

RLAD PANCH FAWAS <392001>  
A RG693404620IN  
Counter No:1, CP-Code:PA  
To:MINISTRY OF ENVIRONM,  
Bhopal G.P.O., PIN:462001  
From:SRF LIMITED , DAHEJ  
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Ref: SRF-DJ/CP-EC-HY/16-17/02

Date: 22/11/2016

To,  
The Member Secretary SEIAA  
GUJARAT POLLUTION CONTROL BOARD  
Paryavaran Bhawan, Sector 10 A,  
Gandhinagar,  
Gujarat 382010

भारतीय डाक  
RLAD PANCH FAWAS <392001>  
A RG693404514IN  
Counter No:1, CP-Code:PA  
To:GUJARAT POLLUTION CO,  
Gandhinagar (Gujarat) H.O, PIN:382010  
From:SRF LIMITED , DAHEJ  
Wt:280grams,  
Amt:90.00 ,29/11/2016 ,09:54  
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Sub.: Half yearly Environmental Clearance Com

Ref.: "Environment Clearances vide letter No. SEIAA/GUJ/EC/8(a)/251/2012 Dated:September 06, 2016"

Dear Sir,

Please find enclosed herewith Half Yearly Environmental Clearance Compliance Report for your ready reference.

We hope you will find in order.

With warm regards,

Authorized Signatory

भारतीय डाक  
RLAD PANCH FAWAS <392001>  
A RG693404528IN  
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Gandhinagar (Gujarat) H.O, PIN:382010  
From:SRF LIMITED , DAHEJ  
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CC:

- (1) The Member Secretary, GUJARAT POLLUTION CONTROL BOARD, Paryavaran Bhawan, Sector 10 A, Gandhinagar, Gujarat 382010.
- (2) The Chief Conservator Forests (Central), Ministry of Environment & Forests, Regional Office (WZ), E - 5, Area Colony, Link Road - 3, Bhopal - 462016



An ISO 9001-2008, ISO 14001-2004 and OHSAS 18001-2007 Certified Company

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**Compliance of Environmental Clearance SEIAA/GUJ/EC/8(a)/251/2012 Dated 06.09.2012  
(Period April 2016 to September 2016)**

Sr. No.	Conditions	Compliance status
A. Specific Conditions		
A.1 Water		
1.	The fresh water requirement for the Captive Power Plant shall not exceed 3500 KL/day and it shall be met only through water supply from the GIDC. Metering of water shall be done and its records shall be maintained. No ground water shall be tapped in any case for meeting the project requirements.	<b>Complied.</b> It is been ensured that fresh water requirement has not exceeds the 3500 KL/day. Required fresh water shall meet through GIDC only. It has been metered and same records shall be maintained. Water Consumption details attached as <b>Annexure I</b>
2.	Industrial effluent generation from the captive power plant shall be 1350 KL/day and domestic wastewater generation shall be 40 KL/day.	<b>Complied.</b> It is been ensured that effluent generation from Captive Power Plant and domestic has not exceeded the clearance conditions. Effluent Generation details attached as <b>Annexure II</b>
3.	The industrial and domestic wastewaters shall be treated together with the effluent of Chemical Complex in the onsite ETP.	<b>Complied.</b> The industrial and domestic wastewater shall treat on-site ETP and STP.
4.	The wastewater after its primary treatment shall be further treated in Ultra-filtration and RO Units. RO permeate water to the tune of 1112 KL/day shall be reused in process plant, dust suppression and green belt development within the premises whereas RO reject effluent to the tune of 278 KL/day shall be discharged into the GIDC underground drain for its ultimate disposal in deep sea.	<b>Complied.</b> Unit has installed <b>2850 KLPD</b> capacity Ultrafiltration and Reverse Osmosis system with primary treatment for recover the effluent generation from Captive Power Plant. After treatment RO permeated shall reuse in premises and RO reject effluent shall discharge into the GIDC drain for its ultimate disposal in deep sea. The photographs of Ultrafiltration and Reverse Osmosis with primary treatment are attached as <b>Annexure III.</b>
5.	The unit shall install ETP consisting of Collection Tank, pH Control Tank, Tube Settler, Ultra- filtration and RO Units, Reject Tank, Permeate Tank etc. The ETP shall be operated regularly and efficiently in order to achieve the GPCB norms at the discharge point.	<b>Complied.</b> The Effluent Treatment Plant (ETP) & Ultra filtration & RO is installed to treat water as per GPCB norms. Photographs of Effluent Treatment Plant is attached as <b>Annexure III</b>
6.	The unit shall provide metering facility at inlets and outlets of the ETP & RO Plant maintain records of the same and furnish it to the GPCB from time to time.	<b>Complied.</b> Separate meter installed in inlet and Outlet of ETP, MEE, STP and UF & RO plant, and records shall be maintained.
7.	Proper logbooks of ETP & RO Plant operation and also showing the quantity of effluent generation, reuse of RO permeate, discharge of RO Reject effluent, chemical consumption, power consumption etc. shall be maintained and furnished to the GPCB from time to time.	Shall comply.
8.	Rain water harvesting of rooftop, paved area and surface runoff shall be undertaken as proposed in the EIA project of the project and	<b>Complied.</b> The roof-top rain water will transfer through a network of pipes linked through storm water drain. The

Sr. No.	Conditions	Compliance status
	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.	storm water connected to storm water collection sump. Rain water will be transferred from collection tank to Utility collection tank for reuse. Photographs attached <b>Annexure IV.</b>
<b>A.2 Air</b>		
9.	Imported Coal [600 MT/day] OR Indian Coal [180 MT/day] + Imported Coal [420 MT/day] shall be used as fuel in the AFBC Boilers [35 TPH x 2 no. & 60 TPH x 1 no.]. HSD to the tune of 25 KL/day maximum may also be used as a fuel intermittently.	<b>Complied.</b> Coal consumption details attached as <b>Annexure V.</b>
10.	Height of flue gas stack attached to the AFBC Boilers shall be minimum 94 meters.	<b>Complied.</b> Photographs attached as <b>Annexure VI.</b>
11.	High efficiency Electro Static Precipitator (ESP) shall be installed as air pollution control system for the AFBC Boilers and it shall be operated efficiently to achieve the norms prescribed by the GPCB at stack outlet. There shall be provision of one extra field in the ESP to ensure that even though one field goes out of order, the efficiency of the ESP is not affected.	<b>Complied.</b> Photographs attached as <b>Annexure VI.</b>
12.	Online monitoring system shall be installed on the Boiler stacks to monitor PM, SOx, & NOx concentrations in the flue gas emission. This online monitoring system shall be interlocked with plant DCS system in such a manner that if concentration of particulate matter in flue gas emission exceed 100 mg/Nm <sup>3</sup> , utilization of boiler capacity shall reduce accordingly in order to bring down the particulate matter concentration below the 100 mg/Nm <sup>3</sup> . An arrangement shall also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB on real time basis.	<b>Complied.</b> The gaseous emissions shall meet the prescribed standards. Continuous emission monitoring systems installed to monitor the emission levels. Possible interlocking facilities are envisaged for pollution control.
13.	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.	<b>Complied.</b> All mechanical and electrical parts of ESPs under preventive maintenance schedule and are check periodically.
14.	Bag filters shall be provided as air pollution control systems for coal crushing & grinding operations. Bag filters shall be operated efficiently to achieve the norms prescribed by the GPCB at stack outlets.	<b>Complied.</b> Photographs attached as <b>Annexure VI.</b>
15.	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).	<b>Complied.</b> Fugitive Emission Monitoring done on regular basis and report submitted to GPCB, RO Bharuch and MoEF&CC, refer <b>Annexure VII.</b>

Sr. No.	Conditions	Compliance status
	Following indicative guidelines shall also be followed to reduce the fugitive emission.	
	➤ All handling & transport of coal shall be exercised through covered coal conveyors only.	<b>Complied.</b> Conveyer of coal transport is attached as <b>Annexure VII.</b>
	➤ Enclosure shall be provided at coal loading and unloading operations.	<b>Complied.</b> Coal loading and unloading is being done in closed shed. Photographs attached as <b>Annexure VII.</b>
	➤ 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.	<b>Complied.</b> Regular water sprinkling on coal stock pile, photographs attached as <b>Annexure VII.</b>
	➤ All transfer points shall be fully enclosed.	<b>Complied.</b> Conveyer of coal transport is attached as <b>Annexure VII.</b>
	➤ Adequate dust suppression/extraction system at crusher house as well as for the coal stock yard shall be provided to abate dust nuisance	<b>Complied.</b> Dust collectors are installed to abate the nuisance of dust in power plant.
	➤ Accumulated dust on the ground and other surfaces shall be removed / swept regularly and water the area after sweeping.	<b>Complied.</b> Housekeeping is maintained regularly in power plant. Photographs attached as <b>Annexure VII.</b>
	➤ Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	<b>Complied.</b> Photographs attached as <b>Annexure VII.</b>
	➤ Air borne coal dust shall be controlled with water sprinklers at suitable locations in the plant.	<b>Complied.</b> For controlling of air borne dust, Water sprinkling on regular basis on coal stock pile and fly ash stored in silo.
	➤ Coal shall be transported through covered trucks only whereas fly ash shall be transported through enclosed containers only.	<b>Complied.</b> Both coal and fly ash transported in covered vehicle only.
	➤ A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.	<b>Complied.</b> Photographs of Green Belt are attached as <b>Annexure XIV.</b>
16.	Third party performance evaluation of the air pollution control systems including ESP shall be carried out at least once in a year to check its performance and efficiency through a reputed institute / organization like NPC, L.D. College of Engineering -Ahmedabad or such other institutes of similar repute, and its records shall be maintained.	<b>Complied.</b> ESP performance evaluation Work done by GPCB approved Schedule 1 auditor SHREE TAPI BRAHMCHARYASHRAM SABHA COLLEGE OF DIPLOMA ENGINEERING, report is attached as <b>Annexure – VIII.</b>
17.	Regular monitoring of ground level concentration of PM2.5, PM10, and NOx & SO2 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	<b>Complied.</b> The company has set-up adequate no. of ambient air quality monitoring stations. Monitoring Reports is attached as <b>Annexure IX.</b>

Sr. No.	Conditions	Compliance status
	monitoring shall be decided in consultation with the GPCB.	
<b>A.3 Hazardous / Solid waste</b>		
18.	The company shall strictly comply with the rules and regulations with regards to handling and disposal of Hazardous waste in accordance with the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules 2008, as may be amended from time to time. Authorization from the GPCB shall be obtained for collection / treatment / storage / disposal of hazardous wastes.	<b>Complied.</b>
19.	Hazardous waste sludge shall be packed and stored in separate designated hazardous waste storage facility with impervious bottom and leachate collection facility, before its disposal.	<b>Complied.</b> Hazardous wastes sludge shall be dewatered, packed & stored at earmarked areas with impervious flooring & leachate collection facility.
20.	ETP sludge shall be sent to the nearest common TSDF.	<b>Complied.</b> We would abide by the rules & regulations for handling & disposal of hazardous waste & membership of BEIL, Ankleshwar TSDF site is already taken. <b>Annexure X.</b>
21.	The used oil shall be sold to only to the registered recyclers / rerefiners.	<b>Complied.</b> Generation and disposal of used oil record is maintained and submitted to GPCB in Form 4 regularly. Copy of Submitted Form 4 is attached as <b>Annexure XI.</b>
22.	The discarded containers / barrels / bags / liners shall be sold only to the registered recycler after decontamination.	<b>Complied.</b> Generation and disposal of discarded containers/barrels record is maintained and submitted to GPCB in Form 4 regularly. Copy of Submitted Form 4 is attached as <b>Annexure XI.</b>
23.	For storage of fly ash, closed silos of adequate capacity shall be provided. No ash pond shall be constructed in the project.	<b>Complied.</b>
24.	The ash shall be supplied to the manufacturers of ash based products such as cement, concrete blocks, bricks, panels, etc. The unit shall strictly comply with the Fly Ash Notification under EPA and it shall be ensured that there is 100% utilization of ash to be generated from the unit.	<b>Complied.</b> Fly ash shall be utilized as per the provisions of Fly Ash Notification, 1999, subsequently amended in 2009. Fly ash shall be stored in ash silo and 100% used in the brick and cement manufacturing. <b>Annexure – XII.</b>
<b>A.4 Safety</b>		
25.	Fire protection system based on Tariff Advisory Committee (TAC) and National Fire Protection Association (NFPA) approved guidelines shall be provided. It shall consist of fire hydrant system all around the plant area and storage yards, high velocity water spray system for transformers, automatic fire	<b>Complied.</b>

Sr. No.	Conditions	Compliance status
	detection and alarm, manual fire alarm system, portable fire extinguishers etc.	
26.	Personal Protective Equipment shall be provided to workers and its usage shall be ensured and supervised.	<b>Complied.</b> Required PPEs are provide to concerned workers and are regularly supervised.
27.	First Aid Box and required antidotes for the chemicals used in the unit shall be made readily available in adequate quantity at all the times.	<b>Complied.</b> Adequate and well equipped first aid boxes are maintained at various plant sections. Required antidotes are made available at occupational health Centre at factory main gate.
28.	Hazardous materials storage shall be at an isolated designated location. Storage and use of hazardous chemicals shall be minimized to the extent possible and all necessary precautions shall be taken to mitigate the risk generated out of it.	<b>Complied.</b> All efforts are made to minimize their usage.
29.	Storage of hazardous chemicals shall be in multiple small capacity tanks / containers instead of one single large capacity tank for safety purpose.	<b>Complied.</b>
30.	All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Bund/dyke walls shall be provided for the storage tanks. Close handling system for chemicals shall be provided.	<b>Complied.</b> Proper dyke and bunds are provided around transfer pump area & necessary safety precautions are taken.
31.	All transporting routes within the factory premise shall have paved roads to minimize splashes and spillages.	<b>Complied.</b> All transporting routes within the factory
32.	Training shall be given to all workers on safety and health aspects.	<b>Complied.</b> Regular training of workers and staff is conducted on Safety and Health aspects for chemical handling and other areas.
33.	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the Factories Act and Rules. Pre-employment and periodical medical examination for all workers shall be undertaken as per the statutory requirements.	<b>Complied.</b> Pre-employment and periodical medical examination of all workers, contractors and staff is conducted regularly as per defined schedule.
<b>A.5 Noise</b>		
34.	To minimize the noise pollution the following noise control measures shall be implemented:	
	Selection of any new plant equipment shall be made with specification of low noise levels.	<b>Complied.</b>
	Manufacturers / suppliers of major noise generating machines / equipment like air compressors, feeder pumps, turbine generators, etc. shall be instructed to make required design modifications wherever possible before supply and installation to mitigate the noise generation and to comply with the national / international regulatory	<b>Complied.</b>

Sr. No.	Conditions	Compliance status
	norms with respect to noise generation for individual units	
	Regular maintenance of machinery and vehicles shall be undertaken to reduce the noise impact.	<b>Complied.</b> Regular maintenance of machinery and vehicles is being carried out to reduce the noise impact.
	Noise suppression measures such as enclosures, buffers and / or protective measures shall be provided.	<b>Complied.</b>
	Employees shall be provided with ear protection measures like earplugs or earmuffs.	<b>Complied.</b> We are being provided earplugs / earmuff to employees.
	Proper oiling, lubrication and preventive maintenance shall be carried out of the machineries and equipments to reduce noise generation.	<b>Complied.</b> The proper oiling, lubrication and preventive maintenance of equipment is being carried out to control noise generation.
	Construction equipment generating minimum noise and vibration shall be chosen.	Shall comply.
	Ear plugs and/muffs shall be made compulsory for the construction workers working near the noise generating activities / machines / equipment.	<b>Complied.</b>
	Vehicles and construction equipment with internal combustion engines without proper silencer shall not be allowed to operate.	<b>Complied.</b>
	Construction equipment meeting the norms specified by EP Act, 1986 shall only be used.	<b>Complied.</b>
	Noise control equipment and baffling shall be employed on generators especially when they are operated near the residential and sensitive areas.	<b>Complied.</b>
	Noise levels shall be reduced by the use of adequate mufflers on all motorized equipment.	<b>Complied.</b>
35.	The overall noise level in and around the plant area shall be kept well within the prescribed standards by providing noise control measures including acoustic insulation, hoods, silencers, enclosures, vibration dampers etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under the Environment (Protection) Act and Rules. Workplace noise levels for workers shall be as per the Factories Act and Rules.	<b>Complied.</b> Necessary action has been taken care to maintain noise levels in and around the plant area. The personal protective equipment (PPE) is provided to workers & employees working in noisy areas. Noise level monitoring is carried out regularly. Reports attached as <b>Annexure XIII.</b>
<b>A.6 Green Belt</b>		
36.	The unit shall develop green belt in at least 3,88,646.67 m <sup>2</sup> [33% of the total plot area] within the premises. Green belt shall comprise of rows of varying height tall native trees with thick foliage in the periphery of the factory premises.	<b>Complied.</b> Out of 118.17 ha, 35.75 ha is projected area and 12.30 ha is developed by green belt which is 34% of projected area.  Approx. 12484 Nos. of trees has been planted in South and West side of plant premises.

Sr. No.	Conditions	Compliance status	
		<b>Plant Local Name</b>	<b>Botanical Name</b>
		Ashoka	Saraca asoca
		Badam	Almond
		Bottle Brush	Callistemon
		Bottle Palm	palmiste gargoulette
		Gulmohar	Delonix regia
		Karanj	Pongam oiltree
		Kasid	Cassiacimia
		Neem	Azadirachta indica
		Nil Giri	Eucalyptus
		Parash Pipal	Thingnam Girija
		Sapatparni	Alstonia
		Saru	Casurina
Photographs of Green Belt are attached as <b>Annexure XIV</b> .			
37.	The unit shall also take up adequate plantation at suitable open land on road sides and other open areas in nearby villages or schools in consultation with the GIDC / Gram Panchayat / GPCB and submit an action plan for the same for next three years to the GPCB.	Shall comply.	
<b>B. Other Conditions</b>			
38.	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.	Shall comply.	
39.	The company shall vigorously follow the recommendations mentioned in the Charter on Corporate Responsibility for Environment Protection (CREP) published by the Central Pollution Control Board	<b>Complied.</b> The recommendations made in the charter on Corporate Responsibility for Environment Protection (CREP) shall be complied	
40.	A separate Environment Management Cell equipped with full-fledged laboratory facilities and qualified personnel shall be set up to carry out the environment management and monitoring functions and a separate budget shall be allocated for this purpose.	<b>Complied.</b> We have separate Environmental Management Cell equipped with full-flagged laboratory facility to carry out environmental management and monitoring function. The report of this group is directly to head of the location.	
41.	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.	<b>Complied.</b> Budget allocated for environment safeguard will not be diverted for other purposes.	
42.	Pucca flooring / impervious bottom shall be provided in the work areas, chemical storage areas and chemical handling areas to minimize soil contamination.	<b>Complied.</b> Work areas, chemical storage areas and chemical handling areas with impervious flooring, shed and spillage/ leakage collection system to eliminate spillages going on to the	



Sr. No.	Conditions	Compliance status
		land and thus land/ soil contamination.
43.	Leakages from the pipes, pumps, shall be minimal and if occurs, shall be arrested promptly. During material transfer, spillages shall be avoided and garland drain be constructed.	<b>Complied.</b> Garland drains have been made around the material storage to avoid spillage.
44.	The project management shall vigorously implement the recommendations / suggestions stated in the EIA report of the project.	<b>Complied.</b>
45.	The company shall carry out socio-economic developmental / community welfare activities in consultation with the District Development Officer / District Collector.	<b>Complied.</b> CSR activities attached as <b>Annexure-XV.</b>
46.	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
47.	No further expansion or modifications in the plant likely to cause environmental impacts shall be carried out without obtaining prior Environment Clearance from the competent authority.	<b>Complied.</b>
48.	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.	<b>Complied.</b>
49.	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 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.	<b>Complied.</b> The condition regarding information the public about the EC of 2012 had published in local newspaper. Copy of advertise is attached <b>Annexure- XVI.</b>
50.	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 hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.	<b>Complied.</b>
51.	The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.	Noted

Sr. No.	Conditions	Compliance status
52.	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
53.	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.	Noted
54.	The above conditions shall 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 Trans boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted
55.	This environmental clearance is valid for five years from the date of issue.	<b>Complied.</b>