S. M. SAIYAD, IFS
MEMBER SECRETARY
SEIAA (GUJARAT)

सत्यमेव जयते
Government of Gujarat

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY GUJARAT

No. SEIAA/GUJ/EC/4(d),5(f)&1(d)/649/2020 Date: 9 JUN 2020 BY R.P.A.D.

Amendment to Environment Clearance Order No:- SEIAA/GUJ/EC/5(f)&1(d)/43/2013 dated 04/03/2013.

(Under the provision of Environmental Impact Assessment (EIA) Notification, 2006)

In exercise of the power conferred under the provision of Environmental Impact Assessment (EIA) Notification, 2006 under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986, the Environment Clearance granted to **Gujarat Alkalis and Chemicals Limited,** vide this office letter no. **SEIAA/GUJ/EC/1(d),4(d)&5(f)/268/2018 dated 19/03/2018 & SEIAA/GUJ/EC/1(d)/1766/2019 dated 11/12/2019,** is being subjected to amendment for the following change in the project.

And whereas project proponent has applied for amendment in the environmental clearance vide their online proposal no. SIA/GJ/IND2/136256/2020 dated 10/01/2020. The project was scheduled for hearing in the SEAC meeting held on 17/03/2020.

The SEAC, Gujarat had recommended the project vide their letter dated 05/05/2020 to grant amendment (Bifurcation) in Environmental Clearance to the SEIAA, Gujarat based on the decision taken during SEAC meeting held on 17/03/2020. The proposal was considered by SEIAA, Gujarat in its meeting held on 19/05/2020 at Gandhinagar. After careful consideration, Environment Clearance order is hereby amended (Bifurcated) as under, subject to amendment with respect to changes in the planning of the project.

➢ **Details of Production:**

S/N	Name of Products	Quantity (MT/MONTH)	Capacity Quantity (MT/MONTH)	
			GACL	GNAL
A. Chlor-Alkali Plant (800 TPD)				
1	Caustic Soda (100%) Lye/ Prills / Flakes	24000	0	24000
2	Chlorine Gas	21300	0	21300
3	Hydrochloric acid	5580	0	5580
4	Hydrogen Gas	600	0	600
5	Sodium Hypochlorite	1020	0	1020
6	Dilute Sulphuric acid (78-80%)	480	0	480
B. Chlorotoluene Plant (205 TPD)				
1	Benzyl chloride	3000	3000	0
2	Benzaldeyde	1500	1500	0
3	Benzyl Alcohol	1650	1650	0
Co-products / Bi-products are listed below				
4	Benzoyl chloride	150	150	0
5	Cinnamic aldehyde	150	150	0
6	Benzyl acetate	450	450	0
7	*Benzal chloride (Intermediate Product)*	2550	2550	0
8	Sodium benzoate	120	120	0
9	Di benzyl ether	450	450	0
10	Hydrochloric acid	5100	5100	0
C. Chlorinated Paraffin Wax Plant (100 TPD)				
1	Chlorinated Paraffin Wax	3000	3000	0
2	Hydrochloric Acid (33%)	5400	5400	0
3	Sodium hypochlorite	1290	1290	0
D. Epichlorohydrine (ECH) Plant (84 TPD)				
1	Epichlorohydrine (ECH)	2520	2520	0
E. Chloromethanes (CLM) Plant (300 TPD)				
1	Chloromethanes (CLM)	9000	9000	0
F	Coal Based Captive Power Plant	195 MW	65 MW	130 MW

➢ **Details of location and power :**

Item	Details		
	As per EC	GACL	GNAL
Location	Plot No.: DII/9, GACL Dahej, Taluka: Vagra, District: Bharuch, Gujarat	Plot No.: DII/9, GACL Dahej, Taluka: Vagra, District: Bharuch, Gujarat	Plot No.: DII/9/1 & DII/9/2, GACL Dahej, Taluka: Vagra, District: Bharuch, Gujarat
Area	7,68,709.98 m^2	3,77,710 m^2	3,90,999.98 m^2
Power Requirement & Source	Power supply from grid (Dakshin Gujarat Vij Co. Ltd.) Captive Power Plant : 195 MW Stand By: 5 D.G Sets	Power supply from grid (Dakshin Gujarat Vij Co. Ltd.) Captive Power Plant : 65 (1*65) MW Stand By: 2 D.G Sets (1×225 & 1×1000 kVA)	Power supply from grid (Dakshin Gujarat Vij Co. Ltd.) Captive Power Plant : 130 (2×65) MW Stand By: 3 D.G Sets (3×1000 kVA)

➢ **Details of water requirement & Source: The water source is GIDC Dahej water supply.**

Item	Details		
	As per EC	GACL	GNAL
Total Water Requirement	19202 KLD	2755 KLD	16447 KLD
Recovery/Reuse	2984 KLD	292 KLD	2692 KLD
Net Water Requirement	16218 KLD	2463 KLD	13755 KLD

➢ **Water consumption details:**

S. No.	Source	Quantity of Water Consumption, KLD		
		EC Received	GACL	GNAL
1	Domestic	125	25	100
2	Process	6385	1642	4743
3	Washing & Safety Shower	75	20	55
4	Boiler feed	1590	530	1060
5	Cooling make up	10652	538	10114
6	Gardening	375	0	375
Total Water requirement		19202	2755	16447
Recovery/Reuse		2984	292	2692
Net water requirement		16218	2463	13755

➢ **Details of effluent generation:**

Item	Details		
	As per EC	GACL	GNAL
Effluent Generation (**KLPD**), Treatment and Disposal:			
Domestic	100	20*	80*
Process	715	175	540
Washing & Safety Shower	70	20	50
Boiler	604	199	405
Cooling	1982	102	1880
Others	650	42	608
Total industrial	**4021**	**538**	**3483**
Total	**4121**	**558**	**3563**
Reuse after RO	3846 KLD	363 KLD 272 RO permeate + 91 RO reject**)	3483 KLD (2612 RO permeate + 871 RO reject**)
After treatment disposed to drain	175 KLD	175 KLD	0 KLD
Sewage generation of 20 KLD & 80 KLD will be treated in STP and reused for gardening			

***RO reject of 91 KLD & 871 KLD will be used for sprinkling in coal handling units and dust suppression.*			
Details of Air Emissions:			
Air emission	Flue Gas Stacks: 5 Nos Process Vents: 5 Nos.	Flue Gas Stacks: 3 Nos. Process Vents: 3 Nos.	Flue Gas Stacks: 2 Nos. Process Vents: 2 Nos.
Hazardous Solid Waste treatment and Disposal	GACL: Membership with TSDF & CHWIF of BEIL have been obtained vide letter no. BEIL/ANK/2017 dated 18.08.2017 GNAL: Membership with TSDF & CHWIF of BEIL have been obtained vide letter no. BEIL/ANK/2017 dated 03.03.2017		

➢ **Details of fuel consumption and flue gas stacks:**

S. No.	Stack Attached to	Type of Fuel	EC Received	GACL	GNAL
1	Boilers – 280 TPH (3 Nos.)	Imported Coal	963600 MTPA	321200 MTPA	642400 MTPA
2	DG Sets (3×1,000 kVA each)	HSD	750 LPH	--	750 LPH
3	DG Set (1×225 kVA)	HSD	50 LPH	50 LPH	--
5	DG Set (1×1000 kVA)	HSD	910 LPA	910 LPA	--

➢ **Fuel consumption and APCM details of GACL:**

S. No.	Stack Attached to	Stack Height (M)	Nos of stacks	Type of Fuel	Quantity of fuel consumption	Air Pollution Control Measures
1	D. G. Set (1*225 kVA)	9	1	HSD	50 LPH	Adequate Stack Height
2	D. G. Set (1*1000 kVA)	9	1	HSD	910 LPA	Adequate Stack Height
3	Boilers – 280 TPH (1 Nos.)	50	1	Imported Coal	892 TPD	ESP

➢ **Fuel consumption and APCM for GNAL:**

S. No.	Stack Attached to	Stack Height (M)	Nos of stacks	Type of Fuel used	Quantity of fuel consumption	Air Pollution Control Measures
1	Boilers – 280 TPH (2 Nos.)	40	2	Imported Coal	1784.4 TPD	ESP
2	D. G. Set (3*1000 kVA each)	15	1	HSD	750 LPH	Adequate Stack Height

➢ **Details of process vents:**

Stack Attached to	Nos. of Stack	Stack Height in m	Pollutants Emitted	Air Pollution Control Measure
Waste air de-chlorination unit	1	30	Cl2	3 Stage Caustic Scrubbing System
HCl synthesis Unit	1	30	HCl, Cl2	Single Stage DM Water Scrubbing System
Reactor of Chlorotoluene	1	33	HCl, Cl2	Caustic Soda Scrubber
Reactor of MCA — Sec I	1	30	HCl, Cl2, CO, SO2, Nox, HC, Dioxin	Water + Alkali Scrubber
Incinerator of ECH Plant	1	25	Nox, CO, HCl, C2H4Cl2, TOC, Dioxin (< 0.1 ng-TEQ/Nm³), NG (30 Nm3/Hr) will be used as start-up fuel	Caustic Scrubber

➢ **Details of process vents for GACL:**

Stack Attached to	Nos. of Stack	Stack Height in m	Pollutants Emitted	Air Pollution Control Measure
Reactor of Chlorotoluene	1	33	HCl, Cl2	Caustic Soda Scrubber
Reactor of MCA — Sec I	1	30	HCl, Cl2, CO, SO2, Nox, HC, Dioxin	Water + Alkali Scrubber
Incinerator of ECH Plant	1	25	Nox, CO, HCl, C2H4Cl2, TOC, Dioxin (< 0.1 ng-TEQ/Nm³), NG (30 Nm3/Hr) will be used as start-up fuel	Caustic Scrubber

➢ **Process vents details of GNAL:**

Stack Attached to	Nos. of Stack	Stack Height in m	Pollutants Emitted	Air Pollution Control Measure
Waste air De-Chlorination Unit	1	30	Cl2	3 Stage Caustic Scrubbing System
HCl synthesis Unit	1	30	HCl, Cl2	Single Stage DM Water Scrubbing System

➢ **Details of Land distribution of GACL:**

S. No.	Area	Area in m^2	% of Plot Area
1	Coal Based CCPP	33854	8.96
2	Chlorine Park	112350	29.74
3	Future Expansion	16904	4.47
4	Open Space	30777	8.14
5	Green belt	124644	33.0
6	Others	59181	15.66
	Total	**377710**	**100 %**

➢ **Details of Land distribution of GNAL:**

S. No.	Area	Area in m^2	% of Plot Area
1	Coal Based CCPP	67708	17.31
2	Area for Common Utilities	50418	12.89
3	Caustic Soda Plant	63531	16.24
4	Switch Yard	3730	0.95
5	Open Space	7341	1.87
6	Truck Parking	41406	10.58
7	Roads	27509	7.03
8	Green belt	129356	33.08
	Total	**390999**	**100 %**

➢ **Detail of hazardous waste is as under:**

S. No.	Type of Waste	HW Category	HW Generation (TPA)			Treatment/Disposal.
			EC received	GACL	GNAL	
1	High M.P. Liquid Impurities	26.1	666	666	0	Incinerator (In house/ BEIL-Dahej)
2	Used/ Spent Oil	5.1	100.0531	0.531	100	To GPCB authorized reprocesses
3	Discarded drums and containers	33.1	6,000 Nos./year	3000	3000	Collection, decontamination & sold to GPCB authorized recyclers
4	Oil Contaminated cotton rags or other cleaning materials	33.2	1	0.5	0.5	Incinerator (In house/ BEIL-Dahej)
5	ETP waste	35.3	250.2	150.2	100	TSDF of BEIL-Dahej
6	Incineration Ash	37.2	80	80	0	TSDF of BEIL-Dahej
7	Waste residue from industrial use of paint	21.1	0.85	0.425	0.425	sold to Authorized recyclers by auction process
8	Lead washers etc. as Lead scrap	Schedule	5.0	2.5	2.5	Sold to recyclers registered with MSTC

		II-A5				and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
9	Nickel Scrap	Schedule II-A68	5.0	2.5	2.5	
10	Copper tubing, caps and cables etc. – As Copper scrap	Schedule II-A66	11.0	5.5	5.5	
11	Spent Carbon	36.2	5.0	5	0	Incinerator (In house/ BEIL-Dahej)
12	Discarded bags / liner / packing material, Discarded PPEs, gaskets	33.3	90	45	45	Will be sold to Authorized recyclers by auction process
Non-Hazardous						
1	Brine Sludge	-	28,800	0	28800	TSDF of BEIL-Dahej
2	Fly Ash	-	1,50,000	50000	100000	Shall be given to Fly ash Brick / Cement manufacturing Industries as per provisions and guidelines of the Fly Ash notification, 1999 as amended till date
Solid Waste						
1	Municipal Solid Waste	-	375 (Construction phase = 150 kg/day Operation phase = 225 kg/day)	185	190	Shall be handled as per the Solid Waste Management Rules, 2016 as amended from time to time
2	Biomedical Wastes	-	As and when generated	As and when generated	As and when generated	Shall be handled as per the Bio-Medical Waste Management Rules, 2016 as amended from time to time
3	Used Lead Acid Batteries	-	As and when generated	As and when generated	As and when generated	Shall be handled as per the Batteries (Management & Handling) Rules, 2010 as amended from time to time
4	Electronic wastes	-	As and when generated due to equipment obsolescence	As and when generated	As and when generated	Shall be handled as per the E-Waste (Management & Handling) Rules, 2011 as amended from time to time
5	Construction and Demolition (C&D) Wastes	-	Generated during project Construction phase & maintenance / repair work during Operation Phase	As and when generated	As and when generated	Handled as per the Construction and Demolition Waste Management Rules, 2016 as amended from time to time

➢ **Detail of hazardous waste for GACL:**

S. No.	Type of Waste	HW Category	HW Generation (TPA)	Treatment/Disposal.
1	High M.P. Liquid Impurities	26.1	666	Incinerator (In house/ BEIL-Dahej)
2	Used/ Spent Oil	5.1	0.531	To GPCB authorized reprocesses
3	Discarded drums and containers	33.1	3000 Nos./year	Collection, decontamination & sold to GPCB authorized recyclers
4	Oil Contaminated cotton rags or other cleaning materials	33.2	0.5	Incinerator (In house/ BEIL-Dahej)
5	ETP waste	35.3	150.2	TSDF of BEIL-Dahej
6	Incineration Ash	37.2	80	TSDF of BEIL-Dahej
7	Waste residue from industrial	21.1	0.425	sold to Authorized recyclers by auction

	use of paint			process
8	Lead washers etc. as Lead scrap	Schedule II-A5	2.5	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
9	Nickel Scrap	Schedule II-A68	2.5	
10	Copper tubing, caps and cables etc. – As Copper scrap	Schedule II-A66	5.5	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
11	Spent Carbon	36.2	5	Incinerator (In house/ BEIL-Dahej)
12	Discarded bags / liner / packing material, Discarded PPEs, gaskets	33.3	45	Will be sold to Authorized recyclers by auction process
Non-Hazardous				
1	Fly Ash	-	50000	Shall be given to Fly ash Brick / Cement manufacturing Industries as per provisions and guidelines of the Fly Ash notification, 1999 as amended till date
Solid Waste				
1	Municipal Solid Waste	-	185	Shall be handled as per the Solid Waste Management Rules, 2016 as amended from time to time
2	Biomedical Wastes	-	As and when generated	Shall be handled as per the Bio-Medical Waste Management Rules, 2016 as amended from time to time
3	Used Lead Acid Batteries	-	As and when generated	Shall be handled as per the Batteries (Management & Handling) Rules, 2010 as amended from time to time
4	Electronic wastes	-	As and when generated	Shall be handled as per the E-Waste (Management & Handling) Rules, 2011 as amended from time to time
5	Construction and Demolition (C&D) Wastes	-	As and when generated	handled as per the Construction and Demolition Waste Management Rules, 2016 as amended from time to time

➢ **Details of Hazardous Waste for GNAL:**

S. No.	Type of Waste	HW Category	HW Generation (TPA)	Treatment/Disposal.
1	Used/ Spent Oil	5.1	100	To GPCB authorized reprocesses
2	Discarded drums and containers	33.1	3000 Nos./year	Collection, decontamination & sold to GPCB authorized recyclers
3	Oil Contaminated cotton rags or other cleaning materials	33.2	0.5	Incinerator (In house/ BEIL-Dahej)
4	ETP waste	35.3	100	TSDF of BEIL-Dahej
5	Waste residue from industrial use of paint	21.1	0.425	sold to Authorized recyclers by auction process
6	Lead washers etc. as Lead scrap	Schedule II-A5	2.5	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
7	Nickel Scrap	Schedule II-A68	2.5	
8	Copper tubing, caps and cables etc. – As Copper scrap	Schedule II-A66	5.5	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
9	Discarded bags / liner / packing material, Discarded PPEs, gaskets	33.3	45	Will be sold to Authorized recyclers by auction process
Non-Hazardous				
1	Brine Sludge	-	28800	TSDF of BEIL-Dahej
2	Fly Ash	-	100000	Shall be given to Fly ash Brick / Cement manufacturing Industries as per provisions and guidelines of the Fly Ash notification, 1999 as amended till date
Solid Waste				

1	Municipal Solid Waste	-	190	Shall be handled as per the Solid Waste Management Rules, 2016 as amended from time to time
2	Biomedical Wastes	-	As and when generated	Shall be handled as per the Bio-Medical Waste Management Rules, 2016 as amended from time to time
3	Used Lead Acid Batteries	-	As and when generated	Shall be handled as per the Batteries (Management & Handling) Rules, 2010 as amended from time to time
4	Electronic wastes	-	As and when generated	Shall be handled as per the E-Waste (Management & Handling) Rules, 2011 as amended from time to time
5	Construction and Demolition (C&D) Wastes	-	As and when generated	handled as per the Construction and Demolition Waste Management Rules, 2016 as amended from time to time

➢ **Details of bifurcation of the environmental clearance conditions:**

PARENT EC CONDITIONS & EC CONDITIONS AFTER BIFURCATION			
No.	**After Bifurcation for GACL**	**After Bifurcation for GNAL**	**Remarks**
A.1	**Specific Condition**		
1	Leak Detection and Repair (LDAR) program shall be prepared and, implemented as per the CPCB guidelines.	Leak Detection and Repair (LDAR) program shall be prepared and, implemented as per the CPCB guidelines.	EC 2018, S.No.1
2	Intermediate products/By-products mentioned in the product list qualifying the hazardous and other Wastes (Management and Transboundary 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 provisions of said rules shall be complied in letter and spirit.	Intermediate products/By-products mentioned in the product list qualifying the hazardous and other Wastes (Management and Transboundary 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 provisions of said rules shall be complied in letter and spirit.	EC 2018, S.No.2
3	The company shall submit the list of authorized end users of above mentioned wastes along with MoU signed with them at least two months in advance prior to commencement of Production. In absence of potential buyers of these items, the unit shall restrict the production of respective item.	The company shall submit the list of authorized end users of above mentioned wastes along with MoU signed with them at least two months in advance prior to commencement of Production. In absence of potential buyers of these items, the unit shall restrict the production of respective item.	EC 2018, S.No.3
4	Continuous Emission Monitoring System (CEMS) shall be provided for monitoring of air pollutants and waste water discharge.	Continuous Emission Monitoring System (CEMS) shall be provided for monitoring of air pollutants and waste water discharge.	EC 2018, S.No.4
5	--	The Company shall install online chlorine gas detectors to detect leakage of chlorine at liquid chlorine storage tanks, chlorine bottling area/sodium hypo plant at vent pipe, HCl synthesis unit and electrolyser area.Water scrubber shall be provided in the HCl plant for absorption of chlorine/HCl from 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.	EC 2018, S.No.5 (Condition applicable to Chlor-alkali plant only)
6	--	Fugitive emissions shall be regularly monitored and data recorded chlorine sensors shall be installed in the chlorine storage area at lower level between the tanks.	EC 2018, S.No.6 (As CL2 storage will in GNAL only)
7	Unit shall comply all the conditions & recommendations mentioned in the guidelines	Unit shall comply all the conditions & recommendations mentioned in the guidelines	EC 2018, S.No.7
8	All measures shall be taken to prevent soil and ground water contamination.	All measures shall be taken to prevent soil and ground water contamination.	EC 2018, S.No.8

9	The project proponent shall submit the detailed study report to Gujarat Pollution Control Board (GPCB) at least once in a year comprising details of percolation rate of surface water, ground water analysis and observations of contamination to soil & ground water (If any) and mitigation measures to curb ground water & Soil contamination.	The project proponent shall submit the detailed study report to Gujarat Pollution Control Board (GPCB) at least once in a year comprising details of percolation rate of surface water, ground water analysis and observations of contamination to soil & ground water (If any) and mitigation measures to curb ground water & Soil contamination.	EC 2018, S.No.9
10	Necessary approvals from PESO and concerned Govt. Authorities shall be obtained before commissioning of the project.	Necessary approvals from PESO and concerned Govt. Authorities shall be obtained before commissioning of the project.	EC 2018, S.No.10
11	Unit shall provide captive incinerator for ECH plant as per the CPCB guide lines.	---	EC 2018, S.No.11 (as ECH plant fall in GACL only)
12	Unit shall comply the emission standards mentioned in the Notification by MOEF&CC vide no. S.D. 3305 I dated 07/1212015.	Unit shall comply the emission standards mentioned in the Notification by MOEF&CC vide no. S.D. 3305 I dated 07/1212015.	EC 2018, S.No.12
13	The Unit shall comply with the Provisions with reference to stack height for power plant as and when the draft Notification vide No. S.O. 3337 I dated 16th October, 2017 is duly finalized and enforced.	The Unit shall comply with the Provisions with reference to stack height for power plant as and when the draft Notification vide No. S.O. 3337 I dated 16th October, 2017 is duly finalized and enforced.	EC 2018, S.No.13
14	Unit shall use Imported Coal having Sulphur content less than 0.5 % in Captive Power Plant.	Unit shall use Imported Coal having Sulphur content less than 0.5 % in Captive Power Plant	EC 2019, S.No.1
15	Unit shall provide Online Emission and Effluent Monitoring System 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 on real time basis.	Unit shall provide Online Emission and Effluent Monitoring System 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 on real time basis.	EC 2019, S.No.2
16	Unit shall comply the emission standards mentioned in the Notification by MoEF&CC vide no. S.O. 3305 I dated 07/1212015 and amended time to time.	Unit shall comply the emission standards mentioned in the Notification by MoEF&CC vide no. S.O. 3305 I dated 07/1212015 and amended time to time.	EC 2019, S.No.3
17	Unit shall comply all the conditions stipulated in Coal Handling Guidelines published by GPCB.	Unit shall comply all the conditions stipulated in Coal Handling Guidelines published by GPCB.	EC 2019, S.No.4
18	The project proponent must strictly adhere to the stipulations made by the Gujarat Pollution Control Board, State Government and/or any other statutory authority.	The project proponent must strictly adhere to the stipulations made by the Gujarat Pollution Control Board, State Government and/or any other statutory authority.	EC 2019, S.No.5
19	The National Ambient Air Quality Emission Standards issued by the Ministry vide G. S. R. No. 826 I dated 16th November, 2009 shall be complied with.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G. S. R. No. 826 I dated 16th November, 2009 shall be complied with.	EC 2019, S.No.6
20	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.	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.	EC 2019, S.No.7
21	The project proponent shall allocate the separate fund of Rs. 3436.25 lakhs i.e. 0.75 % of the capital investment in accordance to the MoEFCC's Office—Memorandum No. F.No.22-65/2017'-IA.1II 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.	The project proponent shall allocate the separate fund of Rs. 4690 lakhs i.e. 2.5 % of the capital investment in accordance to the MoEFCC's Office—Memorandum No. F.No.22-65/2017'-IA.1II dated 01/0512018. 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.	EC 2019, S.No.8 (CER activities are split based on the project cost, OM of 01/05/2018 and 2018 EIA report of GACL)

22	All the Recommendations mitigation measures, environment protection measures and safeguards proposed in the EIA report of the project prepared by M/s: Eco Chem Sales and Services and submitted by project proponent and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.	--	EC 2019, S.No.9
A.2	**Water**		
23	Total water requirement for the project shall not exceed 2755 KLD. Unit shall reuse 272 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 2463 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	Total water requirement for the project shall not exceed 16447 KLD. Unit shall reuse 2612 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 13755 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	EC 2018, S.No.14 EC 2019, S.No.10 (GACL:2755 KLD+GNAL 16447 KLD=19202 KLD original condition in EC 2019, S. No. 10)
24	Prior permission from the concerned authority shall be obtained for withdrawal of water.	Prior permission from the concerned authority shall be obtained for withdrawal of water.	EC 2018, S.No.15
25	No ground water shall be tapped for the project requirements.	No ground water shall be tapped for the project requirements.	EC 2018, S.No.16 EC 2019, S.No.11
26	The water meter shall be installed and records of daily and monthly water consumption shall be maintained.	The water meter shall be installed and records of daily and monthly water consumption shall be maintained.	EC 2018, S.No.17
27	All efforts are made to optimize water consumption by exploring Best Available Technology (BAT).	All efforts are made to optimize water consumption by exploring Best Available Technology (BAT).	EC 2018, S.No.18
28	The unit shall continuously strive to reduce, recycle and reuse the treated effluent.	The unit shall continuously strive to reduce, recycle and reuse the treated effluent.	EC 2018, S.No.19
29	Unit shall segregate industrial waste water streams as Stream A	Unit shall segregate industrial waste water streams as Stream B:	EC 2018, S.No.20 EC 2019, S.No.13
30	Stream I: Wastewater generated from Process, washing and safety showers from Chloromethane, Chlorotoluene, Epichlorohydrin and Chlorinated Paraffin Wax, plant (175 KLD) shall be treated in ETP-1 (Cap. 200 KLD) and treated water shall be discharged into GIDC effluent collection system for sea discharge. Waste Stream-III: The industrial effluent 363 KLD (199 KLD from boiler, 13 KLD from DM regeneration, 29 from softener backwash, 102 KLD from cooling tower blow down and 20 KLD from washing) shall be treated in adequate ETP-1A (Cap.400 KLD) followed by UF-1A and RO System-1A. RO Permeate (272 KLD) shall be reused for industrial purpose within plant premises. RO reject (91 KLD) shall be reused for dust suppression and for sprinkling in coal handling units within premises.	Stream-II: The industrial effluent 3483 KLD (540 KLD from caustic plant, 405 KLD from boiler, 608 KLD from DM regeneration and raw water treatment plant, 1880 KLD from cooling tower blow down and 50 KLD from washing) shall be treated in adequate ETP-2 followed by UF-2 and RO System-2. RO Permeate (2612 KLD) shall be reused for industrial purpose within premises. RO reject (871 KLD) shall be used for dust suppression and for sprinkling in coal handling units within premises.	EC 2018, S.No.21 & 22 EC 2019, S.No.14
31	Total Industrial waste water generation shall not exceed 538 KL/day	Total Industrial waste water generation shall not exceed 3483 KL/day	EC 2018, S.No.23 EC 2019, S.No.12 GACL: Waste water from Stream I is 175 & GNAL Stream II is 3483 KLD

			this comes to 3658 KLD (Original Condition) which was mentioned in EC 2018 S. No. 23 i.e WW should not exceed 3658 KLD. But due to additional WW Stream III as per EC 2019 which is 363 KLD. Hence for GACL= 175 KLD + 363 KLD= 538 KLD and GNAL=348 3 KLD (remains same for GNAL)
32	Total discharge of waste water into GIDC's drain for deep sea disposal after conforming to outlet norms prescribed by GPCB/CPCB MoEF&CC shall not exceed 175 KLD.	---	EC 2018, S.No.24 EC 2019, S.No.15 (GACL as the WW of 175 KLD from GACL will only be discharge outside and GNAL will be ZLD)
33	The company shall provide adequate effluent treatment plants for stream I and Stream III as mentioned above and it shall be operated regularly and efficiently so as to achieve the GPCB/CPCB/MoEF&CC norms.	The company shall provide adequate effluent treatment plants for stream II as mentioned above and it shall be operated regularly and efficiently so as to achieve the GPCB/CPCB/MoEF&CC norms.	EC 2018, S.No.25
34	The treated effluent for final disposal shall not exceed 175 KLD and it shall be conveyed to GIDC drain for deep Sea disposal after ensuring that it meets with the discharge norms prescribed by GPCB.	---	EC 2018, S.No.26 (as the WW of 175 KLD from GACL will only be discharge outside)
35	The unit shall provide continuous online monitoring system at the outlet of the ETP system and maintain records for the same.	The unit shall provide continuous online monitoring system at the outlet of the ETP system and maintain records for the same.	EC 2018, S.No.27
36	Unit shall take steps measures for reuse/recycle of wastewater as proposed in EIA/EMP report.	Unit shall take steps measures for reuse/recycle of wastewater as proposed in EIA/EMP report.	EC 2018, S.No.28
37	Domestic wastewater generation shall not exceed 20 KLD for proposed project and it shall be treated in STP (Cap. 30 KLD).	Domestic wastewater generation shall not exceed 80 KLD for proposed project and it shall be treated in STP (Cap. 100 KLD).	EC 2018, S.No.29 EC 2019, S.No.16 (As per EC 2019, domestic WW shall

<table>
<tr><td></td><td></td><td></td><td>be 85 KLD Now since domestic waste water from EC 2019 has also been added of 15 KLD, hence after splitting both EC it comes to 100 KLD)</td></tr>
<tr><td>38</td><td>Treated sewage shall be utilized for gardening and plantation within premises after achieving prescribed GPCB norms.</td><td>Treated sewage shall be utilized for gardening and plantation within premises after achieving prescribed GPCB norms.</td><td>EC 2018, S.No.30</td></tr>
<tr><td>39</td><td>During monsoon season when treated sewage effluent may not be required for the plantation / Gardening / Green belt purpose, it shall be stored within premises. There shall be no discharge of waste water outside the premises in any case</td><td>During monsoon season when treated sewage effluent may not be required for the plantation / Gardening / Green belt purpose, it shall be stored within premises. There shall be no discharge of waste water outside the premises in any case.</td><td>EC 2018, S.No.31</td></tr>
<tr><td>40</td><td>Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.</td><td>Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.</td><td>EC 2018, S.No.32</td></tr>
<tr><td>41</td><td>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.</td><td>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.</td><td>EC 2018, S.No.33</td></tr>
<tr><td>42</td><td>Proper logbooks of ETP-1 & ETP-1A, & UF/RO Operations, 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.</td><td>Proper logbooks of ETP-2 & UF/RO Operations, , Chemical Consumption, quantities and qualities of effluent reuse, power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.</td><td>EC 2018, S.No.34 EC 2019, S.No.18</td></tr>
<tr><td>43</td><td>The unit shall provide metering facility at the inlet and outlets ETP-1, ETP-1A, STP, UF, RO, reuse lines, discharge line and maintain records for the same.</td><td>The unit shall provide metering facility at the inlet and outlets, ETP-2, STP, UF, RO, reuse lines, discharge line and maintain records for the same.</td><td>EC 2019, S.No.17</td></tr>
<tr><td>A.3</td><td colspan="3">Air</td></tr>
<tr><td>44</td><td>Unit shall not exceed fuel consumption as mentioned in the table.
<table>
<tr><th>S. No.</th><th>Stack Attached to</th><th>Stack Height (M)</th><th>Nos of stacks</th><th>Type of Fuel used</th><th>Quantity of fuel consumption</th><th>Air Pollution Control Measures</th></tr>
<tr><td>1</td><td>D. G. Set (1*225 kVA)</td><td>9</td><td>1</td><td>HSD</td><td>50 LPH</td><td>Adequate Stack Height</td></tr>
<tr><td>2</td><td>D. G. Set (1*1000 kVA)</td><td>9</td><td>1</td><td>HSD</td><td>910 LPA</td><td>Adequate Stack Height</td></tr>
<tr><td>3</td><td>Boilers – 280 TPH</td><td>50</td><td>1.</td><td>Imported Coal</td><td>892 TPD</td><td>ESP</td></tr>
</table></td><td>Unit shall not exceed fuel consumption as mentioned in the table.
<table>
<tr><th>S. No.</th><th>Stack Attached to</th><th>Stack Height (M)</th><th>Nos of stacks</th><th>Type of Fuel used</th><th>Quantity of fuel consumption</th><th>Air Pollution Control Measures</th></tr>
<tr><td>1</td><td>Boilers – 280 TPH (2 Nos.)</td><td></td><td></td><td>I</td><td>1</td><td>ESP</td></tr>
</table></td><td>EC 2018, S.No.35 EC 2019, S.No.19

(D.G set of 1*1000 kVA & Boiler of 280 TPH are part of EC 2019) while other D.G set and Boiler are part of EC 2018 only, both are merged and split now accordingly)</td></tr>
</table>

		2 D. G. Set (3*1000 kVA each) H 7 Adequate Stack Height	
45	Unit shall provide adequate APCM as mentioned in the above table.	Unit shall provide adequate APCM as mentioned in the above table.	EC 2018, S.No.36 EC 2019, S.No.20
46	Sulfur and ash content of the fuel to be used shall be analyzed and its record shall be maintained.	Sulfur and ash content of the fuel to be used shall be analyzed and its record shall be maintained.	EC 2018, S.No.37 EC 2019, S.No.22
47	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 thereof analyzed regularly and reported along with monitoring, reports. Thereafter 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.	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 thereof analyzed regularly and reported along with monitoring, reports. Thereafter 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.	EC 2018, S.No.38 EC 2019, S.No.23
48	Height of flue gas stacks attached to Boilers shall be minimum 50 m.	A flue gas slack of 80 m height shall be provided with online monitoring system to proposed Steam Boiler. Mercury emissions from stacks shall also be monitored on periodic basis. However, unit shall comply the specific condition no. 13 above regarding height of the Boiler stack.	GNAL: EC 2018, S.No.39 GACL: EC 2019, S.No.24
49	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 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.	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 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.	EC 2018, S.No.40 EC 2019, S.No.26
50	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.	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.	EC 2018, S.No.41 EC 2019, S.No.27
51	Lime stone injection technology shall be adopted to control S02 and it shall be ensured that S02 levels in the ambient air do not exceed the prescribed standards.	Lime stone injection technology shall be adopted to control S02 and it shall be ensured that S02 levels in the ambient air do not exceed the prescribed standards.	EC 2018, S.No.42 EC 2019, S.No.28
52	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.	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.	EC 2018, S.No.43 EC 2019, S.No.29
53	Unit shall provide APCM for various plants as per the table. S/N | Source of Emission | Type of Emission | Stack/ Vent Height (mete | APCM	Unit shall provide APCM for various plants as per the table: S/N | Source of Emission | Type of Emi | Stack/ Vent Hei | APCM	EC 2018, S.No.44 (Process vents are part of EC 2018 only as only CPP was

				r)				ssi on	ght (m ete r)	
	1	Reactor of Chlorotoluene plant	HCl, Cl2	33	Caustic Soda Scrubber	1	Waste air De-Chlorination Unit	HCl, Cl2	30	3 Stage Caustic Scrubbing System
	2	Scrubbing unit in Chloromethanes plant	HCl, Cl2, CO, SO2, Nox, HC	30	Water + Alkali Scrubber	2	HCl synthesis Unit Caustic Soda Plant	HCl, Cl2	30	Single Stage DM Water Scrubbing System
	3	Incinerator of Epichlorohydrin plant	Nox, CO, HCl, C2H4Cl2, TOC, Dioxin	25	Caustic Scrubber					
54	Adequate Air Pollution Control Measures [APCM] shall be provided.					Adequate Air Pollution Control Measures [APCM] shall be provided.				EC 2018, S.No.45
55	Flue gas emission & Process gas emission (Whichever is applicable) shall conform to the standard prescribed by the GPCB/CPCB/MoEF&CC. At no time, emission level should go beyond the stipulated standards.					Flue gas emission & Process gas emission (Whichever is applicable) shall conform to the standard prescribed by the GPCB/CPCB/MoEF&CC. At no time, emission level should go beyond the stipulated standards.				EC 2018, S.No.46
56	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826 I dated 16th November, 2009 shall be followed.					The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826 I dated 16th November, 2009 shall be followed.				EC 2018, S.No.47
57	Unit shall take adequate measures to control fugitive emissions as below:					Unit shall take adequate measures to control fugitive emissions as below:				EC 2018, S.No.48
i	All the joints, flanges, pumps, glands, seals, valves shall be maintained in good conditions through timely predictive and preventive maintenance.					All the joints, flanges, pumps, glands, seals, valves shall be maintained in good conditions through timely predictive and preventive maintenance.				EC 2018, S.No.48
ii	Regular workplace monitoring shall be carried out for HCl & Cl2 at various locations within plant.					Regular workplace monitoring shall be carried out for HCl & Cl2 at various locations within plant.				EC 2018, S.No.48
iii	Boundary wall as Wind breaker shall be provided to restrict the dispersion of odor dust from the site.					Boundary wall as Wind breaker shall be provided to restrict the dispersion of odor dust from the site.				EC 2018, S.No.48
iv	Well-developed green belt is provided at the existing site and shall be maintained for the proposed project.					Well-developed green belt is provided at the existing site and shall be maintained for the proposed project.				EC 2018, S.No.48
v	All tanks being used for storage of odorous chemicals products shall be connected to vacuum system. Manometers shall be provided on these tanks. The vacuum shall be monitored on daily basis and actions shall be taken accordingly.					All tanks being used for storage of odorous chemicals products shall be connected to vacuum system. Manometers shall be provided on these tanks. The vacuum shall be monitored on daily basis and actions shall be taken accordingly.				EC 2018, S.No.48
vi	All pumps handling hazardous chemicals shall be provided with mechanical seals to prevent fugitive emission. Wherever possible magnetic coupled pumps shall be used.					All pumps handling hazardous chemicals shall be provided with mechanical seals to prevent fugitive emission. Wherever possible magnetic coupled pumps shall be used.				EC 2018, S.No.48
vii	Any spillage from drums etc. shall be absorbed with saw dust I soda ash and moped clean. The contaminated absorbent shall be safely disposed off along with hazardous waste.					Any spillage from drums etc. shall be absorbed with saw dust I soda ash and moped clean. The contaminated absorbent shall be safely disposed off along with hazardous waste.				EC 2018, S.No.48
viii	Manual Handling of various chemicals shall be avoided and shall be designed by implementing latest automation technology.					Manual Handling of various chemicals shall be avoided and shall be designed by implementing latest automation technology.				EC 2018, S.No.48
ix	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.					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.				EC 2018, S.No.48

applied for 2019 EC)

58	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.	--	EC 2018, S.No.49 (Since Chlor-Alkali industry do not involve use of any solvent, hence it doesn't falls into GNAL)
59	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.	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.	EC 2018, S.No.50
➢	Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	EC 2018, S.No.50
➢	Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.	Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.	EC 2018, S.No.50
➢	A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.	A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.	EC 2018, S.No.50
60	Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.	---	EC 2018, S.No.51 (Since Chlor-Alkali industry do not involve use of any solvent, hence it doesn't falls into GNAL)
61	Airborne dust all transfers operations points shall be controlled either by spraying water or providing enclosures.	Airborne dust all transfers operations points shall be controlled either by spraying water or providing enclosures.	EC 2018, S.No.52
62	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.	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.	EC 2018, S.No.53 EC 2019, S.No.35
➢	All handling & transport of coal shall be exercised through covered coal conveyors only.	All handling & transport of coal shall be exercised through covered coal conveyors only.	EC 2018, S.No.53 EC 2019, S.No.35
➢	Enclosure shall be provided at Coal loading and unloading operations.	Enclosure shall be provided at Coal loading and unloading operations.	EC 2018, S.No.53 EC 2019, S.No.35
➢	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.	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.	EC 2018, S.No.53 EC 2019, S.No.35
➢	All transfer points shall be fully enclosed.	All transfer points shall be fully enclosed.	EC 2018, S.No.53 EC 2019, S.No.35
➢	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.	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.	EC 2018, S.No.53 EC 2019, S.No.35

➢	Accumulated coal dust /fly ash on the ground and other surfaces shall be removed / swept regularly and water the area after sweeping,	Accumulated coal dust /fly ash on the ground and other surfaces shall be removed / swept regularly and water the area after sweeping,	EC 2018, S.No.53 EC 2019, S.No.35
➢	Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.	EC 2018, S.No.53 EC 2019, S.No.35
➢	Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.	Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.	EC 2018, S.No.53 EC 2019, S.No.35
➢	Coal/Lignite shall be transported through covered trucks only whereas fly ash shall be transported through closed trucks only.	Coal/Lignite shall be transported through covered trucks only whereas fly ash shall be transported through closed trucks only.	EC 2018, S.No.53 EC 2019, S.No.35
➢	A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.	A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.	EC 2018, S.No.53 EC 2019, S.No.35
63	Regular monitoring of ground level concentration of PM10, PM2.5, S02, Nox, HC, Dioxin and VOC shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levers 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.	Regular monitoring of ground level concentration of PM10, PM2.5, S02, Nox, Cl2 & HCl shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levers 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.	EC 2018, S.No.54 EC 2019, S.No.36 (GNAL-Dioxin & VOC parameter has been removed as it does not involved any such emission)
64	Stack/Vents (Whichever is applicable) of adequate height shall be provided as per the prevailing norms for flue gas emission/Process gas emission.	Stack/Vents (Whichever is applicable) of adequate height shall be provided as per the prevailing norms for flue gas emission/Process gas emission.	EC 2018, S.No.55
65	Adequate Air Pollution Control Measures (APCM] shall be provided.	Adequate Air Pollution Control Measures (APCM] shall be provided.	EC 2018, S.No.56
66	Flue gas emission & Process gas emission shall conform to the standards prescribed by the GPCB/CPCB/MoEF&CC. At no time, emission level should go beyond the stipulated standards.	Flue gas emission & Process gas emission shall conform to the standards prescribed by the GPCB/CPCB/MoEF&CC. At no time, emission level should go beyond the stipulated standards.	EC 2018, S.No.57
67	All the reactors / vessels used in the manufacturing process shall be closed to reduce the fugitive emission.	All the reactors / vessels used in the manufacturing process shall be closed to reduce the fugitive emission.	EC 2018, S.No.58
68	Online monitoring system shall be installed to monitor the SOx, Nox and SPM in the flue gas stack. 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	Online monitoring system shall be installed to monitor the SOx, Nox and SPM in the flue gas stack. 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	EC 2019, S.No.30
69	Adequate storage facility for the fly ash in terms of closed silos shall be provided at site. No ash pond shall be constructed.	Adequate storage facility for the fly ash in terms of closed silos shall be provided at site. No ash pond shall be constructed.	EC 2019, S.No.31
70	Handling of the fly ash shall be through a closed pneumatic system.	Handling of the fly ash shall be through a closed pneumatic system.	EC 2019, S.No.32
71	Ash shall be handled only in dry state.	Ash shall be handled only in dry state.	EC 2019, S.No.33
72	The unit shall strictly comply with the Fly Ash Notification under the EPA and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.	The unit shall strictly comply with the Fly Ash Notification under the EPA and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.	EC 2019, S.No.34
A.4	**Solid / Hazardous Waste**		
73	The company shall strictly comply with the rules	The company shall strictly comply with	EC 2018,

<table>
<tr><td></td><td>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.</td><td>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.</td><td>S.No.59</td></tr>
<tr><td>74</td><td>Any by-products which fall under the purview of the Hazardous and other Wastes (Management and Transboundary Movement) Rules 2016 shall be handled as per the said rules and necessary permissions from the concern authority shall be obtained.</td><td>Any by-products which fall under the purview of the Hazardous and other Wastes (Management and Transboundary Movement) Rules 2016 shall be handled as per the said rules and necessary permissions from the concern authority shall be obtained.</td><td>EC 2018, S.No.60</td></tr>
<tr><td>75</td><td>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.</td><td>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.</td><td>EC 2018, S.No.61</td></tr>
<tr><td>76</td><td>Management of Hazardous waste shall be according to the table.
<table>
<tr><th>S/N</th><th>Type/ Name of Hazardous waste</th><th>Source of Generation</th><th>Disposal Method</th></tr>
<tr><td>1</td><td>High M.P Liquid Impurities</td><td>Chloro toluene Plant</td><td>Incineration (In-house / BEIL-Dahej)</td></tr>
<tr><td>2</td><td>Used/spent oil</td><td>DG Sets</td><td>Sold to GPCB authorized reprocesses</td></tr>
<tr><td>3</td><td>Discarded drums and containers</td><td>Process</td><td>Collection, decontamination & sold to GPCB authorized recyclers</td></tr>
<tr><td>4</td><td>Oil Contaminated cotton rags or other cleaning materials</td><td>Handling</td><td>Incineration in captive incinerator / BEIL incinerator</td></tr>
<tr><td>5</td><td>ETP waste</td><td>ETP</td><td>TSDF of BEIL-Dahej</td></tr>
<tr><td>6</td><td>Incineration Ash</td><td>ECH Plant</td><td>TSDF of BEIL-Dahej</td></tr>
<tr><td>7</td><td>Waste residue from industrial use of paint</td><td>Entire site</td><td>Shall be sold to Authorised recyclers by auction process</td></tr>
<tr><td>8</td><td>Lead washers etc. as Lead scrap</td><td>Entire site</td><td>Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process</td></tr>
<tr><td>9</td><td>Nickel Scrap</td><td>Entire site</td><td>Sold to recyclers registered with MSTC and possessing requisite valid</td></tr>
</table>
</td><td>Management of Hazardous waste shall be according to the table.
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<tr><td>8</td><td>Lead washers etc. as Lead scrap</td><td>Entire site</td><td>Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process</td></tr>
</table>
</td><td>EC 2018, S.No.62
EC 2019, S.No.37</td></tr>
</table>

				Environmental permissions from respective State Pollution Control Boards by auction process	9	Nickel Scrap	Entire site	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
	10	Copper tubing, caps and cables etc. – As Copper scrap	Entire site	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process	10	Copper tubing, caps and cables etc. – As Copper scrap	Entire site	Sold to recyclers registered with MSTC and possessing requisite valid Environmental permissions from respective State Pollution Control Boards by auction process
	11	Spent Carbon	Entire site	Incineration in captive incinerator / BEIL incinerator				
	12	Discarded bags / liner / packing material, Discarded PPEs, gaskets	Entire site	Shall be sold to Authorised recyclers by auction process	12	Discarded bags / liner / packing material, Discarded PPEs, gaskets	Entire site	Shall be sold to Authorised recyclers by auction process
		The unit shall obtain necessary permission from the nearby TSDF site and CHWIF.			The unit shall obtain necessary permission from the nearby TSDF site and CHWIF.			EC 2018, S.No.63
	78	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.			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.			EC 2019, S.No.38
	79	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.			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.			EC 2019, S.No.39
	80	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.			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.			EC 2018, S.No.64
	81	The design of the Trucks/tankers shall be such that there is no spillage during transportation.			The design of the Trucks/tankers shall be such that there is no spillage during transportation.			EC 2018, S.No.65
	82	All possible efforts shall be made for Co-Processing of the Hazardous waste prior to disposal into TSDF/CHWIF.			All possible efforts shall be made for Co-Processing of the Hazardous waste prior to disposal into TSDF/CHWIF.			EC 2018, S.No.66
A.5	**Safety**							
	83	The occupier/project proponent shall strictly comply the provisions under the Factories Act 1948 and the Gujarat Factories Rules 1963 as well as Manufacture, Storage and Impact of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals.			The occupier/project proponent shall strictly comply the provisions under the Factories Act 1948 and the Gujarat Factories Rules 1963 as well as Manufacture, Storage and Impact of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous			EC 2018, S.No.67 EC 2019, S.No.40

		chemicals.	
84	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 Onsite and Off-site Management Plans have to be prepared and implemented.	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 Onsite and Off-site Management Plans have to be prepared and implemented.	EC 2018, S.No.68
85	Main entry and exit shall be separate and clearly marked in the facility.	Main entry and exit shall be separate and clearly marked in the facility.	EC 2018, S.No.69
86	Sufficient peripheral open passage shall be kept in the margin area for free movement of fire tender/ emergency vehicle around the premises.	Sufficient peripheral open passage shall be kept in the margin area for free movement of fire tender/ emergency vehicle around the premises.	EC 2018, S.No.70
87	Storage of flammable chemicals shall be sufficiently away from the production area.	Storage of flammable chemicals shall be sufficiently away from the production area.	EC 2018, S.No.71
88	Sufficient number of fire extinguishers shall be provided near the plant and storage area.	Sufficient number of fire extinguishers shall be provided near the plant and storage area.	EC 2018, S.No.72
89	All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic / hazardous chemicals.	All necessary precautionary measures shall be taken to avoid any kind of accident during storage and handling of toxic / hazardous chemicals.	EC 2018, S.No.73
90	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.	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.	EC 2018, S.No.74
91	The project management shall ensure to comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report.	The project management shall ensure to comply with all the environment protection measures, risk mitigation measures and safeguards mentioned in the Risk Assessment report.	EC 2018, S.No.75
92	Only flame proof electrical fittings shall be provided in the plant premises.	Only flame proof electrical fittings shall be provided in the plant premises.	EC 2018, S.No.76 EC 2019, S.No.47
93	Storage of hazardous chemicals shall be minimized and it shall be in multiple small capacity tanks / containers instead of one Single large capacity lank / containers.	Storage of hazardous chemicals shall be minimized and it shall be in multiple small capacity tanks / containers instead of one Single large capacity lank / containers.	EC 2018, S.No.77
94	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.	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.	EC 2018, S.No.78
95	Handling and charging of the chemicals shall be done in closed manner by pumping or by vacuum transfer so that minimal human exposure occurs.	Handling and charging of the chemicals shall be done in closed manner by pumping or by vacuum transfer so that minimal human exposure occurs.	EC 2018, S.No.79
96	The up shall be done with nearby health care unit / doctor for seeking immediate medical attention in the case of emergency.	The up shall be done with nearby health care unit / doctor for seeking immediate medical attention in the case of emergency.	EC 2018, S.No.80
97	Personal Protective Equipments (PPEs) shall be provided to workers and its usage shall be ensured and supervised.	Personal Protective Equipments (PPEs) shall be provided to workers and its usage shall be ensured and supervised.	EC 2018, S.No.81 EC 2019, S.No.44
98	First Aid Box and required Antidotes for the chemicals used in the unit shall be made readily available in adequate quantity.	First Aid Box and required Antidotes for the chemicals used in the unit shall be made readily available in adequate quantity.	EC 2018, S.No.82 EC 2019, S.No.45
99	Occupational health surveillance of the workers shall be done and its records shall be maintained.	Occupational health surveillance of the workers shall be done and its records	EC 2018, S.No.83

	Pre-employment and periodical medical examination for all the workers shall be undertaken as per the Factories Act & Rules.	shall be maintained. Pre-employment and periodical medical examination for all the workers shall be undertaken as per the Factories Act & Rules.	EC 2019, S.No.46
100	Transportation of hazardous chemicals shall be done as per the provisions of the Motor Vehicle Act & Rules.	Transportation of hazardous chemicals shall be done as per the provisions of the Motor Vehicle Act & Rules.	EC 2018, S.No.84
101	The company shall implement all preventive and mitigation measures suggested in the Risk Assessment Report.	The company shall implement all preventive and mitigation measures suggested in the Risk Assessment Report.	EC 2018, S.No.85 EC 2019, S.No.42
102	Necessary permissions from various statutory authorities like PESO. Factory Inspectorate and others shall be obtained prior to commissioning of the project.	Necessary permissions from various statutory authorities like PESO. Factory Inspectorate and others shall be obtained prior to commissioning of the project.	EC 2018, S.No.86
103	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.	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.	EC 2018, S.No.87
104	Effective safety precaution shall be taken for chemical storage, process handling and transportation hazard.	Effective safety precaution shall be taken for chemical storage, process handling and transportation hazard.	EC 2018, S.No.88
105	Unit shall prepare and Implement SOP for safe operation of the works.	Unit shall prepare and Implement SOP for safe operation of the works.	EC 2018, S.No.89
106	The unit shall comply the statutory provision of safety audit & its compliance report.	The unit shall comply the statutory provision of safety audit & its compliance report.	EC 2018, S.No.90
107	Effective step shall be taken for prevention of fire. Explosion & toxic release	Effective step shall be taken for prevention of fire. Explosion & toxic release	EC 2018, S.No. 91
108	Proper ventilation shall be provided in the work area	Proper ventilation shall be provided in the work area	EC 2019, S.No.49
109	Necessary precautions like continuous monitoring of hot spots [ignited lignite] using temperature detection systems, water sprinklings, avoiding stacking of lignite near steam pipeline etc. shall be made for storing lignite to prevent fire hazard	Necessary precautions like continuous monitoring of hot spots [ignited lignite] using temperature detection systems, water sprinklings, avoiding stacking of lignite near steam pipeline etc. shall be made for storing lignite to prevent fire hazard	EC 2019, S.No.41
110	A well designed fire hydrant system shall be installed as per prevailing standards	A well designed fire hydrant system shall be installed as per prevailing standards	EC 2019, S.No.43
111	Adequate fire fighting facilities shall be provide at the proposed power plant	--	EC 2019, S.No.48
	All transporting routes within the factory premise shall have paved roads to minimize splashes and spillages	All transporting routes within the factory premise shall have paved roads to minimize splashes and spillages	EC 2019, S.No.50
112	The project management shall prepare as detailed disaster management plan (DMP) for the project as per the guidelines from directorate of Industrial safety and health	The project management shall prepare as detailed disaster management plan (DMP) for the project as per the guidelines from directorate of Industrial safety and health	EC 2019, S.No.51
A.6	**Noise**		
113	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.	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.	EC 2018, S.No.92 EC 2019, S.No.53
114	To minimize the noise pollution the following noise control measures shall be implemented:	To minimize the noise pollution the following noise control measures shall be implemented:	EC 2019, S.No.52
	Selection of any new plant equipment shall be	Selection of any new plant equipment	EC 2019,

	made with specification of low noise levels.	shall be made with specification of low noise levels.	S.No.52
➢	Manufacturers / suppliers of major noise generating machines / equipment's 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 norms with respect to noise generation for individual units	Manufacturers / suppliers of major noise generating machines / equipment's 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 norms with respect to noise generation for individual units	EC 2019, S.No.52
➢	Regular maintenance of machinery and vehicles shall be undertaken to reduce the noise impact.	Regular maintenance of machinery and vehicles shall be undertaken to reduce the noise impact.	EC 2019, S.No.52
➢	Noise suppression measures such as enclosures, buffers and / or protective measures shall be provided.	Noise suppression measures such as enclosures, buffers and / or protective measures shall be provided.	EC 2019, S.No.52
➢	Employees shall be provided with ear protection measures like earplugs or earmuffs.	Employees shall be provided with ear protection measures like earplugs or earmuffs.	EC 2019, S.No.52
➢	Proper oiling, lubrication and preventive maintenance shall be carried out of the machineries and equipment's to reduce noise generation.	Proper oiling, lubrication and preventive maintenance shall be carried out of the machineries and equipment's to reduce noise generation.	EC 2019, S.No.52
➢	Construction equipment generating minimum noise and vibration shall be chosen.	Construction equipment generating minimum noise and vibration shall be chosen.	EC 2019, S.No.52
➢	Ear plugs and/muffs shall be made compulsory for the construction workers working near the noise generating activities / machines / equipment.	Ear plugs and/muffs shall be made compulsory for the construction workers working near the noise generating activities / machines / equipment.	EC 2019, S.No.52
➢	Vehicles and construction equipment with internal combustion engines without proper silencer shall not be allowed to operate .	Vehicles and construction equipment with internal combustion engines without proper silencer shall not be allowed to operate .	EC 2019, S.No.52
➢	Construction equipment meeting the norms specified by EP Act, 1986 shall only be used .	Construction equipment meeting the norms specified by EP Act, 1986 shall only be used .	EC 2019, S.No.52
➢	Noise control equipment and baffling shall be employed on generators especially when they are operated near the residential and sensitive areas.	Noise control equipment and baffling shall be employed on generators especially when they are operated near the residential and sensitive areas.	EC 2019, S.No.52
➢	Noise levels shall be reduced by the use of adequate mufflers on all motorized equipment.	Noise levels shall be reduced by the use of adequate mufflers on all motorized equipment.	EC 2019, S.No.52
A.7	**Cleaner Production and Waste Minimisation**		
115	The unit shall undertake the Cleaner Production Assessment study through a reputed institute I organization and shall form a CP team in the company. The recommendations thereof along with the compliance shall be furnished to the GPCB.	The unit shall undertake the Cleaner Production Assessment study through a reputed institute I organization and shall form a CP team in the company. The recommendations thereof along with the compliance shall be furnished to the GPCB.	EC 2018, S.No.93
116	The company shall undertake various waste minimization measures such as:	The company shall undertake various waste minimization measures such as:	EC 2018, S.No.94
a	Metering and control of quantities of active ingredients to minimize waste.	Metering and control of quantities of active ingredients to minimize waste.	EC 2018, S.No.94
b	Reuse of by-products from the process as raw materials or as raw materials substitutes.	Reuse of by-products from the process as raw materials or as raw materials substitutes.	EC 2018, S.No.94
c	Use of automated and close filling to minimize spillages.	Use of automated and close filling to minimize spillages.	EC 2018, S.No.94
d	Use of close feed system into batch reactors.	Use of close feed system into batch reactors.	EC 2018, S.No.94
e	Venting equipment through vapour recovery system.	Venting equipment through vapour recovery system.	EC 2018, S.No.94
f	Use of high pressure hoses for cleaning to reduce wastewater generation.	Use of high pressure hoses for cleaning to reduce wastewater generation.	EC 2018, S.No.94
g	Recycling of washes to subsequent batches.	Recycling of washes to subsequent	EC 2018,

		batches.	S.No.94
h	Recycling of steam condensate	Recycling of steam condensate	EC 2018, S.No.94
i	Sweeping of mopping of floor instead of floor washing to avoid effluent generation.	Sweeping of mopping of floor instead of floor washing to avoid effluent generation.	EC 2018, S.No.94
j	Regular preventive maintenance for avoiding leakage, spillage etc.	Regular preventive maintenance for avoiding leakage, spillage etc.	EC 2018, S.No.94
A.8	**Greenbelt and Other Plantation**		
117	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 I GPCB and submit an action plan of plantation for next three years to the GPCB.	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 I GPCB and submit an action plan of plantation for next three years to the GPCB.	EC 2018, S.No.95 EC 2019, S.No.54
118	Drip irrigation flow-volume, low-angle sprinkler system shall be used for the green belt development within the premises.	Drip irrigation flow-volume, low-angle sprinkler system shall be used for the green belt development within the premises.	EC 2018, S.No.96 EC 2019, S.No.55
B.	**Other Conditions**		
119	Unit shall comply all the applicable standard conditions prescribed in Office Memorandum (OM) published by MoEF&CC vide no. F. No. 22-34/2018-1A.1I1 dated 09/08/2018.	Unit shall comply all the applicable standard conditions prescribed in Office Memorandum (OM) published by MoEF&CC vide no. F. No. 22-34/2018-1A.1I1 dated 09/08/2018.	EC 2019, S.No.56
120	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.	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.	EC 2018, S.No.97 EC 2019, S.No.59
121	The project proponent shall allocate the separate fund for Corporate Environment Responsibility (CER) in accordance to the MoEFCC's Office Memorandum No. F.No.22-6512017-IA.11I 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 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.	The project proponent shall allocate the separate fund for Corporate Environment Responsibility (CER) in accordance to the MoEFCC's Office Memorandum No. F.No.22-6512017-IA.11I 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 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.	EC 2019, S.No.58
122	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 around water. Before recharging the surface run off, pre-treatment must be done to remove suspended matter.	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 around water. Before recharging the surface run off, pre-treatment must be done to remove suspended matter.	EC 2018, S.No.98
123	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 Industrial Association or GIDC or GPCB or any such authority created for this purpose by the Govt. I GIDC.	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 Industrial Association or GIDC or GPCB or any such authority created for this purpose by the Govt. I GIDC.	EC 2018, S.No.99
124	Application of solar energy shall be incorporated for illumination of common areas, lighting for	Application of solar energy shall be incorporated for illumination of common	EC 2018, S.No.100

	gardens and street lighting in addition the provision for solar water heating system shall also be provided.	areas, lighting for gardens and street lighting in addition the provision for solar water heating system shall also be provided.	
125	The area earmarked as green area shall be used only for plantation and shall not be altered for any other purpose.	The area earmarked as green area shall be used only for plantation and shall not be altered for any other purpose.	EC 2018, S.No.101
126	All the commitments in undertakings given to the SEAC during the appraisal process for the purpose of environmental protection and management shall be strictly adhered to.	All the commitments in undertakings given to the SEAC during the appraisal process for the purpose of environmental protection and management shall be strictly adhered to.	EC 2018, S.No.102
127	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated	EC 2019, S.No.60
128	All the recommendations 1 commitments made in the EIAIEMP report of the project shall be implemented	All the recommendations 1 commitments made in the EIAIEMP report of the project shall be implemented	--
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.	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.	EC 2018, S.No.104 EC 2019, S.No.61
130	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any statutory authority.	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any statutory authority.	EC 2018, S.No.105 EC 2019, S.No.63
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 stone water.	During material transfer there shall be no spillages and garland drain shall be constructed to avoid mixing of accidental spillages with domestic wastewater or stone water.	EC 2018, S.No.106 EC 2019, S.No.64
132	Pucca flooring 1 impervious layer shall be provided in the work areas, chemical storage areas and chemical handling	Pucca flooring 1 impervious layer shall be provided in the work areas, chemical storage areas and chemical handling	EC 2018, S.No.107 EC 2019, S.No.65
133	Leakages from the pipes, pumps, shall be minimal and if occurs, shall be arrested promptly.	Leakages from the pipes, pumps, shall be minimal and if occurs, shall be arrested promptly.	EC 2018, S.No.108 EC 2019, S.No.67
134	The funds earmarked for environment protection measures shall be maintained in a separate account and there shall not	The funds earmarked for environment protection measures shall be maintained in a separate account and there shall not	EC 2019, S.No.66
135	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.	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.	EC 2018, S.No.109 EC 2019, S.No.68
136	The above condition will be enforced, inter-alia under the provision of the Water (prevention and control of pollution) Act 1974, the Air (prevention and control of pollution) Act 1981, the Environment (Protection) Act, 1986, Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments rules. The project proponent shall comply all the condition mentioned in "The Companies (Corporate Social Responsibility Policy) Rules, 2014" and its amendments from time to time in a letter and spirit.	The above condition will be enforced, inter-alia under the provision of the Water (prevention and control of pollution) Act 1974, the Air (prevention and control of pollution) Act 1981, the Environment (Protection) Act, 1986, Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments rules. The project proponent shall comply all the condition mentioned in "The Companies (Corporate Social Responsibility Policy) Rules, 2014" and its amendments from time to time in a letter and spirit.	EC 2018, S.No.110 EC 2019, S.No.69
137	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, Vadodara and submitted by project proponent online application vide no.	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, Vadodara and submitted by project	EC 2018, S.No.111 EC 2019, S.No.62

	SIA/GJ/IND2/2162512016 dated 24101/2018 and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.	proponent online application vide no. SIA/GJ/IND2/2162512016 dated 24101/2018 and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.	
138	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.	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.	EC 2018, S.No.112 EC 2019, S.No.70
139	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.	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.	EC 2018, S.No.113 EC 2019, S.No.71
140	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.	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.	EC 2018, S.No.114 EC 2019, S.No.72
141	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 copy each of the same shall be forwarded to the concerned Regional Office of the Ministry.	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 copy each of the same shall be forwarded to the concerned Regional Office of the Ministry.	EC 2018, S.No.115 EC 2019, S.No.73
142	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.	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..	EC 2018, S.No.103 & 116 EC 2019, S.No.74
143	It shall be mandatory for the project management to submit yearly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copy to the regulatory authority concerned, on 1st June and 1st December of each calendar year.	It shall be mandatory for the project management to submit yearly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copy to the regulatory authority concerned, on 1st June and 1st December of each calendar year.	EC 2018, S.No.117 EC 2019, S.No.75
144	Concealing factual data or submission of false or 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.	Concealing factual data or submission of false or 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.	EC 2018, S.No.118 EC 2019, S.No.76
145	The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.	The project authorities shall also adhere to the stipulations made by the Gujarat Pollution Control Board.	EC 2018, S.No.119 EC 2019, S.No.77
146	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactory.	EC 2018, S.No.120 EC 2019, S.No.78
147	The company in a time bound manner shall implement these conditions. The SEIAA reserves the right to stipulate additional conditions, if the	The company in a time bound manner shall implement these conditions. The SEIAA reserves the right to stipulate	EC 2018, S.No.121 EC 2019,

	same is found necessary.	additional conditions, if the same is found necessary.	S.No.79
148	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.	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.	EC 2018, S.No.122 EC 2019, S.No.80
149	This environmental clearance is valid for seven years from the date of issue.	This environmental clearance is valid for seven years from the date of issue.	EC 2018, S.No.123 EC 2019, S.No.81
150	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.	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.	EC 2018, S.No.124 EC 2019, S.No.82
151	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.	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.	EC 2018, S.No.125 EC 2019, S.No.83

Further, as proposed and justified by PP following conditions are removed.

Condition number and EC letter	Condition	Justification
Condition no. 21 of Environmental Clearance No. SEIAA/GUJ/EC/1(d)/1766/2019 dated 11/12/2019.	There shall be no process gas emission from the proposed project	Due to the bifurcation, it is not applicable to GACL OR GNAL because both of them have process emissions due to SOC (GACL) and Chlor-Alkali (GNAL) this point is in EC 2019 which is obtained only for power plant)
Condition no. 57 of Environmental Clearance No. SEIAA/GUJ/EC/1(d)/1766/2019 dated 11/12/2019.	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	There is no spray dryer proposed in GACL or GNAL).

With regards,
Yours sincerely,

(S. M. SAIYAD)
Member Secretary

Issued to:

1. **Gujarat Alkalis and Chemicals Limited (GACL),**
   P.O. Petrochemicals -391346,
   Dist: Vadodara, Gujarat

2. **GACL-NALCO Alkalies and Chemicals Pvt Ltd. (GNAL),**
   P.O. Petrochemicals -391346,
   Dist: Vadodara, Gujarat

State Level Environment Impact Assessment Authority SEIAA Gujarat