental impact by supporting the local ecology.
	B.3 Other Conditions	
98	The projects covered under category 5(f) shall undergo the safety and environment audit regularly as per the standards laid down by the GPCB and CPCB.	Noted. Shall be Complied after commissioning of the project
99	PP shall carry out the safety audit and Risk Assessment Report as per the prevailing guidelines of safety.	Noted. Shall be Complied after commissioning of the project
100	Management of Fly Ash shall be as per the Fly Ash Notification 2009 & its amendment from time to time and it shall be ensured that there is 100 % utilization of fly ash to be generated from the unit.	Complied, Last report for the period April-22 to March-23 was submitted annual return of fly ash, vide our letter no. SAC-SHE-E-FL-26/APRIL'23/01 dated 13.04.2023.
101	EMP should invariably include provisions for environmental Monitoring and measures for noise pollution control measures.	Point noted,
102	Wherever waste water or chemical water to be collected by tankers and transported to CETP etc. any diversion and disposal in open drainage (nallah) etc. causing human and environmental damage or loss will make it liable for action under the law.	Point noted,
103	All transport movement by tankers etc has to be done with maintenance of gate pass and logbook it should be verified by inspecting authorities.	Point noted and being complied with.
104	Non-hazardous waste data shall be informed to GPCB time to time so as to make an assessment and tie-up with industry for generating sustainable power from the waste.	Point noted and being complied with.
105	All chemical, pharma industry etc. should ensure predictive and preventive maintenance of factory / boiler and reactive as to avoid incident of fire and safety hazards.	Point noted and being complied with.
106	EMP should include STP and detail cost including maintenance, transportation of waste water to CETP / CMEE etc as well as transportation cost or transit cost.	Point noted and being complied with.
107	In LDAR preventive and predictive maintenance plan.	Noted & complied. Leak Detection and Repair programme is in place and Chlorine sensors and Hydrogen sensors are planned for installation with

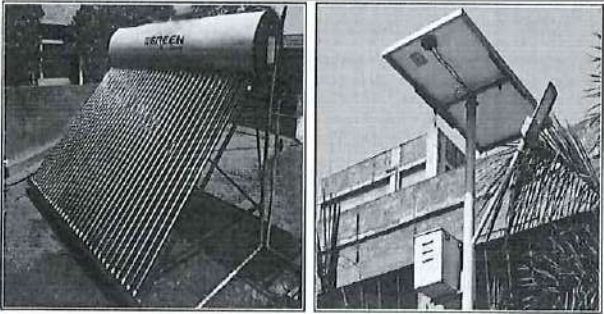


		necessary indication in DCS. They will be implemented as the projects get executed and as per their requirements. Presently in the operating facilities 45 Chlorine sensors and 45 Hydrogen sensors with their indication in DCS have been provided for the purpose.
108	In LDAR leakage component, source of equipment leak, detention method should be given in table form.	Point noted and being complied with.
109	In storage component should be shown separately in terms whether inflammable, toxic, corrosive, reactive etc.	Point noted and being complied with.
110	In case of Fly Ash generation its management and disposal should be as per Government of India Notification and 100 % utilization should be ensured.	Complied, We will ensure to follow the prescribed standards and guidelines for 100 % fly ash utilization in our upcoming plants also.
111	Project proponent shall install all environment management systems as per the CPCB/GPCB directives regarding the effluent discharge and air emission in working condition.	Point noted and being complied with.
112	Project proponent shall display the copy of Environment Clearance at the site prominently.	Point noted and being complied with.
113	Project proponent shall prepare and follow regular and preventive maintenance plan The copy of same shall be submitted to SEIAA.	Point noted and being complied with.
114	Project Proponent will have to display the safety procedure in working area.	Point noted and being complied with.
115	The project proponent shall obtain all required permissions for safety, health and fire from competent authorities like PESO/Fire Authority etc. and intimate SEIAA.	Complied, We will obtain all required permission for safety, health & fire for competent authorities in our upcoming plants also.
116	Project Proponent will intimate SEIAA/SEAC/GPCB after obtaining the membership of common facilities like CETP / TSDf / CHWIF / CMEE / Common Spray Dryer as the case may be.	Complied, We already have necessary permissions from BEIL Infrastructure Limited , Safe Enviro Private Limited (SEPL) & Hindustan Enviro Life Protection Services Ltd. (HEPL) TSDf, copy of membership attached as Annexure 15.
117	Extra care will be taken by PP to avoid any accidental blast in boiler, reactor or any machinery in the plant.	Noted for compliance
118	Environment monitoring, training and disaster management plan should be undertaken and complied at regular interval.	Point noted and being complied with.
119	Integrated Regional Office of MoEF&CC, Gandhinagar and GPCB will monitor all environment, safety & health	Point noted and being complied with.



	norms as per the prevailing rules.	
120	The PP has to maintain the log sheets / registers / manifest / gate pass for discharge through tankers and SCADA system for pipeline discharge for the waste water generation and its disposal data and submit to the GPCB every quarter. GPCB shall verify the same on regular basis and inform SEIAA and take legal action in the cases of non-compliance.	Point noted and being complied with.
121	Unit shall comply all the applicable standard conditions prescribed in Office Memorandum (OM) published by MoEF&CC vide no. F. No. 22-34/2018-IA.III dated 09/08/2018 for Pharmaceutical and Chemical industries mentioned at (Sr. no. XX).	Point noted and being complied with.
122	The project proponent shall allocate the separate fund for Corporate Environment Responsibility (CER) in accordance to the MoEFCC's Office Memorandum No. F.No.22-65/2017-IA.III dated 01/05/2018 to carry out the activities under CER in affected area around the project. The entire activities proposed under CER shall be monitored and the monitoring report shall be submitted to the regional office of MoEFCC as a part of half-yearly compliance report and to district collector. The monitoring report shall be posted on the website of the project proponent.	Point noted and being complied with.
123	Rain water harvesting of surface as well as rooftop runoff shall be undertaken and the same water shall be used for the various activities of the project to conserve fresh water as well as to recharge ground water. Before recharging the surface run off, pre-treatment must be done to remove suspended matter.	Complied, We have implemented rainwater harvesting system in our unit and use the harvested rain water for green belt development as per requirement.
124	The unit shall join and participate financially and technically for any common environmental facilities / infrastructure as and when the same is taken up either by the Industrial Association or GIDC or GPCB or any such authority created for this purpose by the Govt. / GIDC	Point noted and being complied with.
125	Application of solar energy shall be incorporated for illumination of common areas, lighting for gardens and street lighting in addition the provision for solar water heating system shall also be provided.	Complied Unit has installed solar lights on internal roads and solar water heaters in the canteen.

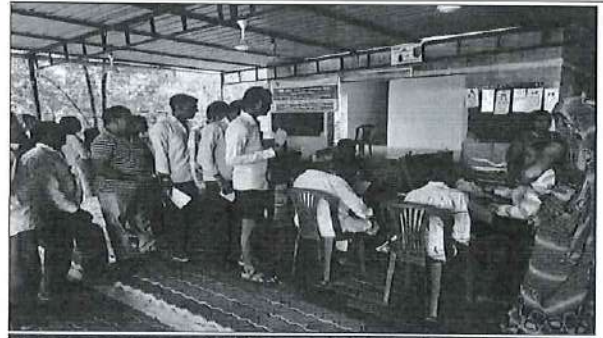


		 <p>Solar water heater for dish washing in canteen Solar light installed on main road area of the plant We have signed an agreement for 50 MW of hybrid wind / solar renewable energy from renew power for its chlor-alkali manufacturing facility in Bharuch copy attached as Annexure-19</p>
126	The area earmarked as green area shall be used only for plantation and shall not be altered for any other purpose.	Noted & Being done. We will ensure to use the green belt area specifically for greenbelt development.
127	All the commitments / undertakings given to the SEAC during the appraisal process for the purpose of environmental protection and management shall be strictly adhered to.	Noted for compliance. We will strictly adhere to our commitment /undertaking given during the appraisal process
128	The project proponent shall also comply with any additional condition that may be imposed by the SEAC or the SEIAA or any other competent authority for the purpose for the environmental protection and management.	Noted for compliance.
129	In the event of failure of any pollution control system adopted by the unit, the unit shall be safely closed down and shall not be restarted until the desired efficiency of the control equipment has been achieved.	Complied. SOPs have been developed and implemented such that in case of failure of any pollution control device, the concerned equipment/ plant will be stopped and will not be started till the concerned device is rectified.
130	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any statutory authority.	Noted. We are following all the regulation by GPCB, CCA compliance.
131	During material transfer there shall be no spillages and garland drain shall be constructed to avoid mixing of accidental spillages with domestic wastewater or storm water.	Noted. Garland drain has been provided in all areas to avoid mixing of accidental spillage in storm drain or domestic water.
132	Pucca flooring / impervious layer shall be provided in the work areas, chemical storage areas and chemical	Complied. All the work areas, storage areas are RCC and waste storage areas are also covered as per



	handling areas to minimize soil contamination.	standard guidelines so as to prevent soil contamination. In Chemical storage area and chemical handling area, the RCC floor and collection & recovery system with bond walls are in place.
133	Leakages from pipes, pumps shall be minimal and if occurs, shall be arrested promptly.	Noted. We will provide Leakage detection facilities and collection system to ensure the same
134	No further expansion or modifications in the plant likely to cause environmental impacts shall be carried out without obtaining prior Environment Clearance from the concerned authority.	Noted for compliance. We will opt for Prior Environmental Clearance before doing any further expansion
135	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, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules	Noted. All the given rules and applicable requirements are being met on continuous basis. We have adopted continuous monitoring of compliance through Complinty software and will continue to do that. We are certified under ISO14001:2015 and Responsible Care logo holder.
136	The project proponent shall comply all the conditions mentioned in "The Companies (Corporate Social Responsibility Policy) Rules, 2014" and its amendments from time to time in a letter and spirit.	<p>Noted & being complied with The Companies (Corporate Social Responsibility Policy) Rules, 2014, Unit is conducting various social development activities in villages as a part of Corporate Social Responsibility (CSR). These activities are being implemented in association with partner agencies. The Company is making a positive impact on society by implementing programs on Preventive Health Care & Sanitation, Environment Sustainability, Education & Literacy, Skill Development & Livelihood, and Rural Development.</p> <p>Eye Cataract Screening and Surgery Camp camps have been organized in Sardarpura & Kapalsadi villages. Total 386 patients screened and 20 have been referred for surgery. Spectacles have been provided to 276 patients. We at DCM Shriram organizing regular eye check-up camps in surrounding villages since 10 years now and till date more than 2300 people have taken benefits of the same. These camps being organized in close coordination with local gram panchayat and beneficiaries are consulted by ophthalmologist. People are getting medicine, spectacles and support to cataract operation at Sewa Rural hospital in Jhagadiya.</p>






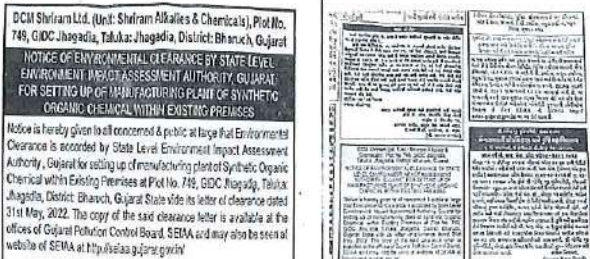
Sickle Cell Awareness & Screening Camps:

Sickle Cell is incurable disease and screening and awareness are only solution available for prevention of the disease. To address the same camp has been organized in Primary school of Selod village and 100 Nos of patients screened in the same. 19 students have detected with sickle cell trait and 2 with disease. Individual cards and reports provided to parents and school for regular treatment.



		<p>Donation of Equipment</p>  <p>Donation of AED to JIA to handle cardiac emergency.</p> 
<p>137</p>	<p>The project management shall ensure that unit complies with all the environment protection measures, risk mitigation measures and safeguards recommended in the EMP report and Risk Assessment study report as well as proposed by project proponent.</p>	<p>Noted & complied. We will comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report Copy of the Risk assessment report with their compliance status is attached as Annexure-16</p>
<p>138</p>	<p>The project authorities shall earmark adequate funds to implement the conditions stipulated by SEIAA as well as GPCB along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.</p>	<p>Complied. We have earmarked separate fund for the same and the monitoring is being done on regular basis</p>
<p>139</p>	<p>The applicant shall inform the public that the project has been accorded environmental clearance by the SEIAA and that the copies of the clearance letter are available with the GPCB and may also be seen at the Website of SEIAA/ SEAC/ GPCB. This shall be</p>	<p>Noted. The Public has been informed about this through local newspapers. Copy of the paper cuttings have been submitted to your office, vide letter no. SAC-SHE-E-FL-06/June-22/02, dated: 13th June-22. Advertisement published in "Times of India" on dt:</p>



	<p>advertised within seven days from the date of the clearance letter, in at least two local newspapers that are widely circulated in the region, one of which shall be in the Gujarati language and the other in English. A copy each of the same shall be forwarded to the concerned Regional Office of the Ministry.</p>	<p>11.06.2022 and local newspaper "Sandesh" on dt: 11.06.2022 Photos is attached as below :</p> 
140	<p>It shall be mandatory for the project management to submit half-yearly compliance report in respect of the stipulated prior environmental clearance terms and conditions in soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.</p>	<p>Noted & complied. Regular Half yearly compliance report is submitted to MoEFCC-RO, CPCB-ZO, SEIAA (Gujarat) and GPCB by mail and hardcopies before 1st June and 1st December every year as per the requirement. Last report for the period April'22 to Sept-22 was submitted, vide our letter no. SAC-SHE-E-FL-08/22-23/01, on 29.11.2022</p>
141	<p>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.</p>	<p>Noted. The above information provided is true to the best of our knowledge.</p>
142	<p>The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.</p>	<p>Noted. We have received CCA NO: 117635 dated 21.03.2022 and adhere to the conditions mentioned in the CCA.</p>
143	<p>The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.</p>	<p>Noted. Implementation of the conditions is satisfactory and duly verified by the authorities, like-GPCB and MoEFCC from time to time.</p>
144	<p>The company in a time bound manner shall implement these conditions. The SEIAA reserves the right to stipulate additional conditions, if the same is found necessary.</p>	<p>Noted. We will comply with all the conditions along with project completion work.</p>
145	<p>The project authorities shall inform the GPCB, Regional Office of MoEF and SEIAA about the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project</p>	<p>Noted. We have already intimated the GPCB, RO-MoEFCC and SEIAA about the date of financial closure of our previous projects and will do so for the upcoming project.</p>
146	<p>This environmental clearance is valid for seven years from the date of issue.</p>	<p>Noted.</p>
147	<p>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</p>	<p>Noted.</p>



	16 of the National Green Tribunal Act, 2010.	
148	Submission of any false or misleading information or data which is material to screening or scoping or appraisal or decision on the application makes this environment clearance cancelled	Noted. We do not conceal any information from the authorities and abide by any direction.
	B.4 Compliance of environmental clearance / reporting / administration / appeal	
149	Project proponent shall inform to all the concerned authorities including Municipal Corporation and District Collector and shall also give wide publicity through advertisement in minimum Mo local newspapers within seven days, about the Environment Clearance order accorded.	Point noted and being complied with. The Public has been informed about this through local newspapers. Copy of the paper cuttings have been submitted to your office, vide letter no. SAC-SHE-E-FL-06/June-22/02, dated: 13 th June-22. Advertisement published in "Times of India" on dt: 11.06.2022 and local newspaper "Sandesh" on dt: 11.06.2022. Kindly refer photographs attached in point no. sr. no.139.
150	Project proponent shall appoint a key person in the organization who shall be responsible for compliance of above condition fully on behalf of the proponent. It will not mean that appointing a key person will exempt the project proponent from the responsibility of compliance. Any change in key person shall immediately be informed to SEIAA and all concerned authorities.	Point noted and being complied with.
151	Designated key person shall submit six monthly compliance reports to SEIAA/SEAC, MOEF&CC, GPCB and Nodal Department of the Government.	Point noted and being complied with.
152	The Nodal Department or any authority or officer authorized by MOEF&CC/SEIAA can inspect the site of the project and all the facilities, for verification of compliances of environment clearance conditions.	Noted.
153	In case of violation reported upon, the project proponent shall be responsible for all the legal actions as per Environment Protection Act, 1986 including SEIAA may cancel, withdraw or keep in abeyance, the Environment Clearance accorded.	Noted. We do not conceal any information from the authorities and abide by any direction.
154	Any person including the project proponent affected by this Environment Clearance order may file appeal to Honorable National Green Tribunal West Zone branch, Pune, preferably within a period of thirty days from the date of issue of Environment Clearance as prescribe	Noted.



	under section 16 of National Green Tribunal Act 2010.	
155	All complains and public grievance or representations may be addressed to SEIAA/SEAC in' the email addresses (a) msseiaagj@gmail.com& (b) seacgujarat@gmail.com	Noted.



List of Annexures

Annexure Nos.	Annexure Description
1	NDA with National Chemical Laboratory for HCl purification and reuse
2	Correspondence with AMAI Technical Sub-Committee Team
3	Copies of Hazardous Waste Manifest
4	Copy of MoU with Dilute Sulphuric acid user
5	Calibration certificates of Hydrogen & Chlorine detectors
6	Analysis report of Ambient air monitoring for the month of March-2023
7	Analysis report of Liquid Effluent for the Months of March-2023
8	Green maple award for Energy Conservation
9	Health Register Form-32 Copy
10	Consent Letter from GIDC for Water Supply
11	NCT Consent for additional effluent discharge
12	Analysis report of Flue gas stacks for the Month of March-2023
13	ESP efficiency report
14	Analysis report of Process vents for the Month of March-2023
15	CSWDF Membership Certificate
16	Risk assessment report
17	Pre-Employment Medical Check-up format (Form-33)
18	ISO 9001,ISO 14001,ISO 45001 Certificate
19	Signed an agreement for 50 MW of hybrid wind / solar renewable energy from renew power for its chlor-alkali manufacturing facility in Bharuch.
20	Responsible Care certificate (JANUARY 2023 to DECEMBER 2025)



Annexure-1

NDA with National Chemical Laboratory for HCl purification and reuse

Non Disclosure Agreement

NON DISCLOSURE AGREEMENT

THIS AGREEMENT is made and entered into on 21st day of April, Two Thousand Twenty Three ('Effective Date')

Between

Council of Scientific and Industrial Research (CSIR), a society registered under the Societies Registration Act (XXI of 1860), having its registered office at Anusandhan Bhavan, 2, Rafi Marg, New Delhi 110001 through its constituent CSIR-National Chemical Laboratory (NCL), located at Dr. Homi Bhabha Road, Pune-411008, India (hereinafter called 'CSIR-NCL' which expression shall where the context so admits include its successors and permitted assigns) of the one part,

And

DCM SHRIRAM Shriram Limited, a company registered under the Companies Act, 1956 having its registered office at 2nd Floor (West Wing), World Mark 1, Aerocity, New Delhi-110037 (INDIA) hereinafter called the 'DCM SHRIRAM' which expression shall where the context so admits include its successors and permitted assigns) of the other part.

CSIR-NCL is a potential contract research service provider, technology licensor, consultant or other business associate in connection with the development of products and services.

WHEREAS DCM SHRIRAM is a leading business conglomerate business portfolio of Agri-rural, chlor-vinyl and value added business.

WHEREAS CSIR-NCL and DCM SHRIRAM wish to hold discussions in the area of 'chemistry and allied sciences' with the sole purpose of evaluating the feasibility of developing a research relationship between the parties ('Purpose').

In order to evaluate the potential research relationship, either Party may disclose to the other Party certain technical or business information, which is not in public domain and is proprietary in nature to the Disclosing Party (one who discloses the information). This information is secret and confidential, and will be disclosed to the Receiving Party (one who receives the information) on the following terms and conditions:

1. "Confidential Information" shall mean all information, data, samples, specifications and processes owned by or in possession of the Disclosing Party. Only such information would be deemed confidential if it is designated by the Disclosing Party as "Confidential" at the time of disclosure or if disclosed orally, and is confirmed in writing by the Disclosing Party as "Confidential" within one calendar month.

CSIR-NCL
SHRIRAM



Page 1 of 5

DCM

[Handwritten signature]



Non-Disclosure Agreement

2. Proper and appropriate steps shall be taken and maintained by the Receiving Party to protect the Confidential Information received. The Receiving Party shall limit disclosure and access of the Confidential Information received from the Disclosing Party to such of its employees who are directly involved with this project and even then only to such extent as is necessary and essential to complete the work involved herewith and such employees shall preserve the confidential nature of this information. The Receiving Party shall also not disclose any of the Confidential Information to any unauthorized third party.
3. With respect to any samples that either Party may receive from the other Party, it is agreed that (a) to hold such samples in confidence and not to transmit such samples to any third party, (b) not to analyze or reverse engineer or to have such samples analyzed, (c) not to sell or use such samples either commercially or for any purpose not specifically contemplated by this agreement. All samples remaining after the purposes of the evaluation have been fulfilled shall be returned to the Disclosing Party, or destroyed, as instructed by the Disclosing Party.
4. Confidential Information shall be used by either Party in connection with the purpose only of evaluating a potential relationship. Neither Party nor its employees will make use of the Confidential Information in any other form, it being recognized that both parties reserve all rights to the Confidential Information not expressly granted herein.
5. Each Party represents that it has the right to make disclosures under this Agreement; that it will not disclose to the other any information confidential to any third party; and that the terms of this Agreement are not inconsistent with other contractual and/or other legal obligations it may have, or with the policies of any institution with which it is associated.
6. The Receiving Party shall only make such copies of the Disclosing Party's Confidential Information as are necessary for the purposes of this NDA or any future research agreements. Upon termination of this NDA, each Party shall, upon the request of the other Party, promptly return or destroy the original and all copies of Confidential Information.
7. Neither Party makes any representation or warranty with respect to the accuracy or completeness of any of Confidential Information provided by it to the other Party. The Receiving Party agrees that the Disclosing Party and its affiliates shall not incur any liability to the Receiving Party as a result of the Receiving Party's use of or reliance on the Confidential Information provided to the Receiving Party hereunder.
8. The execution of this NDA or the disclosure of any Confidential Information hereunder, shall not be construed as granting, either expressly or by implication, estoppel or otherwise, any intellectual property right, title, or



Handwritten signature



license under any invention or patent now or hereafter owned or controlled by the Disclosing Party.

9. The parties will not be financially liable to each other for the performance of the agreement and also shall hold each other unconditionally harmless from any possible claims brought by Third Parties against either Party in connection with the performance of this Agreement. Any financial liability arising from this Non-disclosure agreement shall be limited to the funds received by CSIR-NCL on the subsequent Project agreement to be signed between the Parties.
10. The obligation of confidentiality and non-use shall not apply to the information that is (a) in the possession of the Receiving Party prior to receipt thereof from the Disclosing Party as shown by the Receiving Party's prior written records; (b) is already available or becomes available to the public through no fault of the Receiving Party; (c) is received by the Receiving Party from a third party having a right to disclose it; (d) is developed by the Receiving Party independent of any disclosure hereunder; (e) required by a judicial or administrative agency of competent jurisdiction to be disclosed, after maximum practicable notice by the Receiving Party to the Disclosing Party; provided, however, that in such an event the Receiving Party will reasonably cooperate with the Disclosing Party's request to obtain appropriate protection orders and to take similar protective measures to preserve the confidentiality of the Disclosing Party's Confidential Information.
11. Confidential Information disclosed under this Agreement will not be deemed to be within the foregoing exceptions merely because such information is embraced by more general knowledge in the foregoing exceptions. In addition, any combination of features will not be deemed to be within the foregoing exceptions merely because individual features are in the foregoing exceptions, but only if the combination itself and its principal of operation are in the foregoing exceptions.
12. Either Party shall not assign this Agreement without the prior written consent of the other Party. This Agreement shall be binding upon the parties and their permitted successors and assignees.
13. Failure by either Party to enforce any of the provisions of this Agreement shall not constitute a waiver of such provisions or in any way effect the validity of the Agreement.
14. No amendment, modification or waiver of the terms or conditions of this Agreement shall be binding unless placed in writing and duly executed by the parties to this Agreement.



[Handwritten signature]



15. If any covenant, term, condition or provision of this NDA, including any further modifications hereto, or the application thereof to any situation or circumstance shall be finally determined by a court of competent jurisdiction to be invalid or unenforceable, all remaining terms, conditions or provisions shall not be affected, and each covenant, term, condition or provision of this NDA shall be valid and enforceable to the fullest extent permitted by law.
16. This Agreement shall continue for a period of two (2) years from the effective date of this Agreement. This Agreement may be canceled or terminated by either Party upon thirty (30) days prior written notice to the other, but such expiration or termination shall not relieve either Party of continuing obligations of confidentiality, non-analysis, and non-use with respect to Confidential Information disclosed hereunder prior to expiration or termination of the Agreement. The term of confidentiality, non-analysis, and non-use shall remain valid, despite expiration or termination of this Agreement, for Three (3) years from the 'Effective Date'.
17. The laws of India shall govern the performance of this Agreement.
18. In the event of any question /dispute/difference arising under this agreement or in connection herewith (except as to matters the decision of which is specially provided under this agreement) the same shall be referred to the Delhi International Arbitration Centre (DIAC), Delhi High Court, New Delhi for appointment of Arbitrator to adjudicate the dispute. The award of the Arbitrator shall be final and binding on the parties. The Arbitrator may give interim award(s) and /or directions, as may be required. Subject to the aforesaid provision, the arbitration and conciliation act, 1996 and the rules made hereunder and any modification thereof from time to time being in force shall be deemed to apply to the Arbitration proceedings under this clause.
19. This NDA, including any annexures hereto, contains the entire Agreement and understanding between the parties with regard to the subject matter hereof and supersedes any previous understandings, commitments or agreements, whether written or oral with regard to the subject matter hereof.

[Handwritten signature]

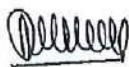


In witness whereof the parties hereto have signed this Agreement on the day, month and year mentioned hereinbefore.

For and on behalf of
CSIR-NCL

For and on behalf of
DCM SHRIRAM

Signature: 

Signature: 

Name: **Dr. Magesh Nandagopal**
Head, Technology Management Group
CSIR-National Chemical Laboratory
Dr. Homi Bhabha Road
Pune 411 008 (India)

Name: BM Patel
Title: President & Unit Head and
Constituted Attorney

Date: 21 APR 2023

Date:





Arpit Nanavati <arpitnanavati@dcmshriram.com>

Fwd: NCL - DCM Shriram Meeting

1 message

Debabrata Rautaray <debabratarautaray@dcmshriram.com>

Tue, Apr 25, 2023 at 10:53 AM

To: Arpit Nanavati <arpitnanavati@dcmshriram.com>

Cc: B M Patel <bmpatel@dcmshriram.com>, Jaideep Charan <jaideepcharan@dcmshriram.com>

Dear Arpit,

The NDA is signed with NCL (attached). The tech proposal is expected in a week's time.

- Project scope with NCL has the following 3 attributes/ deliverables
- 1) Detailed product landscaping and value chain of HCl,
- 2) Impurity profiling of HCl from our customers (few of our customers obtain 30% of HCl as a by-product with organic & inorganic contaminants)
- 3) Purification of contaminated HCl to obtain virgin grade HCl

Dear Jaideep,

You may keep this in your record. The hard copy will be received soon.

Best Regards,
Deb

----- Forwarded message -----

From: Kharat Kedar <kg.kharat@ncl.res.in>

Date: Fri, Apr 21, 2023 at 4:00 PM

Subject: Re: NCL - DCM Shriram Meeting

To: <debabratarautaray@dcmshriram.com>

Cc: Lele Ashish <ak.lele@ncl.res.in>, Nilesh A. Mali <na.mali@ncl.res.in>, Magesh Nandagopal <m.nandagopal@ncl.res.in>, Mangesh Vetal <md.vetal@ncl.res.in>, Santosh Kadam <sj.kadam@ncl.res.in>, Harekrishna K. Punjal <h.punjal@ncl.res.in>

Dear Dr. Deb,

Please find attached Copy of the **Non Disclosure Agreement** duly signed by both the parties for your record.

Thanks & Regards,

Kedar G. Kharat
Technology Management Group
CSIR-National Chemical Laboratory,
Dr. Homi Bhabha Road,
Pune - 411 008
Ph. + 91 20 2590 2754 / 2125
Email: kg.kharat@ncl.res.in



From: debabratarautaray@dcmshriram.com

To: "Mangesh Vetal" <md.vetal@ncl.res.in>

Cc: "Lele Ashish" <ak.lele@ncl.res.in>, "Magesh Nandagopal" <m.nandagopal@ncl.res.in>, "Santosh Kadam" <sj.kadam@ncl.res.in>, "Harekrishna K. Punjal" <h.punjal@ncl.res.in>, "Kharat Kedar" <kg.kharat@ncl.res.in>

Sent: Monday, April 10, 2023 3:47:10 PM

Subject: Re: NCL - DCM Shriram Meeting

Dear Mangesh,

Annexure-2:
Correspondence with AMAI Technical Sub-Committee Team

To,
The AMAI

Subject: **Deliberation on specific conditions given in environment clearance by SEAC, Gujarat.**

Dear Madam,

DCM Shriram Limited (Unit: Shriram Alkali & Chemicals) have obtained environment clearance vide EC Letter No. SE/IAA/GUI/EC/1(d)/925/2020 dated 28th July-2020 for their 850 TPD chlor-alkali expansion project at Bharuch.

The SEAC has given some specific conditions for utilization of weak HCl acid from downstream industries using Cl₂ from chlor-alkali industries. One of the specific conditions given by the SEAC is:

- Project Proponent shall initiate the proposal with Alkali Manufacturer's Association of India to study and derive a common formula / process for the purpose of purifying spent HCl.

For the above, we have already initiated a R&D proposal with National Chemical Laboratory, Pune and they have suggested, rather than using water as a stripping agent, if suitable organic base (even if its weaker) is used, salt of which is of commercial value, the process will become highly effective in techno-economic way. The added advantage will be a large volume of water will be made available for reuse.

Request you to kindly take-up the points given by SEAC for discussion and further deliberation in the upcoming AMAI technical committee meeting.

Thanking you.

Your truly

DR,RPS Chauhan
Sr. Vice President & Operations Head
DCM Shriram Ltd. Bharuch



Annexure-3:
Copies of Hazardous Waste Manifest



Ambica Metallic Chemicals [14901]
(Hazardous Waste Manifest)

Manifest No:
2047344
27/03/2023

Copy 1

To be forwarded by To be forwarded by the occupier to the State Pollution Control Board or Committee.

Sender's Details					
Sender Name	DCM SHRIRAM LTD (UNIT: Shriram Alkali & Chemicals) [15672]				
Address	, Taluka :JHA Distict:ANK Pin no:393110				
Contact Details	8511495365 bmpatel@dcmsriram.com	GPS Coordinates	Lat :21.65671025076693 Long :73.13787075538635		
Receiver's Details					
State	Gujarat	Type of Facility	Actual user (within state)		
Facility Details	Ambica Metallic Chemicals [14901]				
Contact Details	9824114138 jaygurudev@ambicaalum.com	GPS Coordinates	Lat :21.618000 Long:73.022800		
Address	, Taluka :ANK Distict:ANK Pin no:393002				
Waste Details					
Waste Details	II~B~B15~Inorganic Acids (Spent Acids)				
Waste Intended for	Recycling	Total Qty	23.960MT	Consistency	liquid
Transporter Details					
Name	MAHEK ENTERPRISE	Contact Details	9904887766 Mahekenterprise2016@gmail.com		
Address	G/B Shreenathji Arcade, Opp Meghmani Organics ltd ,G/B Shreenathji Arcade, Opp Meghmani Organics ltd District :Ankleshwar Taluka :Ankleshwar				
Vehicle Details					
Vehicle no	GJ18AU9468 (IMEI No :358980100411843)	GPS Enabled	Yes	Type of Vehicle	Tanker
Driver name	Shiv ji Shahani	Driver Contact No	9725664170		
Waste Transportation Details					
Vehicle Depart.	27/03/2023 2:40PM	Number of Drums	0	Loose Waste	23,960
Remarks	Dilute Sulphuric acid (70-78%).		No of bags	0	
Sender's Declaration : 1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations. 2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.					
Name and stamp of sender:		Date:	27/03/23	Signature:	
Transporter's Acknowledgement of Receipt of waste Stamp:		Date:	27/03/23	Signature: Shiv Ji	
Receiver's Certification of Receipt of Hazardous waste					
In Principal Approval Details :Accepted - 27/03/2023 2:16PM - Remarks :AMC					
Stamp:		Date:	Signature:		

By scanning QR code, copy of transporter will be display. (All copy has same information)

Print by 15672 @ 27/03/2023 02:18:03 PM 02f9e2f7-0dae-4431-8ebd-e6e0bba48989

Page 1 of 1





Ambica Metallic Chemicals [14901]
(Hazardous Waste Manifest)

Manifest No:
2047344
27/03/2023

Copy 2

To be forwarded by To be Carried by the occupier after taking signature on it form the transporter.

Sender's Details					
Sender Name	DCM SHRIRAM LTD (UNIT: Shriram Alkali & Chemicals) [15672]				
Address	, Taluka :JHA Dist:ANK Pin no:393110				
Contact Details	8511495365	brnpatel@dcmsriram.com	GPS Coordinates	Lat :21.656710250766693 Long :73.13767075538635	
Receiver's Details					
State	Gujarat	Type of Facility	Actual user (within state)		
Facility Details	Ambica Metallic Chemicals [14901]				
Contact Details	9824114138	jaygurudev@ambicaalum.com	GPS Coordinates	Lat :21.618000 Long:73.022800	
Address	, Taluka :ANK Dist:ANK Pin no:393002				
Waste Details					
Waste Details	II~B~B15~Inorganic Acids (Spent Acids)				
Waste Intended for	Recycling	Total Qty	23.960MT	Consistency	liquid
Transporter Details					
Name	MAHEK ENTERPRISE		Contact Details	9904887766 Mahekenterprise2016@gmail.com	
Address	G/8 Shreenathji Arcade, Opp Meghmani Organics Ltd ,G/8 Shreenathji Arcade, Opp Meghmani Organics Ltd District :Ankleshwar Taluka :Ankleshwar				
Vehicle Details					
Vehicle no	GJ18AU9468 (IMEI No :358980100411843)	GPS Enabled	Yes	Type of Vehicle	Tanker
Driver name	Shiv ji Shahani	Driver Contact No	9725664170		
Waste Transportation Details					
Vehicle Depart.	27/03/2023 2:40PM	Number of Drums	0	Loose Waste	23.960
Remarks	Dilute Sulphuric acid (70-78%).		No of bags	0	
Sender's Declaration :					
1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.					
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.					
Name and stamp of sender:		Date: 27/03/23		Signature:	
Transporter's Acknowledgement of Receipt of waste Stamp:		Date: 27/03/23		Signature:	
Receiver's Certification of Receipt of Hazardous waste					

In Principal Approval Details :Accepted - 27/03/2023 2:16PM - Remarks :AMC

Stamp:

Date:

Signature:

By scanning QR code, copy of transporter will be display. (All copy has same information)

Print by 15672 @ 27/03/2023 02:18:51 PM 02f9e2f7-0dac-4431-8c8d-c6e0bba48989

Page 1 of 1



Annexure-4:
Copy of MOU with Dilute Sulphuric acid user

INDIA NON JUDICIAL Government of Gujarat Certificate of Stamp Duty	
Certificate No.	IN-GJ15029465440486U
Certificate Issued Date	22-Aug-2022 04:11 PM
Account Reference	IMPACC (SV)/ gj13039204/ ANKLESHWAR1/ GJ-BH
Unique Doc. Reference	SUBIN-GJGJ1303920460149782343757U
Purchased by	AMBICA METALLIC CHEMICALS
Description of Document	Article 5(h) Agreement (not otherwise provided for)
Description	MOU
Consideration Price (Rs.)	0 (Zero)
First Party	AMBICA METALLIC CHEMICALS
Second Party	DCM SHRIRAM LTD
Stamp Duty Paid By	AMBICA METALLIC CHEMICALS
Stamp Duty Amount(Rs.)	300 (Three Hundred only)

₹300
₹300*300*300*300

₹300

IN-GJ15029465440486U

JD 0010760416

VOID VOID VOID

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.sholestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it Invalid.
2. The ones of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

NOTICE

- The contents of this e-stamp certificate can be verified at www.shcilestamp.com, Stock Holding mobile application "EStamping" or at Stock Holding Branch/ Centre (the details of which are available at www.stockholding.com).
- Any alteration to this certificate renders it invalid and would constitute a criminal offence.
- Kindly contact Stock Holding Branch / Centre in case of discrepancy.
- For information related to e-Stamping you may write to us on our email id estamp.ahmedabad@stockholding.com or visit our Branch/Centre.

મુસબત

- આ ઈ-સ્ટેમ્પ પ્રમાણપત્રની વિગતો www.shcilestamp.com દ્વારા અથવા સ્ટોક હોલ્ડિંગની "ઈ-સ્ટેમ્પિંગ" મોબાઇલ એપ્લિકેશન અથવા સ્ટોક હોલ્ડિંગની શાખા / કેન્દ્ર (જેની વિગતો www.stockholding.com પર ઉપલબ્ધ છે) પર જઈને ચકાસી શકાય છે.
- આ પ્રમાણપત્રમાં કરેલ કોઈપણ ફેરફાર અમાન્ય છે અને તે કોજદારી ગુનો બને છે.
- આ ઈ-સ્ટેમ્પ પ્રમાણપત્રમાં કોઈપણ વિસંગતતા જણાય તો સ્ટોક હોલ્ડિંગની શાખા / કેન્દ્ર પર સંપર્ક કરવો.
- ઈ-સ્ટેમ્પિંગ સંબંધિત જાણકારી માટે અમને estamp.ahmedabad@stockholding.com પર ઈ-મેઇલ કરવો અથવા અમારી શાખા / કેન્દ્ર ની મુલાકાત લેવી.



MEMORANDUM OF UNDERTAKING

This memorandum of Undertaking is made and executed on the 22nd August 2022 at Ankleshwar, Gujarat by and between.

M/s. DCM Shriram Ltd. (GPCB ID: 15672) a company under the companies Act, 1956 having its manufacturing unit namely Shriram Alkali & Chemicals at Plot No.749, GIDC Estate, Jhagadia, Dist. Bharuch on the first part. (hereinafter called the First Party) which expression shall, unless it is repugnant to the context, mean and include its authorized representative, transferee, assignees and administrators)

AND

M/s. AMBICA METALLIC CHEMICALS, (GPCB ID: 14901), a company under the Companies Act, 1956 having its plant at Plot No.6408, GIDC, Ankleshwar, District Bharuch, Gujarat on the second part (hereinafter called the Second Party) which expression shall, unless it is repugnant to the context mean and include its authorized representative, transferee, assignees and administrators).

Whereas the first party is manufacturer of Chlor-alkali product viz. Caustic Soda, Chlorine, Hydrogen etc. including generation of dilute Sulphuric Acid (70-78%). The second party is an end user of such dilute Sulphuric Acid as raw material for manufacturing Aluminium Sulphate.

The First party, M/s. DCM Shriram Ltd. (Unit: Shriram Alkali & Chemicals) is holding CCA Order Number AWH-117635 valid up to 03/07/2026.



The Second Party **AMBICA METALLIC CHEMICALS**, is holding consolidate Consent & Authorisation Order No. **AWH-117876 Valid Up to 25/12/2026**. Issued by Gujarat Pollution Control Board (GPCB).

This MOU has been entered with mutual understanding between both first Party (the Supplier of dilute Sulphuric Acid) and the second party (the receiver and user of dilute Sulphuric Acid as raw materials for manufacturing of Aluminium Sulphate).

Both the Parties have to obtain necessary permission, NOC, authorization or amendment from GPCB to validate their transaction as applicable from time to time. This MOU is subject to issuance of valid authorization / permission from GPCB to both parties. This MOU is also subject to other commercial terms and conditions to be agreed between both the parties. The first party will supply a quantity of 300 MT per month to the Second Party and the Second Party will received such quantity subject to mutual agreement of commercial and other terms conditions.

The dilute Sulphuric Acid movement will be carried out through approved transporter with GPS mounted vehicles and will be registered through online manifest.

Both the parties will comply with the Hazardous Waste Rule 2016.

For & On Behalf of
DCM Shriram Ltd.
(Unit: Shriram Alkali & Chemicas)
Jhagadia



For & on Behalf of
Ambica Metallic Chemicals

For Ambica Metallic Chemicals

Authorised Signatory



Annexure-5:
Calibration certificates of Hydrogen & Chlorine detectors

TEST & CALIBRATION REPORT: GAS DETECTOR

CUSTOMER DETAILS: -

Name : M/s. SHRIRAM ALKALI & CHEMICALS	Location : JHAGADIA
P.O. No. : SAC/B04/4220009357	P.O. Dated : 09/06/2022

INSTRUMENT DETAILS:

Instrument Type: CL2 GAS DETECTOR	Make : UNIPHOS	Tag Name: CL2I-495A
Gas : CHLORINE	Range : 0 - 10 PPM	Serial No. : T - 12235
Testing Date : 29/03/2023	Due Date: 28/07/2023	Location : CL2 TANK - A

CALIBRATION DETAILS:

Calibration	Gas used	Required Reading PPM	Initial Reading PPM	Final Reading PPM	Acceptable Tolerance Limit
Zero Calibration	AMBIENT AIR	00	00	00	± 1%
Span Calibration	CHLORINE 06 PPM BALANCE AIR	06	07	06	± 1%

DETAILS OF STANDARD GASES USED:

Calibration	Gas Composition Used	Cylinder No.	Certificate No.	Dated	Make
Zero Calibration	AMBIENT AIR	NA	NA	NA	NA
Span Calibration	CHLORINE 06 PPM BALANCE AIR	295518	5167	29/01/2023	PGPL

CALIBRATED BY: MR. BALAJI BORKAR (SERVICE ENGINEER)	APPROVED BY: Mr. PRASHANT GAWANDE (HEAD OF DEPARTMENT)
--	---

Form No: PD/AM/F/08

REV No: 02

DATE: 07.05.2018



TEST & CALIBRATION REPORT: GAS DETECTOR

CUSTOMER DETAILS: -

Name : M/s. SHRIRAM ALKALI & CHEMICALS	Location : JHAGADIA
P.O. No. : SAC/B04/4220009357	P.O. Dated : 09/06/2022

INSTRUMENT DETAILS:

Instrument Type: H2 GAS DETECTOR	Make : UNIPHOS	Tag Name: H2IG19
Gas : HYDROGEN	Range : 0-1000 PPM	Serial No. : T-16279
Testing Date : 29/03/2023	Due Date : 28/07/2023	Location : H2 COMP. - A

CALIBRATION DETAILS:

Calibration	Gas used	Required Reading PPM	Initial Reading PPM	Final Reading PPM	Acceptable Tolerance Limit
Zero Calibration	AMBIENT AIR	000	000	000	± 2%
Span Calibration	HYDROGEN 514 PPM BALANCE AIR	514	512	514	± 2%

DETAILS OF STANDARD GASES USED:

Calibration	Gas Composition Used	Cylinder No.	Certificate No.	Dated	Make
Zero Calibration	AMBIENT AIR	NA	NA	NA	NA
Span Calibration	HYDROGEN 514 PPM BALANCE AIR	2286	5164	29/12/2022	PGPL

<u>CALIBRATED BY:</u>		<u>APPROVED BY:</u>	
MR. BALAJI BORKAR (SERVICE ENGINEER)		Mr. PRASHANT GAWANDE (HEAD OF DEPARTMENT)	

Form No: PD/AM/F/08


REV No: 02

DATE: 07.05.2018





Annexure-6:

Analysis report of Ambient of air monitoring for the month of March-23 done by M/S Unistar Environment & Research Labs Pvt Ltd



UniStar
Environment and Research Labs Pvt. Ltd





White House
Near G.I.D.C. Office, Char Rasta,
Vapi- 395 195 Gujarat, India
Phone : +91 269 2433966 / 2425640
Email : response@unstar.com Website : www.unstar.in

QC/NABL Accredited EIA
Consultant Organization

GPCB Recognized Environment
Auditor [Schedule 11]

ISO 9001:2015
Certified Company

ISO 45001:2018
Certified Company

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC77532300002605F			
Test Report No.:	URA/23/03/D/A-001	Report Issue Date	25/03/2023
Service Request form No.:	URA/SRF/03/001	Service Request Date	17/03/2023
Sample ID No.:	URA/ID/A-23/03/001	Field Data Sheet No.	URA/FDS/A-23/03/001
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Dates of Sampling :	17/03/2023	Date of Testing	18/03/2023
Sampling Procedure:	As per CPCB Guidelines		
Location of Sampling / Monitoring:	Near Admin Office		
Environmental Conditions during Sampling :	Temp.:	Min.: 23 °C	Max.: 35 °C
	Rel. Humidity:	Min.: 42 %	Max.: 94 %
		Avg.: 30 °C	Avg.: 73 %

➤ Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Calli. Date	Next Calli. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	30/07/2022	29/07/2023
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	30/07/2022	29/07/2023

➤ General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	23.82
2.	Flow Rate of PM ₁₀	m ³ /min	1.18
3.	Volume of Air Sampled for PM ₁₀	m ³	1600.7
4.	Volume of Air Sampled for PM _{2.5}	m ³	23.9

➤ Environmental Conditions during testing :Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%


➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	GPCB Limits	Test Method
1.	Particulate Matter (PM ₁₀)	µg/m ³	59.1	100	IS 5182 (Part -23)
2.	Particulate Matter (PM _{2.5})	µg/m ³	18.4	60	CPCB Manual Volume-1
3.	Sulphur Dioxide(SO ₂)	µg/m ³	20.5	80	IS 5182 (Part- 2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	23.8	80	IS 5182 (Part-6)
5.	Hydrochloric Acid as HCl	µg/m ³	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07
6.	Chlorine as Cl ₂	µg/m ³	BDL (MDL: 2.0)	-	IS 5182 (Part- 19)

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit.


Checked By:



Vikram D. Patel
(Chemist)

***** End of Report *****

Authorized By:




Javed S. Patel
(Manager - Operations)

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UERL/AIR/F-05/05

Regd. Office : 215, Royal Arcade, Near G.I.D.C. Office, Char Rasta, Vapi-395 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN: U73100GJ2007PTC051463





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Consultant Organization

GPCB Recognized Environmental
Auditor (Schedule 11)

ISO 9001 : 2015
Certified Company

ISO 45001 : 2018
Certified Company

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC77532300002606F			
Test Report No.:	URA/23/03/D/A-002	Report Issue Date	25/03/2023
Service Request form No.:	URA/SRF/03/002	Service Request Date	17/03/2023
Sample ID No.:	URA/ID/A-23/03/002	Field Data Sheet No.	URA/FDS/A-23/03/002
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Dates of Sampling :	17/03/2023	Date of Testing	18/03/2023
Sampling Procedure:	As per CPCB Guidelines		
Location of Sampling / Monitoring:	Behind SLF 3		
Environmental Conditions during Sampling :	Temp.: Min.: 23 °C	Max.: 35 °C	Avg.: 30 °C
	Rel. Humidity: Min.: 42 %	Max.: 94 %	Avg.: 73 %

> Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Call. Date	Next Call. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	30/07/2022	29/07/2023
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	30/07/2022	29/07/2023

> General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	23.85
2.	Flow Rate of PM ₁₀	m ³ /min	1.15
3.	Volume of Air Sampled for PM ₁₀	m ³	1645.7
4.	Volume of Air Sampled for PM _{2.5}	m ³	23.9

> Environmental Conditions during testing :Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

> Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	GPCB Limits	Test Method
1.	Particulate Matter (PM ₁₀)	µg/m ³	56.8	100	IS 5182 (Part -23)
2.	Particulate Matter (PM _{2.5})	µg/m ³	20.0	60	CPCB Manual Volume-1
3.	Sulphur Dioxide(SO ₂)	µg/m ³	17.3	80	IS 5182 (Part- 2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	21.2	80	IS 5182 (Part-6)
5.	Hydrochloric Acid as HCl	µg/m ³	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07
6.	Chlorine as Cl ₂	µg/m ³	BDL (MDL: 2.0)	-	IS 5182 (Part- 19)

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit.

***** End of Report *****

Checked By:


Himang D. Patel
(Chemist)

Authorized By:


Himang D. Patel
(Manager - Operations)

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UERL/AIR/F-05/05

Regd. Office : 215, Royal Arcade, Near G.I.D.C. Office, Char Rasta, Vapi-396 195, Gujarat, India.

Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.

CIN:U73100GJ2007PTC051463





TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC77532300002607F			
Test Report No.:	URA/23/03/D/A-003	Report Issue Date	25/03/2023
Service Request form No.:	URA/SRF/03/003	Service Request Date	17/03/2023
Sample ID No.:	URA/ID/A-23/03/003	Field Data Sheet No.	URA/FDS/A-23/03/003
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS, (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Dates of Sampling :	17/03/2023	Date of Testing	18/03/2023
Sampling Procedure:	As per CPCB Guidelines		
Location of Sampling / Monitoring:	Near ETP Discharge		
Environmental Conditions during Sampling :	Temp.:	Min.: 23 °C	Max.: 35 °C
	Rel. Humidity:	Min.: 42 %	Max.: 94 %
		Avg.: 30 °C	Avg.: 73 %

> Details of Master Instrument Used for Monitoring

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	30/07/2022	29/07/2023
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	30/07/2022	29/07/2023

> General Sampling / Monitoring Observation as per CPCB Guideline

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	23.66
2.	Flow Rate of PM ₁₀	m ³ /min	1.21
3.	Volume of Air Sampled for PM ₁₀	m ³	1646.7
4.	Volume of Air Sampled for PM _{2.5}	m ³	23.7

> Environmental Conditions during testing :Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

> Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit	Result	GPCB Limits	Test Method
1.	Particulate Matter (PM ₁₀)	µg/m ³	57.4	100	IS 5182 (Part -23)
2.	Particulate Matter (PM _{2.5})	µg/m ³	17.3	60	CPCB Manual Volume-1
3.	Sulphur Dioxide(SO ₂)	µg/m ³	20.0	80	IS 5182 (Part- 2)
4.	Nitrogen Dioxide (NO ₂)	µg/m ³	24.7	80	IS 5182 (Part-6)
5.	Hydrochloric Acid as HCl	µg/m ³	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07
6.	Chlorine as Cl ₂	µg/m ³	BDL (MDL: 2.0)	-	IS 5182 (Part- 19)

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit.

***** End of Report *****

Checked By:

Mohini D. Patel
(Chemist)

Authorized By:

Jyoti S. Tamboli
(Manager - Operations)



Annexure: 7

Analysis report of treated effluent for the Month of March'23 done by M/S Unistar Environment & Research Labs Pvt Ltd



White House
Near G.I.D.C. Office, Char Rasta,
Vapi- 396 195, Gujarat, India
Phone : +91 260 2433966 / 2425610
Email : rapoose@unistar.in Website : www.unistar.in

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GPCB Recognized Environmental
Auditor (Schedule 11)

ISO 9001 : 2015
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ISO 45001 : 2018
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TEST REPORT

UIR No.	TC7582300002737F	Report No.	URC /23/03/0412
Name & Address of Customer	M/s. DCM Shri Ram Alkies & Chemicals LTD. Plot No.749, GIDC Estate, Jhagadia, Dist: Bharuch.	Date Of Report	27/03/2023
Sample Details	ETP Outlet Water Sample	Customer's Ref.	--
Sample Qty.	10 Lit.	Location	--
Sampling Date	18/03/2023	Appearance	Colourless
Test Started Date	20/03/2023	Sample Received Date	20/03/2023
Sampled By	Client.	Test Completion Date	27/03/2023
UERL Lab ID. No.	23/03/0412	Sampling Method	--

TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
PHYSIO-CHEMICAL PARAMETERS:					
1.	pH @ 25 °C	APHA 23 rd Ed.,2017,4500 H'B	6.0-9.0	--	5.78
2.	Colour	IS 3025(Part 4)2021	--	Pl. Co. Scale	40
3.	Temperature	IS 3025(Part 9)1984	Shall Not exceed more than 5°C above ambient water Temp.	°C	30
4.	Total Dissolved Solids	APHA 23 rd Ed.,2017, 2540- C	--	mg/L	890
5.	Total Suspended Solids	APHA 23 rd Ed., 2017 2540 D	100	mg/L	12
GENERAL CHEMICAL PARAMETERS:					
6.	Oil & Grease	IS 3025(Part 39)2021	10	mg/L	BDL(MDL:2.0)
7.	Fluoride	(APHA 23 rd Ed.,2017,4500 F,D)	15	mg/L	0.58
8.	Sulphide	(APHA 23 rd Ed.,2017,4500 S ² F)	5	mg/L	BDL(MDL:0.05)
9.	TRN	(APHA 23 rd Ed.,2017,4500 NORG, B.)	50	mg/L	6.0
10.	Ammonical Nitrogen	(APHA 23 rd Ed.,2017,4500 NH ₃ -B&C)	50	mg/L	2.3
11.	Copper	APHA 23 rd Ed.,2017,3111-B, 3-20	3	mg/L	0.196
12.	Zinc	APHA 23 rd Ed.,2017,3111-B, 3-20	15	mg/L	0.663
13.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993	100	mg/L	18
14.	COD	IS 3025(Part 58)2006	500	mg/L	48.0
15.	Arsenic	APHA 23 rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
16.	Mercury	(APHA 23 rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
17.	Lead	APHA 23 rd Ed.,2017,3111-B, 3-20	0.1	mg/L	BDL(MDL:0.01)
18.	Cadmium	APHA 23 rd Ed.,2017,3111-B, 3-20	0.05	mg/L	0.408
19.	Hexavalent Chromium	APHA 23 rd Ed.,2017,3500Cr-B	0.1	mg/L	BDL(MDL:0.05)
20.	Nickel	APHA 23 rd Ed.,2017,3111-B, 3-20	3	mg/L	0.960
21.	Cyanide	IS 3025(Part 27)1986	0.2	mg/L	BDL(MDL:0.05)
22.	Phenolic Compound	IS 3025(Part 43)1992	5	mg/L	BDL(MDL:0.1)

Note: BDL = Below Detection Limit, MDL = Minimum Detection Limit.

Remarks: --

Opinion & Interpretation (If required): --



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Auditor (Schedule-11)

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Certified Company

ISO 45001:2018
Certified Company

TEST REPORT

ULR No.	TC775323000002737F	Report No.	URC /23/03/0412
Name & Address of Customer	M/s. DCM Shri Ram Alkalis & Chemicals LTD. Plot No.749, GIDC Estate, Ihagadia, Dist: Bharuch.	Date Of Report	27/03/2023
Sample Details	ETP Outlet Water Sample	Customer's Ref.	--
Sample Qty.	10 Lit.	Location	--
Sampling Date	18/03/2023	Appearance	Colourless
Test Started Date	20/03/2023	Sample Received Date	20/03/2023
Sampled By	Client.	Test Completion Date	27/03/2023
UERL Lab ID. No.	23/03/0412	Sampling Method	--

TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
GENERAL CHEMICAL PARAMETERS:					
23.	Iron	(APHA 23 rd Ed.,2017,3111-B)	3	mg/L	2.108
24.	Nitrate	(APHA 23 rd Ed.,2017,4500 NO3-B)	50	mg/L	3.1
25.	Total Residual Chlorine	APHA 23 rd Ed.: 2017 4500-Cl, G	1	mg/L	BDL(MDL:0.1)
26.	Manganese	APHA 23 rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
27.	Pesticides (Alpha BHC)	US EPA 8081 B	Absent	µg/L	BDL(MDL:1.0)
28.	Selenium	APHA 23 rd Ed., 2017 -3114-C,	0.05	mg/L	BDL(MDL:0.05)
29.	Vanadium	APHA 23 rd Ed.,2017,3500 - V	0.2	mg/L	BDL(MDL:0.5)
Toxicity Test:					
30.	Bio Assay test (%)	IS 6582 (Part 1): 1971	90 % survival of fish after 96 hrs.	mg/L	90 % survival of fish after 96 hrs.

Note: BDL = Below Detection Limit, MDL = Minimum Detection Limit.
Remarks: --
Opinion & Interpretation (if required): --

***** End of Report *****

Checked By

N.C.P.
Nilesh C. Patel
(Sr. Chemist)

Authorized By

N.B.T.
(Nitin B. Tandel)
(Technical Manager)

Page No.: 20

Note: This report is subject to Terms and Conditions mentioned overleaf.

UERL/AIR/F-04/04

Regd. Office : 215, Royal Arcade, Near G.I.D.C., Office, Char Rasta, Vapi-396 195 Gujarat.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.

CIN: U73100GJ2007PTC051463



QC/HABET Accredited EIA
Consultant Organization

GFCB Recognized Environmental
Auditor (Schedule-II)

ISO 9001 : 2015
Certified Company

ISO 45001 : 2018
Certified Company

TEST REPORT

ULR No.	--	Report No.	URC /23/03/0412
Name & Address of Customer	M/s. DCM Shri Ram Alkalis & Chemicals LTD. Plot No.749, GIDC Estate, Jhagadia, Dist: Bharuch.	Date Of Report	27/03/2023
		Customer's Ref.	--
Sample Details	ETP Outlet Water Sample	Location	--
Sample Qty.	10 Lit.	Appearance	Colourless
Sampling Date	18/03/2023	Sample Received Date	20/03/2023
Test Started Date	20/03/2023	Test Completion Date	27/03/2023
Sampled By	Client.	Sampling Method	--
UERL Lab ID. No.	23/03/0412		

TEST RESULTS:

Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
PHYSIO-CHEMICAL PARAMETERS:					
1.	Odour	IS 3025(Part 5)1983	---	--	Unobjectionable
GENERAL CHEMICAL PARAMETERS:					
2.	Trivalent Chromium	By Calculation	2	mg/L	N.D.
3.	Chromium-Total	(APHA 23rdEd.,2017,3111-B)	2	mg/L	N.D.
4.	Total Heavy Metal	By Calculation	7	mg/L	0.040
Note: N.D. = Not Detectable					
Remarks: --					
Opinion & Interpretation (if required): --					

***** End of Report *****

Checked By
N.C.P.
Nilesh C. Patel
(Sr. Chemist)

Authorized By
N.B.T.
(Nitin B. Tandel)
(Technical Manager)



Annexure-8

Green maple award for Energy Conservation



Annexure-9

Health Register Form-32 copy

8176

1. Sr. No in the Register of Adult Workers: 51108
 2. Name of Worker: Rav. Karmen Puro
 3. Section: Puro
 4. Date of Birth/Year: 10/08/1993

FORM N. 32
 (Prescribed under Rule 501) (विनियम 501 की तहत निर्दिष्ट स्वरूप)
HEALTH REGISTER आरोग्य रजिस्टर

Department/Work विभाग/कार्य	Name of hazardous processes किसी खतरनाक प्रक्रिया का नाम	Dangerous process operation खतरनाक प्रक्रिया का संचालन	Nature of Job or occupation काम का स्वरूप	Raw materials products or by products likely to be exposed to जिन सामग्री/उत्पादों से संपर्क हो सकता है	Date of posting दिनांक	Date of leaving transfer to or transfer from आवृत्ति/स्थान परिवर्तन का दिनांक	Medical examination and the results thereof चिकित्सा परीक्षा का परिणाम				If declared unfit for work अयोग्यता का कारण				Signature of with date of the Factory Medical Officer the Certifying Surgeon कारखाने के चिकित्सक/प्रमाणित चिकित्सक का हस्ताक्षर
							Date दिनांक	Signs and symptoms observed during examination परिष्कार के दौरान देखे गए चिह्न/लक्षण	Nature of test & results परीक्षा का स्वरूप/परिणाम	Result निष्कर्ष	Period of temporary withdrawal from the work कार्य से अस्थायी रूप से हटाने का अवधि	Reasons for such withdrawal अस्थायी रूप से हटाने का कारण	Date of re-entrance पुनः प्रवेश का दिनांक	Date of issuing fitness certificate स्वास्थ्य प्रमाणपत्र जारी करने का दिनांक	
1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	17
Puro	No	...	Fit



Annexure - 10

Consent Letter from the GIDC for Water Supply



GUJARAT INDUSTRIAL DEVELOPMENT CORPORATION
[A Govt. of Gujarat Undertaking]
Office of the Dy. Executive Engineer,
Plot no - 40, Near PepsiCo. Road no 08, GIDC,
Jhagadia Industrial Estate.

No. GIDC/DEE/JHG/ 234

DATE 16/7/18

To Whom So Ever It May be Concern

This is to certify that, GIDC has adequate quantity of water to meet the requirement of 24000.00 KL. per Day of M/s DCM Shriram Ltd, Plot no 749, GIDC Jhagadia subject to have necessary NOC from GPCB.

GIDC shall provide above quantity of water through direct (Express) pipeline from the GIDC water supply sump as per GIDC water supply rules and regulations.



[Signature]
Dy. Executive Engineer
GIDC Jhagadia

To,
M/s DCM Shriram,
Plot No. 749
G.I.D.C, Jhagadia



Annexure – 11
NCT Consent for addition effluent discharge

(A Subsidiary of GIDC)

NCT/MU/January-106

Date: 27.01.2019

Membership ID: J/M/E/D-SP/1-58

To,
M/s. Shriram Alkal & Chemicals
Plot No. 749, GIDC Ind. Estate,
Pugada - 393 110

Sub: Proposed additional booked quantity

Dear Sir,

With reference to your E-mail dated 16.01.2019 for the additional booked quantity, we would like to inform you that acceptance for proposed additional booked quantity of 600 KL/day for further treatment & disposal at NCT will be depend on and subject to,

- a. Necessary permission & approval from pollution control authorities to NCT
- b. Conveyance capacity from NCT to deep sea (final landfill point) will be increased / up-graded from existing 35 MLD to 60 MLD

Further, with this letter, total bifurcation of your effluent quantity booked at NCT is as under:

Sr. No.	Description	Quantity (KL/day)	Remarks
1.	Current disposal quantity received at NCT (In 35 MLD)	1200	This current disposal quantity 874 KLD, is as per Consolidated consents Order No. W- 18011 issued by GPCB, through vide letter No. GPCB/AMK/CCA-305 (10/10-15672/, dated 01.09.2017. Total booked effluent quantity -1200 KLD.
2.	Booked quantity (In Waiting list Prepared by NCT)	600	This is additional proposed quantity and this will be considered based on two conditions mentioned above in this letter
Total booked quantity at NCT (KL/day)		1800	

This Letter is exclusively issued as per the specific request of the industry for obtaining permission to apply for Environment Clearance/ TOR.


For, Narmada Clean-Tech


Moh Kumar
Managing Director





Annexure- 12:

Analysis report of Flue gas stack for the Month of MARCH-23 done by M/s. Unistar Environment & Research Labs Pvt Ltd. Vapi



Unistar
Environment and Research Labs Pvt. Ltd.

White House
Near G.I.D.C. Office, Char Rasta,
Vapi - 396 195, Gujarat, India
Phone : +91 200 2433966 : 2425610
Email : response@unistar Website : www.unistar.in

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TEST REPORT
(STACK MONITORING)

ULR - TC775323000002616F			
Test Report No.	URA/23/03/D/S-009	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/009	Service Request Date	18/03/2023
Sample ID No.	URA/ID/S-23/03/009	Field Data Sheet No.:	URA/FDS/S-23/03/009
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS, (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	18/03/2023	Date of Testing	20/03/2023
Stack Sampling Attached to	PF Boiler		
Air Pollution Control Device	ESP		
Fuel Used	Imported Coal		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	85
2.	Stack Diameter	mm	3500
3.	Ambient Temperature	°C	32
4.	Stack Temp	°C	124
5.	Velocity	m/s	9.5
6.	Exit Gas Flow	m ³ /h	329175.0

➤ Test Parameter Results


DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No	Test Parameter	Unit of measurement	Result	Method of Test
1.	Particulate Matter	mg/Nm ³	23	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	38	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	28	IS 11255 (Part 7)

Remarks:

Opinion & Interpretation (if required):


***** End of Report *****

Checked By:



Nikunj D. Patel
(Chemist)

Authorized By:




Jaivik S. Tandel
(Manager - Operations)

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UERL/AIR/F-04/04

Regd. Office : 215, Royal Arcade, Near G.I.D.C., Office, Char Rasta, Vapi-396 195 Gujarat
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat
CIN: U73100GJ2007PTC051463





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TEST REPORT
(STACK MONITORING)

ULR - TC77532300002617F			
Test Report No.	URA/23/03/D/S-010	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/010	Service Request Date	18/03/2023
Sample ID No.	URA/ID/S-23/03/010	Field Data Sheet No.:	URA/FDS/S-23/03/010
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	18/03/2023	Date of Testing	20/03/2023
Stack Sampling Attached to	CFBC Boiler		
Air Pollution Control Device	ESP		
Fuel Used	Imported Coal		

> Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

> General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	115
2.	Stack Diameter	mm	3900
3.	Ambient Temperature	°C	33
4.	Stack Temp	°C	122
5.	Velocity	m/s	9.1
6.	Exit Gas Flow	m ³ /h	391514.8

> Test Parameter Results

DISCIPLINE - CHEMICAL TESTING			NAME OF GROUP - ATMOSPHERIC POLLUTION	
Sr. No	Test Parameter	Unit of measurement	Result	Method of Test
1.	Particulate Matter	mg/Nm ³	17	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	34	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	31	IS 11255 (Part 7)

Remarks:

Opinion & Interpretation (if required):

***** End of Report *****

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jalvik S. Tandel
(Manager - Operations)
UERL/AIR/F-04/04





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**TEST REPORT
(STACK MONITORING)**

ULR - TC775323000002608F			
Test Report No.	URA/23/03/D/S-001	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/001	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/001	Field Data Sheet No.:	URA/FDS/S-23/03/001
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	Flaker Plant 1 (Old)		
Air Pollution Control Device	--		
Fuel Used	Hydrogen		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UURL-D/AIR/SMIK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DT1 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	700
3.	Ambient Temperature	°C	31
4.	Stack Temp	°C	143
5.	Velocity	m/s	9.6
6.	Exit Gas Flow	m ³ /hr	13305.6

➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Specific Value	Method of Test
1.	Particulate Matter	mg/Nm ³	BDL (MDL: 2.0)	<150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	BDL (MDL: 4.0)	<100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	31	<50	IS 11255 (Part 7)

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

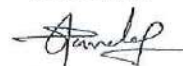
***** End of Report *****

Checked By:



Nikunj D. Patel
(Chemist)

Authorized By:



Jalvik S. Tandel
(Manager - Operations)

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UURL/AIR/F-04/04





TEST REPORT
(STACK MONITORING)

ULR - TC775323000002609F			
Test Report No.	URA/23/03/D/S-002	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/002	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/002	Field Data Sheet No.:	URA/FDS/S-23/03/002
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	Flaker Plant 2 (New)		
Air Pollution Control Device	--		
Fuel Used	Hydrogen		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	700
3.	Ambient Temperature	°C	31
4.	Stack Temp	°C	148
5.	Velocity	m/s	8.6
6.	Exit Gas Flow	m ³ /hr	11919.6

➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	Test Parameter	Unit of measurement	Result	Specific Value	Method of Test
1.	Particulate Matter	mg/Nm ³	BDL (MDL: 2.0)	<150	IS 11255 (Part 1)
2.	Sulphur Dioxide	ppm	BDL (MDL: 4.0)	<100	IS 11255 (Part 2)
3.	Oxide of Nitrogen	ppm	27	<50	IS 11255 (Part 7)

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

***** End of Report *****

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jayvik S. Tandel
(Manager - Operations)

UERL/AIR/F-04/04



Annexure- 13:
ESP efficiency report



BEIL INFRASTRUCTURE LIMITED
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ANALYTICAL RESEARCH LABORATORY



TEST REPORT

MoEF&CC Recognized Laboratory NABL ACCREDITED LAB (TC-8141) ISO 14001 & ISO 45001 Certified Laboratory

Page: 1 of 1

Barcode Id da59231799 Report No/Sample ID TC814122000003225F Report Date 17-Aug-22

Name Of Customer:	DCM SHRIRAM LTD.		
Address Of Customer:	749,GIDC INDUSTRIAL ESTATE,JHAGADIA-393110,DIST.-BHARUCH:.		
Sample Description:	PF Boiler Stack (P-48) Outlet		
Sample Quantity:	01	Sampling Date:	11-Aug-2022
Sampling Location:	PF Boiler (P-48)	Sample Received Date:	12-Aug-2022
Sample Collected By:	By BEIL	Sampling Procedure:	As per IS-11255
Packing Details:	--	Analysis Start Date:	12-Aug-2022
Fuel:	Coal	Analysis Completion Date:	17-Aug-2022
Sampling Start Date & Time:	--	Sample Type:	Stack Emission Sample
Sampling End Date & Time:	--	Sampling Duration:	--

Sr. No	Parameters	Unit	Result	Permissible Limit	Method Ref.
1	Sampling/Masurement (PM-Velocity- Temp°C)	-	Done	--	As per IS-11255
2	Particulate Matter (PM)	mg/Nm3	31.7	--	IS:11255(Part-1),1985(Reaf.1999)

Remarks: Base on particulate matter reduction. ESP Efficiency of Stack NO: P-48 observed is 99.19 %.

.....END OF REPORT.....

For BEIL Infrastructure Ltd.

AUTHORIZED SIGNATORY
MR. SATHISHKUMAR GADDAM
(TECHNICAL MANAGER)

Regd. office & Works Office: Plot No 9701-16, G.I.D.C. Estate, Post Box No 82, Ankleshwar - 393002, Dist - Bharuch (Gujarat)
Tel: (02646) 253135, 225228 | Fax: (02646) 222849 | E-Mail: sathish.gaddam@beil.co.in, meghparad@beil.co.in
CIN NO : U45300GJ1997PLC032696
Terms & Condition are on backside





BEIL INFRASTRUCTURE LIMITED

(Formerly known as Bharuch Infrastructure Ltd.)

ANALYTICAL RESEARCH LABORATORY

TEST REPORT



MoEF&CC Recognized Laboratory

NABL ACCREDITED LAB (TC-8141)

ISO 14001 & ISO 45001 Certified Laboratory

Page: 1 of 1

Barcode Id 847009aba9 Report No/Sample ID TC81412200003222F Report Date 17-Aug-22


Name Of Customer:	DCM SHRIRAM LTD.		
Address Of Customer:	749,GIDC INDUSTRIAL ESTATE,JHAGADIA-393110,DIST.-BHARUCH.		
Sample Description:	CFBC Boiler stack (P-60) Inlet		
Sample Quantity:	01	Sampling Date:	11-Aug-2022
Sampling Location:	CFBC Boiler (P-60)	Sample Received Date:	12-Aug-2022
Sample Collected By:	By BEIL	Sampling Procedure:	As per IS-11255
Packing Details:	--	Analysis Start Date:	12-Aug-2022
Fuel:	Coal	Analysis Completion Date:	17-Aug-2022
Sampling Start Date & Time:	--	Sample Type:	Stack Emission Sample
Sampling End Date & Time:	--	Sampling Duration:	--

Sr. No	Parameters	Unit	Result	Permissible Limit	Method Ref.
1	Sampling/Measurement (PM-Velocity- Temp°C)	-	Done	--	As per IS-11255
2	Particulate Matter (PM)	mg/Nm ³	4853	--	IS:11255(Part-1),1985(Reaf.1999)

Remarks:

----- END OF REPORT -----

For BEIL Infrastructure Ltd.


AUTHORIZED SIGNATORY
MR. SATHISHKUMAR GADDAM
(TECHNICAL MANAGER)

Regd. office & Works Office: Plot No 9701-16, G.I.D.C. Estate, Post Box No 82, Ankleshwar - 393002, Dist - Bharuch (Gujarat)
Tel: (02646) 253135, 225228 | Fax: (02646) 222849 | E-Mail: sathish.gaddam@beil.co.in, meghparadi@beil.co.in
CIN NO : U45300GJ1997PLC032696
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ANALYTICAL RESEARCH LABORATORY



TEST REPORT

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ISO 14001 & ISO 45001 Certified Laboratory

Page: 1 of 1

Barcode Id 340f9cc451 Report No/Sample ID TC814122000003224F Report Date 17-Aug-22

Name Of Customer:	DCM SHRIRAM LTD.		
Address Of Customer:	749,GIDC INDUSTRIAL ESTATE,JHAGADIA-393110,DIST.-BHARUCH.		
Sample Description:	PF Boiler Stack (P-48) Inlet		
Sample Quantity:	01	Sampling Date:	11-Aug-2022
Sampling Location:	PF Boiler (P-48)	Sample Received Date:	12-Aug-2022
Sample Collected By:	By BEIL	Sampling Procedure:	As per IS-11255
Packing Details:	--	Analysis Start Date:	12-Aug-2022
Fuel:	Coal	Analysis Completion Date:	17-Aug-2022
Sampling Start Date & Time:	--	Sample Type:	Stack Emission Sample
Sampling End Date & Time:	--	Sampling Duration:	--

Sr. No	Parameters	Unit	Result	Permissible Limit	Method Ref.
1	Sampling/Measurement (PM-Velocity- Temp°C)	-	Done	--	As per IS-11255
2	Particulate Matter (PM)	mg/Nm3	3926	--	IS:11255(Part-1),1995(Reaf.1999)

Remarks:

----- END OF REPORT -----

For BEIL Infrastructure Ltd.

AUTHORIZED SIGNATORY
MR. SATHISHKUMAR GADDAM
(TECHNICAL MANAGER)

Regd. office & Works Office: Plot No 9701-16, G.I.D.C. Estate, Post Box No 82, Ankleshwar - 393002, Dist - Bharuch (Gujarat)
Tel: (02646) 253135, 225228 | Fax: (02646) 222849 | E-Mail: sathish.gaddam@beil.co.in, meghparad@beil.co.in
CIN NO : U45300GJ1997PLC032696
Terms & Condition are on backside





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Barcode Id 51e7aa7058 Report No/Sample ID TC81412200003223F Report Date 17-Aug-22


Name Of Customer:	DCM SHRIRAM LTD.		
Address Of Customer:	749,GIDC INDUSTRIAL ESTATE,JHAGADIA-393110,DIST.-BHARUCH.		
Sample Description:	CFBC Boiler stack (P-60) Outlet		
Sample Quantity:	01	Sampling Date:	11-Aug-2022
Sampling Location:	CFBC Boiler (P-60)	Sample Received Date:	12-Aug-2022
Sample Collected By:	By BEIL	Sampling Procedure:	As per IS-11255
Packing Details:	--	Analysis Start Date:	12-Aug-2022
Fuel:	Coal	Analysis Completion Date:	17-Aug-2022
Sampling Start Date & Time:	--	Sample Type:	Stack Emission Sample
Sampling End Date & Time:	--	Sampling Duration:	--

Sr. No	Parameters	Unit	Result	Permissible Limit	Method Ref.
1	Sampling/Masurement (PM-Velocity- Temp°C)	-	Done	--	As per IS-11255
2	Particulate Matter (PM)	mg/Nm ³	39.3	--	IS:11255(Part-1),1985(Reaf.1999)

Remarks: Base on particulate matter reduction. ESP Efficiency of Stack NO: P-60 observed is 99.19 %.

..... END OF REPORT

For BEIL Infrastructure Ltd.



AUTHORIZED SIGNATORY
MR. SATHISHKUMAR GADDAM
(TECHNICAL MANAGER)

Regd. office & Works Office: Plot No 9701-16, G.I.D.C. Estate, Post Box No 82, Ankleshwar - 393002, Dist - Bharuch (Gujarat)
Tel: (02646) 253135, 225228 | Fax: (02646) 222849 | E-Mail: sathish.gaddam@beil.co.in, meghparadti@beil.co.in
CIN NO : U45300GJ1997PLC032696
Terms & Condition are on backside





Annexure-14:

Analysis report of Process stacks for the Month of MARCH-23 done by M/S Unistar Environment & Research Labs Pvt Ltd



UniStar
Environment and Research Labs Pvt. Ltd

White House
Near G.I.D.C. Office, Char Rasta
Vapi - 396 195, Gujarat, India
Phone : +91 260 2433966 / 2425640
Email : response@unistar.com Website : www.unistar.com

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Consultant Organization

GPCB Recognized Environmental
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ISO 45001 : 2018
Certified Company

**TEST REPORT
(STACK MONITORING)**

ULR - TC775923000002610F			
Test Report No.	URA/23/03/D/S-003	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/003	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/003	Field Data Sheet No.:	URA/FDS/S-23/03/003
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	Hypo Plant 1		
Air Pollution Control Device	Alkali Scrubber		
Fuel Used	--		

> Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

> General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	300
3.	Ambient Temperature	°C	29

> Test Parameter Results


DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	< 09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit


***** End of Report *****

Checked By:



Nkhun] D. Patel
(Chemist)

Authorized By:




Jaivik S. Tandel
(Manager - Operations)

Page | 9

UERL/AIR/F-04/04

Regd. Office : 215, Royal Arcade, Near G.I.D.C., Office, Char Rasta, Vapi-396 195, Gujarat.
Extended Work Office : G.I.D.C., Dahajil, Bharuch, Gujarat.
CIN: U73100GJ2007PTC051463





TEST REPORT
(STACK MONITORING)

ULR - TC77532300002611F			
Test Report No.	URA/23/03/D/S-004	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/004	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/004	Field Data Sheet No.:	URA/FDS/S-23/03/004
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS, (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	Hypo Plant 2		
Air Pollution Control Device	Alkali Scrubber		
Fuel Used	--		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/05/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	300
3.	Ambient Temperature	°C	30

➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	< 09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

***** End of Report *****

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jalvik S. Tandel
(Manager - Operations)





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TEST REPORT
(STACK MONITORING)

ULR - TC775323000002612F			
Test Report No.	URA/23/03/D/S-005	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/005	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/005	Field Data Sheet No.:	URA/FDS/S-23/03/005
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	HCL Plant 1		
Air Pollution Control Device	Water Scrubber, Alkali Scrubber		
Fuel Used	--		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	100
3.	Ambient Temperature	°C	32

➤ Test Parameter Results


DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Hydrochloric Acid as HCl	mg/Nm ³	2.1	<20
2.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	<09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

***** End of Report *****

Checked By:


Nfkunf D. Patel
(Chemist)

Authorized By:


Jaivik S. Tandel
(Manager - Operations)





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Consultant Organization

GPCB Recognized Environmental
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ISO : 9001 : 2015
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ISO : 45001 : 2018
Certified Company

TEST REPORT
(STACK MONITORING)

ULR - TC775323000002613F			
Test Report No.	URA/23/03/D/S-005	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/006	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/006	Field Data Sheet No.:	URA/FDS/S-23/03/005
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS, (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	HCL Plant 2		
Air Pollution Control Device	Water Scrubber, Alkali Scrubber		
Fuel Used	--		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	100
3.	Ambient Temperature	°C	32

➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Hydrochloric Acid as HCl	mg/Nm ³	2.7	<20
2.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	<09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

***** End of Report *****

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager - Operations)





QCI NABET Accredited EIA
Consultant Organization

GPCB Recognized Environment
Auditor (Schedule - II)

ISO 9001 : 2015
Certified Company

ISO 45001 : 2018
Certified Company

TEST REPORT
(STACK MONITORING)

ULR - TC775323000002614F			
Test Report No.	URA/23/03/D/S-007	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/007	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/007	Field Data Sheet No.:	URA/FDS/5-23/03/007
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	HCL Plant 3		
Air Pollution Control Device	Water Scrubber, Alkali Scrubber		
Fuel Used	-		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	100
3.	Ambient Temperature	°C	32

➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Hydrochloric Acid as HCl	mg/Nm ³	1.7	<20
2.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	<09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

***** End of Report *****

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager - Operations)





QCI-NABL Accredited EIA
Consultant Organization

GPCB Recognized Environmental
Auditor [Schedule-11]

ISO 9001 : 2015
Certified Company

ISO 45001 : 2018
Certified Company

TEST REPORT
(STACK MONITORING)

ULR - TC775323000002615F			
Test Report No.	URA/23/03/D/S-008	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/008	Service Request Date	17/03/2023
Sample ID No.	URA/ID/S-23/03/008	Field Data Sheet No.:	URA/FDS/S-23/03/008
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS. (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	17/03/2023	Date of Testing	18/03/2023
Stack Sampling Attached to	HCL Plant 4		
Air Pollution Control Device	Water Scrubber, Alkali Scrubber		
Fuel Used	--		

➤ Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

➤ General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	100
3.	Ambient Temperature	°C	32

➤ Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Hydrochloric Acid as HCl	mg/Nm ³	2.3	<20
2.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	<09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit
***** End of Report *****

Checked By:

Nilunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager - Operations)





TEST REPORT
(STACK MONITORING)

ULR - TC77532300002618F			
Test Report No.	URA/23/03/D/S-011	Report Issue Date:	25/03/2023
Service Request form No.	URA/SRF/03/011	Service Request Date	18/03/2023
Sample ID No.	URA/ID/S-23/03/011	Field Data Sheet No.:	URA/FDS/S-23/03/011
Name & Add. of Customer	M/s. SHRIRAM ALKALI & CHEMICALS, (A unit of DCM Shriram LTD.) Plot No. 749, GIDC Industrial Estate, Jhagadia, Dist.- Bharuch (393110)		
Date of Sampling	18/03/2023	Date of Testing	20/03/2023
Stack Sampling Attached to	ALCP Plant		
Air Pollution Control Device	Caustic Scrubber		
Fuel Used	-		

> Details of Instrument Used for Monitoring

Instrument Id No.	UERL-D/AIR/SMK/01		
Instrument Name	Stack Monitoring Kit, VSS1	Serial Number	467 DTJ 15
Calibration Date	23/06/2022	Next Calibration Due On	22/06/2023

> General Stack Monitoring Observation

Sr. No.	Description	Unit of measurement	Observation
1.	Stack Height	m	30
2.	Stack Diameter	mm	300
3.	Ambient Temperature	°C	30

> Test Parameter Results

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION	
Sr. No.	Test Parameter	Unit of measurement	Result	GPCB Limits
1.	Chlorine as Cl ₂	mg/Nm ³	BDL (MDL: 1.0)	< 09

Remarks:

Opinion & Interpretation (if required): BDL: Below Detection Limit, MDL: Minimum Detection Limit

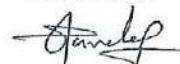
***** End of Report *****

Checked By:



Nikunj D. Patel
(Chemist)

Authorized By:



Jaivik S. Tandel
(Manager - Operations)



Annexure 15
CSWDF Membership Certificate



BEIL INFRASTRUCTURE LIMITED
(formerly known as Bharuch Enviro Infrastructure Limited)

13th June, 2019

To,
DCM Shriram Ltd.
(Unit - Shriram Alkali & Chemicals)
Plot No. 749,
GIDC Estate
Jhagadia.

Sub: Membership Certificate for Common Solid Waste Disposal Facility.

Dear Sir,

We hereby certify that you have become member for the common Solid/Hazardous waste disposal facility developed by Bharuch Enviro Infrastructure Ltd., at GIDC, Ankleshwar and Dahej. You have booked solid waste quantity of **20,000 MT/year**. You have also paid your capacity commitment charges. Your Membership No. is **Jhg/063**.

Waste will be accepted after submitting valid authorization of GPCB.

Thanking you,

Yours faithfully,
For BHARUCH ENVIRO INFRASTRUCTURE LTD.


AUTHORISED SIGNATORY





DETOX INDIA
operated by VEOLIA

"Certificate"

Certificate No.: I03786

To Whomsoever it may concern

This is to certify that

DCM SHRIRAM LIMITED

PLOT NO.749,
GIDC ESTATE JHAGADIA,
BHARUCH

is a valid member of

SAFE ENVIRO PRIVATE LIMITED

SEPL - Magnad

for

Integrated Common Hazardous Waste Management Facility

This membership is valid for a period of
05 Years

Date of issue : 11/05/2022
Date of expiration : 11/05/2027

For, Safe Enviro Private Limited

Place of issue : Surat

Director

SUBJECT TO SURAT JURISDICTION

Safe Enviro Private Limited

Survey No. 868, Village - Magnad, Tal. - Jambusar, Dist. - Bharuch - 392150 (Guj) INDIA

Corporate Office - Detox House, Opp. Gujarat Samachar Press, Udhna Darwaja, Ring Road, Surat-395 002 (Guj) INDIA

Ph : +91 261 2351249, 2346181 | E-mail : info.safeenviro@veolia.com | CIN : U51101GJ2015PTC083237



Annexure 16
Risk Assessment Report

Quantitative Risk Assessment of M/s DCM SHRIRAM LTD.
Unit – Shriram Alkali & Chemicals, Jhagadia



CHAPTER 5 : CONCLUSION AND RECOMMENDATIONS

5.1 SITE SPECIFIC OBSERVATIONS (STRENGTH)

- HAZOP study was carried out by third part.
- All chlorine bullets kept in standard Dyke wall.
- All chlorine bullets provided with all safety gadgets i.e. Level gauge/ alarm, limit switch for over filling.
- Eye washer cum shower installed at safe approachable location in nearby area.
- PPE box kept.
- All PPEs as well as safety equipment required for emergency use such as breathing apparatus, (SCBA set) fire suit, regularly tested and its records maintained
- All chlorine bullets provided with remote operated level instrument which located in control room or office. In addition, high/low level alarms with independent primary sensing device and local displayed.
- Existing fire protection systems installed in the factory confirm to National Building Code (NBC) guideline or as per Rule 66 A of The Gujarat Factories Rules, 1963.
- Appropriate testing and maintenance procedures followed for the fire-fighting equipment.
- SOP with pictogram for storage and handling of Chlorine displayed in prominent manner and in local language at conspicuous places.
- Valid license taken from PESO.
- Unloading operation carried out by trained Operator and under competent supervision.
- Personal protective equipment like helmet, spectacle goggles, PVC hand gloves and safety shoes used while unloading. Respiratory equipment also used.
- Double rupture disc installed.
- Double safety valve installed.
- Load cell provided in each chlorine bullet.
- Remote type valve installed in liquid chlorine line.
- One bullet always kept empty.
- Online Chlorine detection sensor installed.
- Dyke wall provided (impervious flooring with 1:100 slope)
- Temperature alarm installed.
- High- & low-pressure alarm installed.
- 02 no. of wind sock should be provided at maximum height and visible from each point of plant boundary.
- Neutralization system by caustic soda to form sodium hypochlorite product with emergency power supply (3 stage neutralization) installed.
- MSDS or abstract of MSDS displayed near Storage area.



- Separation distance maintained as per Rule 22 of The Static Mobile Pressure Vessel Rule (U) 1981.
- On-site emergency plan updated considering consequences of chlorine – leakage or tank rupture and scenario based mock drills carried out on regular basis.
- ERT team trained on regular basis for different scenario and also for usage of various emergency equipments like SCBA set, specialized PPE, fire hydrant system and emergency tool kit.

5.2 RECOMMENDATIONS:

Attempt has been made to document measures for risk mitigation in case of dominant contributors as identified earlier in above chapter. Following dominant risk contributors are identified based on CRA.

1. Chlorine (100 m³): Toxic area of vapor cloud due to 15 mm leakage
2. Chlorine (100m³): Toxic area of vapor cloud due to Instantaneous release (catastrophic rupture)
3. Chlorine (100 m³): Toxic area of vapor cloud due to Continuous release

In order to bring down the risk level the following risk reduction measures can be followed:

✓ **RECOMMENDATIONS BASED ON DISPERSION MODELING**

The maximum probable extends of damage distance due to Toxic area of vapor cloud will be >10 km.

In order to bring down the risk level the following risk reduction measures can be followed:

- Dry sand / earth kept in sufficient quantity.
- Effective controls proved to prevent overfilling of the storage tank i.e. Level gauge / indicator or any better arrangement. Level transmitter should be provided with high and low alarms. And High high / Low-low level interlocks should be provided to close the on-off valve on inlet line and trip the transfer pump. Level switch should be provided with alarm and interlock provided to close the on-off valve.

5.3 RISK REDUCTION-GENERAL APPROACH

A hazard analysis often reveals opportunities to reduce the consequences arising out of a release. Some consequence-reduction possibilities include

- Reduction of inventories
- Modification of process or storage conditions
- Improvement in secondary containment



Reduction of Inventories

The primary objective should be to reduce the inventory of hazardous material, so that the potential off-site consequences of a release are greatly reduced or even eliminated. Many instances can be cited where it has been possible to operate the plants with considerably lower quantities of raw materials, intermediates and finished products than originally designed.

Improvement in shut-down and secondary containment

If a release does occur it is possible to reduce the amount of material escaping from containment or from the site.

- There are also methods for keeping released material within the plant boundaries. These include:
 - Provision of bunds, curbs in certain situations to prevent the spread of liquid, and also reduce the evaporation rate by reducing the area of the pool.

Reduce Probability of Release

The failure probabilities largely depend upon how effectively Safety is being managed at the plant. This in turn necessitates formal documented Safety Management System (SMS). One that is effective.

Safety Management System (SMS)

Analysis of industrial accidents and disasters has shown clearly that these are not simply a consequence of direct technical failure or operator tasks which were carried out incorrectly. The underlying causes may be deeply rooted in management aspects of the organisation. In some cases, the incidents could have been prevented with a formal Safety Management System (SMS). In other situations, a safety management system was in place, but did not prevent the occurrence of the incident. This suggests the need for a wider application of "best practice" safety management system in industry. Moreover, it raises the question of the quality of such systems.

Safety Management comprises of a number of elements such as

1. Management leadership, commitment and accountability
2. Risk Analysis, Assessment and Management
3. Facilities design and construction
4. Process and facilities information and documentation
5. Personnel safety
6. Health
7. Personnel



**Quantitative Risk Assessment of M/s DCM SHRIRAM LTD.
Unit – Shriram Alkali & Chemicals, Jhagadia**



8. Training
 9. Operation and Maintenance procedures
 10. Work permits and LOTO
 11. Inspection and Maintenance
 12. Reliability and Control of defeat of critical systems & devices
 13. Pollution prevention
 14. Regulatory compliance
 15. Product stewardship
 16. Management of change
 17. Third party services
 18. Incident reporting, analysis and follow-up
 19. Emergency preparedness
 20. Community awareness
 21. Operations integrity assessment and improvement
- Continued efforts spearheading the Safety Management System and making it yet more effective are indicated in the report.

II END OF THE REPORT II



Annexure 17

Pre-Employment Medical Check-up Format (Form-33)

SHRIRAM ALKALI & CHEMICALS

749, GIDC Industrial Estate, JHAGADIA.
Dist. : Bharuch - 393 110 (Gujarat)

Certificate of Fitness of employment in hazardous process and Operations.

Form No. 33

(Prescribed under Rule 68-T and 102)
(Gujarat Factories Rules, 1963)

Date: 15/11/2015

TO BE ISSUED BY FACTORY MEDICAL OFFICER

- 1. Serial number in the register : 57806
- 2. Name of person examined : Arun Rana
- 3. Father's Name : Shantilal Rana
- 4. Sex : Male
- 5. Residence : Bharuch
- 6. Date of birth, if available : 02/02/1997
- 7. Name & address of the factory : D.C.M. Jhagadia
- 8. Department : Engineering
- 9. The worker is employed/proposed :
 - a) Hazardous Process : —
 - b) Dangerous Operation : —

I certify that I Have personally examined the above named person whose identification marks is Male on Card Arun and who is desirous of being employed in above mentioned process / operation and that his / her, age as nearly as can be ascertained from my examination is 21 Years.

In my opinion he / she is fit for employment in the said manufacturing process / operation.

In my opinion he / she is unfit for employment in the said manufacturing process / operation for the reason — He / she is referred for further examination to the Certifying Surgeon.

The serial number of previous certificate is —

Signature or Left Hand Thumb
Impression of the Person

MEDICAL OFFICER
O. & O. CENTRE
SHRIRAM ALKALI & CHEMICALS
GIDC INDUSTRIAL ESTATE
JHAGADIA, BHARUCH
Medical Office with Stamp





DCM SHRIRAM
Growing with trust

Shriram Alkali & Chemicals : Jhagadia - QEOHS Management System

SHRIRAM ALKALI & CHEMICALS, JHAGADIA
PRE-EMPLOYMENT MEDICAL EXAMINATION REPORT (FORM - 33)

Sr. No. :

Date : 19/3/23

Full Name : Arun Shrikeshwarman Ramu

Father's Name : Shrikeshwar Ramu

Date of Birth : 07/07/1991 Age : 31 Blood Group : B⁺

DOJ : 15/3/2023 Department : Inst. Designation : D.M

PHYSICAL EXAMINATION :

Height : 160 Cms Weight : 64 Kgs:

Chest : Normal : - Cms Abdominal : -

Expanded : - Cms Girth : - Cms

Physical Norm & Development (Below normal / Average / Obese / Any Deformity) : _____

EYE :

Distant Vision : RE 6x6 W glasses LE 6x6

Near Vision : RE NAG LE NAG

Colour Vision : AT normal

Any evidence of trachoma or any other disease of eye : nil

CVS :

Heart NAD

Pulse 75 B.P. 135/90 m.m of Hg.

Respiratory System : NAD

CNS : NAD

Abdomen (Liver, spleen, hernia, muscle tone etc.) NAD

Genitourinary System (Hydrocele, Hernia, piles etc.) NAD

EAR

Hearing : (N)

Any evidence of ear diseases : NAD

SKIN :

(N)

Any other abnormalities detected : _____

Marks of identified : none on (N) Agm

Medical Fitness Status : FIT / UNFIT

Remarks : _____

SIGNATURE OF EXAMINEE

MEDICAL OFFICER
D. H. CENTRE
MEDICAL OFFICER
CA.

SAC-OHC-F-05 (1.1)

SAC/OHC/F-05/V.L/16.01.2017



Annexure 18

ISO 9001, ISO14001, ISO45001 certificate



Certificate of Registration

This is to certify that the Management System of:

DCM Shriram Limited (Unit: Shriram Alkali & Chemicals)

749, GIDC Industrial Estate, Jhagadia, District Bharuch - 393 110, Gujarat, India

has been approved by Alcumus ISOQAR and is compliant with the requirements of:

ISO 9001:2015

ISO 14001:2015

ISO 45001:2018



Certificate Number:	9182-Q15-001
Certificate Number:	9182-E15-001
Certificate Number:	9182-OHS-001
Initial Registration Date:	15 March 2011
Previous Expiry Date:	15 March 2023
Recertification Date:	22 - 26 February 2023
Re-issue Date:	28 March 2023
Current Expiry Date:	15 March 2026

Scope of Registration:

Manufacture and Supply of Caustic Soda (Lye & Flakes), Hydrochloric Acid, Chlorine (including Chlorine Cylinder Testing), Hydrogen, Sodium Hypochlorite & Anhydrous Aluminium Chloride

Signed:
Alyn Franklin, Chief Executive Officer
(on behalf of Alcumus ISOQAR)

This certificate will remain current subject to the company maintaining its system to the required standard. This will be monitored regularly by Alcumus ISOQAR. Further clarification regarding the scope of this certificate and the applicability of the relevant standards' requirement may be obtained by consulting Alcumus ISOQAR.



Alcumus ISOQAR Limited, Alcumus Certification, Cobra Court, 1 Blackmore Road, Stretford, Manchester M32 0QY.
T: 0161 865 3699 F: 0161 865 3685 E: isoqarenquiries@alcumusgroup.com W: www.alcumusgroup.com/isoqar
This certificate is the property of Alcumus ISOQAR and must be returned on request.



Annexure 19

Signed an agreement for 50 MW of hybrid wind / solar renewable energy from renew power for its chlor-alkali manufacturing facility in Bharuch.



DCM Shriram Ltd. and ReNew Power

sign an agreement to set up 50 MW hybrid
wind/solar projects for its Manufacturing
facility in Bharuch, Gujarat

**One of the largest corporate renewable power supply deals
in India under captive model**

DCM Shriram has signed an agreement for 50 MW of hybrid Wind/solar renewable energy from ReNew Power for its chlor-alkali manufacturing facility in Bharuch, Gujarat.

The agreements will see renewable energy supplied from ReNew's two upcoming projects in Bhavnagar, Gujarat, to DCM Shriram's Chlor-Alkali manufacturing facility in Bharuch district.

"We as a group are committed to improving our energy footprint and this is a step in that direction".

"With a long-term commitment towards ESG (environmental, social and governance), the captive power agreements for green energy have been signed for 25 years and will mitigate around 2,25,000 tCO₂e (carbon emissions) annually."

The 50-MW hybrid project, which has around 100 MW of wind and solar generation capacity at its backend, is expected to generate around 250 million units of renewable energy every year exclusively for the DCM Shriram's Bharuch facility.

#GreenEnergy



Annexure 20

Responsible Care certificate (JANUARY 2023 to DECEMBER 2025)



