## DESCRIPTIVE REPORT ON STATUS OF COMPLIANCE TO CONDITIONS OF ENVIRONMENT CLEARANCE AND ENVIRONMENT MANAGEMENT

Compliance Status (for the period of **April 2020 to September 2020)** of Environmental Clearance issued by SEIAA, Gujarat, vide letter **Reference no. SEIAA/GUJ/EC/6(b)&7(e)/34/2011 Dated 17.02.2011** 

(**Detail of project:** "Expansion of the existing Isolated Chemical Storage capacity from existing 3,66,140 m3 to 4,84,514 m3 and expansion in cargo handling capacity from existing 49.63 Lac MT / Annum to 49.79 Lac MT / Annum" at GIDC, Dahej, Taluka Vagra, Dist. Bharuch, Gujarat by M/s Gujarat Chemical Port Terminal Company Limited.)

SN	Conditions	Status / Act	ion taken					
A-1	WATER							
1.	There shall be no increase in water consumption & waste water generation from the project expansion.	There is no increase in the existing water consumption, domestic wastewater generation and industrial effluent generation from the consented quantities.  Details of water consumption during the last 3 years appended as below for ready reference —						
		Year	2017-18	2018-19	9 2	2019-20		
		Average consumption of water in KLD 613 512		6	651			
		Details of wast	020 is 593 KLD.  ars is appended  2019-20					
			<b>Year</b> Consented	<b>2017-18</b> 125	<b>2018-19</b> 125	125		
			Quantity in KLD	40	40	40		
			Generation in	2.5	2.8	2.7		
			KLD	38.72	36.33	35.43		
		Year (Apr.19 to March.20)				7		
		Industrial Consented		125				
		Domestic Quantity in KLD		40				
			Generation in	3				
		Domestic	KLD	12				

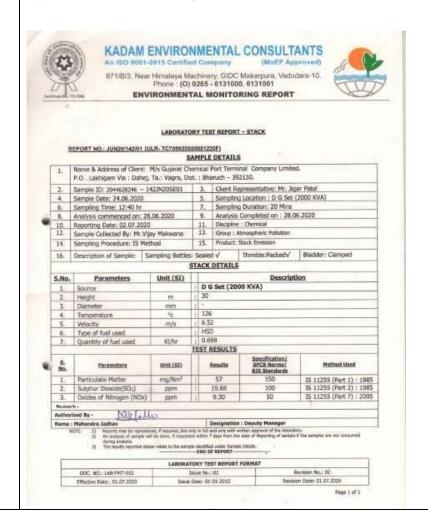
		COMPLIED.	
2.	The company shall harvest rain Water through storm Water trench and use it as fire Water.	The surface runoff water from storm water channel is recovered and stored in firewater reservoir.  Pump lifting Water from storm Water channel and discharging into Fire Reservoir.	
10	415	COMPLIED.	
<b>A-2</b> 3	There shall be no process gas emission from the Terminal.		
		envisaged.  At pressurized gantry, complete closed circuit process has been following for transfer of hazardous chemicals into tanker. For atmospheric loading of Acetic Acid, water scrubbing system is provided.  COMPLIED.	
4	There shall be no additional fuel consumption or flue gas emission due to the proposed expansion.	Consumption of fuel (HSD) is envisioned for operation of existing emergency DG Set- 2000 KVA capacity and diesel generating fire water pumps during the reporting period.  No new DG set had been proposed under this EC.	
		Details of consumption of fuel for the reporting period is 9.556 KL only mostly consumed for conducting functional performance of DG Set and Diesel Generating Fire Water Pumps - 3 nos. of 710 m3/Hr capacity.	

DG Set stack emission monitoring has been carried out through MoEF&CC (recognition valid till 11.03,2021 and NABL accredited laboratory (Certificate No. TC-7099, valid till 26.03.2022). Monitoring report for April 2020 to September 2020 is presented in tabular form as below for ready reference:-

Parameter –Stack	GPCB consented limit -	Average	Minimum	Maximum
РМ	150 mg/m3	47	37	57
SO2	100 ppm	15.69	11.7	19.68
NOx	50 ppm	8.75	8.2	9.3

The results of stack monitoring report mentioned in above table are well within the prescribed limit of GPCB.

The Typical Stack Monitoring report for the reporting period is appended as below for ready reference.



5 **Fugitive** emission at workplace shall be kept controlled and below the limits prescribed by the concerned authorities from time to time. At no time, the emission level shall be beyond the prescribed limits.

Fugitive emissions at work places are monitored and records are maintained. Following best practices/RAGAGEP have been are implemented with a view to eliminate/reduce the fugitive emissions.

 Handling of products through closed systems – use of piping and loading arms for transfer/handling of products Flange joints in the piping network are of full faced gasket joint and valves (stem) equipped with graphite fitting etc.



- Material transfer pumps are of centrifugal type and are provided with double mechanical seals.
- Prevention/Reduction of evaporation loss Rim seal type vapour seal mechanism is provided for storage tanks containing highly volatile products i.e. class 'A' petroleum products.



 Leak Detection and Alarm Repair – 103 LEL detectors are installed at prominent locations to continuously measure the release of hazardous material, if any from the pipeline/storage tank etc. and subsequent initiating corrective measures.

#### Monitoring of Fugitive Emission -

Regular monitoring of fugitive emission (Volatile Organic Component) is carried out through Schedule-I Environmental Auditor – M/s. MANTRA (Man Made Textile and Research Association, Gujarat) - refer **Annexure 30** in the main report.

Summary of fugitive emission monitoring for April 2020 to September 2020 is appended as below for ready reference.

Location	VOC (mg/m3)
Near Atmospheric Gantry	1.16
Near Pressurize Gantry	1.21
Near BOG Area	1.26
Near LPG Tank Farm	1.32
Near Propane Tank Farm	1.25
Near Py Gas Tank Farm	1.08
Near Methanol Tank Farm	1.19
Near Px Tank Farm	1.02
Near Hydrocarbon Tank (Naphtha)	1.48
Near Acetic Acid Tank Farm	1.42

No limit prescribed for VOC.

Analytical report of one such fugitive emission monitoring is attached as **Annexure 31** in the main report.

## Workplace monitoring -

Workplace monitoring for presence of hazardous chemicals, if any is carried out through MoEF&CC (recognition valid till 11.03,2021 and NABL accredited laboratory (Certificate No. TC-7099, valid till 26.03.2022 )— M/s. Kadam Environmental Consultants, Gujarat — details attached as **Annexure 33** in the main report.

Summary of monitoring of hazardous chemical at workplace for the reporting period i.e., (April.2020 to September.2020) is appended as below for ready reference

Hazardous	Average	Minimum	Maximum
chemical	mgm3	mg/m3	mg/m3
Px	5.39	3.70	6.98
Methanol	3.20	1.61	5.18
Hydrocarbon	1.96	1.30	2.80
Butadiene	ND	ND	ND
Acetic Acid	ND	ND	ND
Caustic Fumes	ND	ND	ND
Propylene Oxide	ND	ND	ND

Report of one such workplace monitoring for the reporting period is attached as **Annexure 32** in the main report.

## COMPLIED.

- For control of fugitive emission following steps shall be followed:
  - Closed handling system shall be provided.
  - Pumps shall be provided with mechanical seals to prevent leakages.
  - System of leak detection and repair of pump/pipeline based on prevention maintenance.
  - The products shall be taken to or from storage tanks through closed pipeline.

GCPTCL has implemented following systems as a part of controlling fugitive emission during storage and handling including transfer of products –

Closed handling systems for handling of chemicals: closed piping network has been provided across the Terminal as well as up to end user of the products like Ethane, Naphtha, PX etc.





- Hazardous material transfer pumps are of centrifugal type and are provided with double mechanical seals.
- Some of the products are handled in tankers/trucks Loading arm (instead flexible hose connection) are provided for transfer of products into tanker.





As a part of LDAR (Leak Detection Alarm and Repair), about 103 Hydrocarbon detectors (i.e. LEL detector) are installed at areas

considered as potential leak prone area like tank farm, pumping station – manifold area, gantry, material transfer pipelines etc. including Jetty.

The audio – visual detection of LDAR system is integrated at main control room as well as fire station.

The system is operated in auto and contribute to early detection of leakage of products, if any taking place and subsequent initiating corrective actions.

Practice of carrying out calibration of the detectors has been established and records are maintained.





#### COMPLIED.

status in the area, particularly with respect to VOCs in addition to general parameters shall be monitored and its

air

shall

quality

Ambient

records

maintained.

## Ambient Air Quality Monitoring (VOC) -

Ambient air quality monitoring for the presence of VOC is carried out through schedule 1 Environment Auditor – M/s. MANTRA (Man Made Textile and Research Association, Gujarat). Refer **Annexure 30** in the main report.

Summary of fugitive emission monitoring for April 2020 to September 2020 period is appended as below for ready reference.

Location	VOC mg/m3
Near Atmospheric Gantry	1.16
Near Pressurize Gantry	1.21
Near BOG Area	1.26
Near LPG Tank Farm	1.32
Near Propane Tank Farm	1.25
Near Py Gas Tank Farm	1.08
Near Methanol Tank Farm	1.19
Near Px Tank Farm	1.02
Near Hydrocarbon Tank (Naphtha)	1.48
Near Acetic Acid Tank Farm	1.42

No limit prescribed for VOC.

Analytical report of one such fugitive emission monitoring is attached as **Annexure 31** in the main report.

## Ambient Air Quality Monitoring -

Workplace monitoring for presence of hazardous chemicals, if any is carried out through MoEF&CC (recognition valid till 11.03,2021) and NABL accredited laboratory (Certificate No. TC-7099, valid till 26.03.2022)— M/s. Kadam Environmental Consultants, Gujarat — details attached as **Annexure 33** in the main report.

Summary of Ambient Air Quality Monitoring for the reporting period i.e., (April 2020 to September 2020 ) is appended as below for ready reference.

Location - Terminal Control Room

Parameter – AAQM	GPCB consented	Average µg/m3	Minimum µg/m3	Maximum µg/m3
- AAQIVI	limit -	μу/ш3	μу/ш3	μу/ш3
	μg/m3		0.4.00	0.4.00
PM10	100	64.4	24.00	94.00
PM2.5	60	19.40	16.00	25.00
SO2	80	7.45	5.84	8.47
NOx	80	13.81	10.07	18.72
HCL	200	5.19	ND	16.54
CI2	100	3.05	ND	5.91
CO	5000	461	ND	1340
HC	160	ND	ND	ND
NH3	400	4.16	ND	11.47
H2S	500	ND	ND	ND
CS2	2000	ND	ND	ND
HF	60	0.09	ND	0.23

Note – reference method of analysis is indicated in the report and ND = Not Detected.

The results of all the parameters are well within the prescribed limit.

Report of Ambient Air Quality Monitoring for the reporting period is attached as **Annexure 34** in the main report.

## COMPLIED.

## A-3 | HAZARDOUS/SOLID WASTE

8 The company shall strictly comply with rules and regulation with regards to handling and disposal of hazardous

GCPTCL strictly comply with rules and regulation with regards to handling and disposal of hazardous waste in accordance with hazardous waste (Management, Handling and Transboundary Movement) rules 2008, as may be amended from time to time.

waste in accordance with hazardous waste (Management, Handling and Transboundary Movement) rules 2008, as may be amended from time to time. Authorization from GPCB must be obtained for collection/ treatment/ storage/ disposal hazardous wastes.

## **AUTHORIZATION -**

GCPTCL had obtained authorization from GPCB for collection, storage, transportation and disposal of hazardous waste vide

CC & A order no. AWH- 98682 dated 14.02.2019, valid upto 25.11.2023.

Copy of latest CC & A is attached as **Annexure 35** in the main report.

## **MEMBERSHIP SUBSCRIPTION –**

The hazardous wastes generated is being disposed in an environment friendly manner to the GPCB authorized agency/recycler i.e. M/s. BEIL, M/s. Bombay Barrel (April 2020 to September 2020).

Copy of Consents and Authorisation for BEIL, Anas Green and Ambuja Cement is attached as **Annexure 36, 37 and 38** respectively in the main report.

Summary of disposal of hazardous waste from April. 2019 to March 2020 is appended as below for ready reference.

SN	Title – Hazardous Waste	Categ ory	Consented quantity MT/ Year	Total disposal during Apr 2019 to March 2020
1	Used or Spent Oil	5.1/I	7.2	NIL
2	ETP Sludge	35.3/I	6.0	NIL
3	Discarded Containers/Barrel s/ Liners	33.1/I	3.0	2.56 MT
4	Used Foam pig of chemical	C-1/II	12.0	2.94 MT
5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL
	Tank Sludge-Iron Sludge	3.1/I	100	NIL
6	Cargo /Tank Residue , washing Water and sludge containing oil	3.1/I	100	NIL
7	Cargo Tank Residue containing Chemicals	3.2/I	100	NIL
8	Ballast / Bilge Water containing oil from ship	3.4/I	100	NIL

Summary of disposal of hazardous waste for the reporting period i.e., from April.2020 to September.2020 is appended as below for ready reference.

SN	Title – Hazardous Waste	Categ ory	Consented quantity MT/ Year	Total disposal during Apr 2020 to Sept. 2020
1	Used or Spent Oil	5.1/I	7.48	NIL
2	ETP Sludge	35.3/I	6.0	NIL
3	Discarded Containers/Barrel s/ Liners	33.1/I	3.0	NIL
4	Used Foam pig of chemical	C-1/II	12.0	NIL
5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL
	Tank Sludge-Iron Sludge	3.1/I	100	NIL
6	Cargo /Tank Residue , washing Water and sludge containing oil	3.1/I	100	NIL
7	Cargo Tank Residue containing Chemicals	3.2/I	100	NIL
8	Ballast / Bilge Water containing oil from ship	3.4/I	100	NIL

Copy of online generated manifest for the disposal of hazardous waste in March 2020 is attached as **Annexure 39** in the main report.

## **HAZARDOUS WASTE STORAGE FACILITY –**

Centralized hazardous waste storage facility with impervious bottom and leachate collection arrangement has been provided within the Terminal premises far away from CRZ area.









**Pig Storage** 

COMPLIED. Leachate collection

Pipeline to ETP – Leachate collection

The hazardous waste shall be packed and stored in separate designated hazardous waste storage facility with impervious bottom Inc.

and leachate collection

before

its

facility,

disposal.

GCPTCL has provided designated hazardous waste storage facility nearby ETP located within Terminal premises far away from CRZ area.

Following types of packaging mechanism is being followed for

Channel -

hazardous waste before permitting its disposal at TSDF, recycler or Incineration purpose.

- M/s. BEIL Incineration facility located at Ankleswar is having GPCB CCA (AWH 89137) valid till 31.07.2022.
- M/s. BEIL TSDF facility located at Dahej is having GPCB CCA (AWH 70720) valid till 17.04.2025.
- The CCA (AWH 109859) to M/s Anas Green issued by GPCB for recycling facility is valid up to 22.06.2025.
- The CCA (AWH 25627) to M/s Bombay Barrel issued by GPCB for recycling facility is valid up to 30.09.2022.
- The CCA (AWH 97567) to M/s Ambuja Cement issued by GPCB for recycling facility is valid up to 18.09.2023.

Type of	Packing method	Disposal
hazardous waste		method
Spent oil/used oil	Metal container.	Authorized recycler- M/s Bombay Barrels, Ahmedabad
Discarded container/Barrels/ Liners	Direct disposal	Authorized recycler-

Used foam pig of	In HDPE/LDPE liner bag	M/s Ambuja
chemical	of appropriate capacity –	Cement ,
	200 kg / 500 kg.	Kodinar ,
		Sourashtra.
Oil soaked cotton	In plastic container or	M/s Ambuja
and other waste	HDPE/LDPE liner bag of	Cement ,
	appropriate capacity	Kodinar ,
		Sourashtra
Tank sludge	In HDPE/LDPE liner bag.	TSDF- M/s BEIL,
_	_	Dahej
ETP sludge	In HDPE/LDPE liner bag	TSDF- M/s BEIL,
	of appropriate capacity.	Dahej

Centralized hazardous waste storage facility with impervious bottom and leachate collection arrangement has been provided within the Terminal premises far away from CRZ area.





Pig Storage

COMPLIED.



Channel -





Pipeline to ETP – Leachate collection

10 Used foam pigs with traces of chemical/oil (05 MT/Month. Waste/residue containing oil (0.05)MT/Month, Asbestos containing waste (0.1 MT/Month, Chemical containing cargo residue sludge (0.5)MT/Month) and mercury GCPTCL strictly comply with rules and regulation with regards to handling and disposal of hazardous waste in accordance with hazardous waste (Management, Handling and Transboundary Movement) rules 2016, as may be amended from time to time.

## **AUTHORIZATION –**

GCPTCL had obtained authorization from GPCB for collection, storage, transportation and disposal of hazardous waste vide CC & A order no. AWH -98682 dated 14.02.2019, valid upto 25.11.2023.

Copy of CC & A is attached as **Annexure 35** in the main report.

bearing CFLs & FLs (0.05 MT/Month to be generated as additional hazardous waste due to proposed expansion shall be sent to common TSDF or common hazardous waste incineration facility of BEIL, Ankleshwar.

## **MEMBERSHIP SUBSCRIPTION –**

The hazardous wastes generated is being disposed in an environment friendly manner to the GPCB authorized agency/recycler i.e. M/s. BEIL, M/s. Bombay Barrel (for the reporting period).

Copy of Consents and Authorisation for BEIL, Anas Green and Ambuja Cement is attached as **Annexure 36, 37 and 38** respectively in the main report.

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	Tank Sludge-Iron Sludge	3.1/I	100	NIL
6	Cargo /Tank Residue , washing Water and sludge containing oil	3.1/I	100	NIL
7	Cargo Tank Residue containing Chemicals	3.2/I	100	NIL
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		5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL	
			Tank Sludge-Iron Sludge	3.1/I	100	NIL	
		6	Cargo /Tank Residue , washing Water and sludge containing oil	3.1/I	100	NIL	
		7	Cargo Tank Residue containing Chemicals	3.2/I	100	NIL	
		8	Ballast / Bilge Water containing oil from ship	3.4/I	100	NIL	
A 4	CAEETV	waste report	of online generated in March 2020 is a PLIED.		•		
A-4	SAFETY project	Thorn	oviciono mada in Ma	nufactur-	Ctorogo on-	moort of Hazarda	
11	The project management shall strictly comply with the provisions made in	The provisions made in Manufacture Storage and Import of Hazardous Chemicals Rules, 1989 as amended in 2000, for handling of hazardous chemicals are complied with like –					
	Manufacture Storage	SN	MSIHC Rules - C	omplian			
	and Import of Hazardous Chemicals Rules, 1989 as amended in 2000, for handling of hazardous chemicals.		Conditions		Compl	liance	

1	An occupier to identify the major accident hazards and taken adequate steps to prevent such major accidents and to limit their consequences to persons and the environment.  Provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety.	<ul> <li>Major Accident Hazards has been identified and incorporated in On Site Emergency Action Plan. The plan was last reviewed in January 2020.</li> <li>Following controls have been implemented as a part of prevention of Major Accidents         <ul> <li>Storage tankages are confirming to API/ASTM codes and practices</li> <li>Process Hazard Analysis and Risk Assessment has been carried out for bulk storage of Hazardous Chemicals and recommendations implemented.</li> <li>Standard Operating Procedures are in place for handling of Hazardous Chemicals</li> <li>Standard Maintenance Practices are in place for ensuring integrity of installations etc.</li> <li>Training and Awareness on HSE-F topics is one of the ongoing activity.</li> </ul> </li> </ul>
2	An occupier shall not undertake any industrial activity unless he has been granted an approval for undertaking such an activity and has submitted] a written report to the concerned authority containing the particulars specified in Schedule 7	Noted and being complied with.  Latest approval obtained from the office of Petroleum Explosives and Safety Organization, Nagpur as well as from the office of Directorate of Industrial Safety and Health, Ahmedabad for installation and commissioning of 20" pipeline and its chill down line for handling Butane/Propane/LPG/Propylene dated 02.07.2020.  Copy of an approval is attached as Annexure 41 A in the main report.

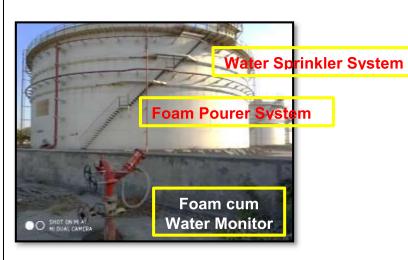
3	An occupier shall prepare a safety report on that industrial activity and send a copy of that report to the concerned authority. The occupier shall within three years of the date of the last safety report, make a further report and shall end a copy of the report to the concerned authority.	Last Safety Report was prepared by M/s. Pro Safe Consultants, Surat for industrial activity carried out at GCPTCL i.e. receipt, storage and transfer/dispatch of Hazardous Chemicals. As a part of integration of relevant information for the recent changes/ modification, Work Order had been awarded to M/s. ECO Safe Consultant, Ahmedabad.
4	An occupier shall carry out an independent safety audit of the respective industrial activities with the help of an expert, not associated with such industrial activities and forward a copy of the auditor's report along with his comments to the concerned Authority	Last Statutory Safety Audit was carried out by an external agency in the year 2018. As per statutory requirement, it is due in year 2020. Work Order had been awarded to M/s. Trivedi Associate to conduct statutory Safety Audit of GCPTCL industrial activities with reference to IS 14489. Copy of Safety Audit Report is attached as <b>Annexure 41 C</b> in the main report.
5	An occupier shall prepare and keep upto-date an on-site emergency plan containing details how major accidents will be dealt with on the site.	On Site Emergency Action Plan was prepared and submitted to the office of Asst. Directorate of Industrial Health and Safety (DISH), Bharuch as requested. The plan was last reviewed and modified in January 2020.
6	The occupier shall ensure that a mock drill of the on-site emergency plan is conducted every six months.	Complied, attached as <b>Annexure 41 B</b> in the main report.
7	OFF-SITE EMERGENCY PLAN - the occupier shall provide the concerned authority with such information relating to the industrial activity under his control.	Copy of an On Site Emergency Action Plan was submitted to the office of Asst. Directorate of Industrial Health and Safety (DISH) vide our letter. Dated 13,08.2020

		steps to persons outsi site either dire through Emergency A who are likely an area which 8 affected by a accident about nature of the accident haza (b) the	community awareness program under title "Jan JagrutiAbhiyan" is conducted at least once in a year or on need basis for the people/community staying in close vicinity to the organization with special attention to HSE risks and its consequences in case disaster including industrial disaster.  (a) the major (a) the major (b) the major (c) the major (c) the major (d) the major (d) the major (e) the major (e) the major (e) the major (f)
12	Necessary permissions from various statutory authorities like PESO, Nagpur, Factory inspectorate etc. shall be obtained prior to commissioning of the additional storage tanks.	GCPTCL had obtaine Government departm  The details of the period CTE (Annexure 12A in the main report)	with outward date 30/09/2015.  CTE Amendment No. 101047 GPCBBRCH-B/CTE-347(5)/ID-15134 with outward date 21.05.2019
		CC & A (Annexure 13A in the main report)	GPCB/BRCH-B/CCA-347(3)/ID-15134 / 408519 dtd.30.03.2017.  GPCB/BRCH-B/CCA-347(4)/ID-15134/494730 dtd.14.02.2019  GPCB/BRCH-B/ CCA-347(5)/ID-15134 dated 27.03.2020
		GMB (Gujara	<ul> <li>GMB/N/PVT-1/601(10)/285/5605 dated 21.09.2015 in principle approval for construction of two Mooring Dolphins and allied facilities.</li> <li>GMB/N/PVT-1/601(10)/94/3512 dated 06.06.2016 for construction of two Mooring Dolphins and allied faculties.</li> </ul>

	GMB/N/PVT/-1/229/89/3694 dated 28.05.2019 in principle approval for new development / modification at GCPTCL-Dahej
<b>PESO</b> (Petroleum and Explosive Safety Organization,	G-22(47)167, P2 (4) 359 dtd.28.07.2016
Nagpur)	G-22(47)167 dtd. 06.06.2016.
(Annexure 41A in the main report)	P-2(4)1005 dated 02.07.2020
<b>DISH</b> (Director of	
Industrial Safety and Health)	DISH/F-Map/2015/1997 dtd. 02.11.2015.
(Annexure 16A in	DISH/F-PLAN/2020/177 dtd 29.01.2020
the main report)	
Forest Division	Not Applicable

13 the bulk Design of installations storage shall be done in accordance with the applicable OISD standards. All safety and firefighting requirements as per these norms will be put in place inside the product tank farm.

All the storage tanks and related installation including fire protection facility have been constructed/provided as per design code API 650 and/or OISD norms like OISD 117/156/244.



#### COMPLIED.

14 Strict supervision by plant personnel shall be carried out during transfer or receipts of products.

Supervision by plant personnel is carried out during product transfer or receipt.

#### At Jetty

The Cargo operation (transfer/receipt of product) is carried out under strict supervision by Jetty Officer/Loading Master and ship representative. This requirement is mutually agreed between ship and shore and being enforced/ensured through enlisted in Ship/Shore checklist (Point no 24). You may kindly refer **Annexure 03** in the main report.

Continuous communication between ship and shore with regards to monitoring safe cargo operation is maintained thru' VHF set.

## At Terminal -

Operation related to receipt/transfer of product is carried out in accordance to standard operating procedure – SOP.

Typical SOP for handling of MEG is attached as **Annexure 42** in the main report.





## COMPLIED.

Proper earthing shall be provided on the pipelines and storage tanks. The tank gauging operator shall not be earthed with the tank (i.e. he shall wear non conducting shoes).

Proper earthing is provided on the pipelines and storage tanks. Employees are provided with insulating type safety shoes.

Total 200+ earthing pit provided across the Terminal premises.

Procedures are in place to maintain the earth pit and monitor/measure earth pit resistance. Copy of SMP and sample earth pit resistance measurement report for the reporting period is attached as **Annexure 43** in the main report.





16 Lightening protection devices shall be provided for all storage tanks.

Lightening Protection Devices (LA – Lightening Arrester) are provided across the Terminal including Jetty. Advanced Direct Strike Lightning Protection devices are provided across the terminal including Jetty and building structures and fire water pump house.

Total 30+ LA provided.

Copy of a drawing showing location of each Lightening Arrestor mounting location is attached as **Annexure 44** in the main report.



## COMPLIED.

The entire tank farm area shall be provided with leak detection sensors located at areas

As a part of LDAR (Leak Detection and Repair), about 103 Hydrocarbon detectors (i.e. LEL detector) are installed at prominent locations across the Terminal considered as potential leak prone like tank farm, pumping station – manifold area, gantry, material transfer pipelines etc.

prone to fire risk / leakages.

The audio – visual detection of LDAR system is integrated at main control room as well as fire station.

The system is operated in auto and contribute to early detection of leakage of products, if any taking place and subsequent initiating corrective actions.

Practice of carrying out calibration of the detectors has been established and records are maintained.

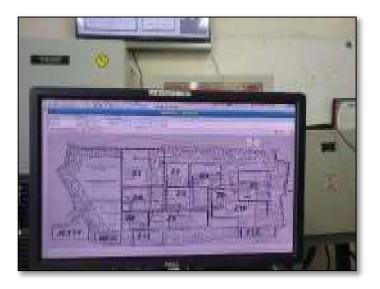


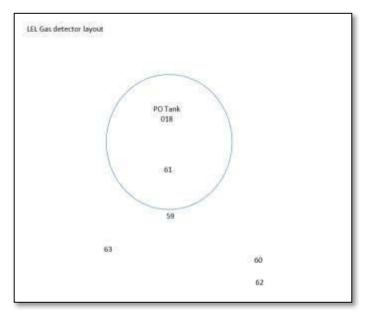


## Further explanation -

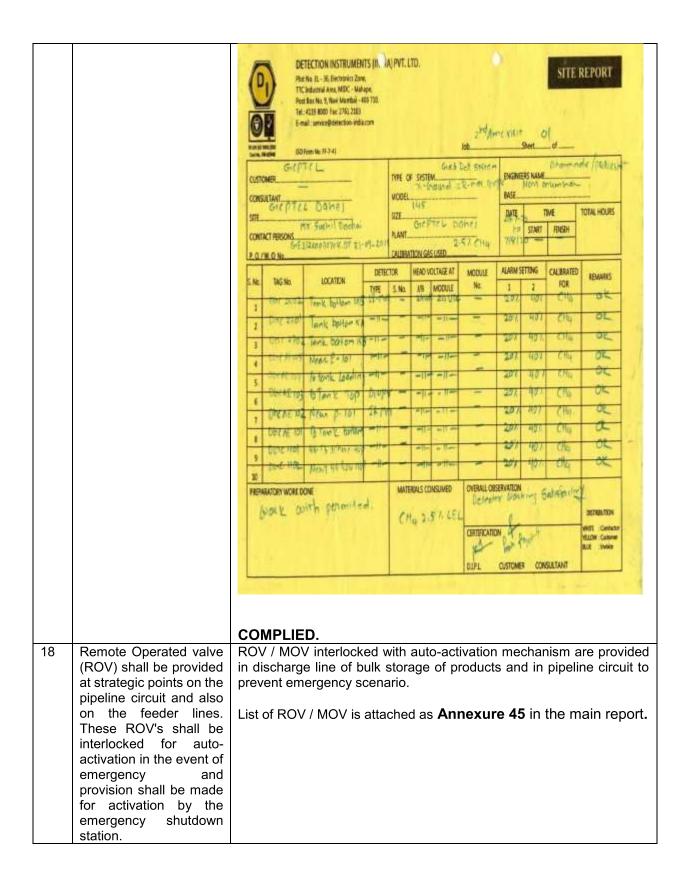
- Fire and Gas detection network (LDAR System) has been established across the Terminal and Jetty area.
- 103 LEL gas detectors have been installed across the Terminal and Jetty area which is divided into 12 different zones for ease of identification of exact location and guick response.
- The very basic intent of the network is to detect a gas leakage, if any in the field area and generate signal so that gas detectors can identify the leakage and initiate an alarm sequence on the panel located at control room as well as at Fire Station. Alarm communication devices are also installed in the field to generate audible and visible alarm.

• Installation of the detector - The location of the detectors are so selected that it can detect gas leak, if any, on faster basis as well as to facilitate its functional testing. Graphical presentation of 12 zone as well as typical lay out of installation of Gas detector for one of the tank farm (PO Tank) is appended as below for ready reference.





• Functional testing of detectors- The detectors are being tested at an interval of 06 months for checking of its healthiness by third party M/s Detection instrument, Mumbai and the records are being maintained. Typical record of functional testing of the detector is appended as below for ready reference.





# ROV in Ethane System

## COMPLIED.

19 All the storage tanks shall be fitted with appropriate controls to avoid any leakages. Close handling system for handling shall be provided. Double mechanical seals shall provided for pumps/agitators for reactors for reduction of fugitive emissions and leakages. Traps shall be installed wherever necessary.

All storage tank containing hazardous materials are provided with Low, Low-Low, High and High-High level and/or pressure type audio alarm and trip system to prevent leakage from the storage tank. List of such system provided for MEG tank is attached as **Annexure 46** in the main report.

Closed handling systems for handling of chemicals: closed piping network has been provided across the Terminal as well as up to end user of the products like PX etc.

Hazardous material transfer pumps are of centrifugal type and are provided with double mechanical seals.

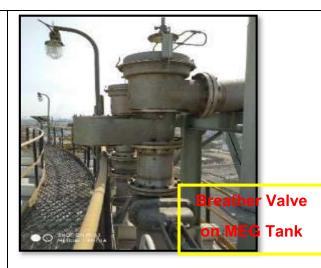
Some of the products are handled in tankers/trucks - Loading arm (instead flexible hose connection) are provided for transfer of products into tanker.

#### COMPLIED.

High temperature and high pressure alarm with auto-activation of water sprinklers as well as safety relief valves shall be provided.

High temp and high pressure alarm with auto activation of water sprinklers as well as safety relief valve (PRV/PVRV) are provided for bulk storage of hazardous chemicals.

List of tanks equipped with PRV/PVRV/Nitrogen blanketing is attached as **Annexure 47** in the main report.



Hazardous material storage tank farm and handling facilities (e.g. gantry) is provided with water Sprinkling System.

- Auto-activating type water sprinkling system (i.e. deluge valve mechanism) as per OISD norms has been provided and maintained for cooling purpose on spheres, gantry and pumping manifold. The system is getting activated on breaking QBD – sensing element heat with a set point @ 69 deg. C.
- Manual type water sprinkling system (i.e. deluge valve mechanism) as per OISD norms has been provided and maintained for cooling purpose on storage tanks handling hazardous materials.



## COMPLIED.

21 All venting equipment shall have vapour recovery system. All the pumps and other equipment where there а likelihood of shall leakages be provided with Leak Detector and Repair (LDAR) system. Provisions for immediate isolation such

GCPTCL is a Port and Storage Terminal and its main activities involves handling of hazardous chemicals (i.e. receiving/dispatch and storage) in an enclosed system.

As no manufacturing activity is involved, no process gas emissions is envisaged.

At pressurized gantry, complete closed circuit process has been following for transfer of hazardous chemicals into tanker. For atmospheric loading of Acetic Acid, water scrubbing system is provided.

equipment also be made. The detector sensitivity shall be in ppm levels.

Addition to this, following specific efforts / best practices have been implemented as a part of eliminating / minimizing evaporation loss of highly volatile products during its storage.

 Prevention/Reduction of evaporation loss - Rim seal type vapour seal mechanism is provided for storage tanks containing highly volatile products i.e. class 'A' petroleum products.



 LDAR (Leak Detection and Repair) - about 103 hydrocarbon detectors (i.e. LEL detector) are installed at areas considered as potential leak prone area like tank farm, pumping station – manifold area, gantry, material transfer pipelines etc. including Jetty.

The audio – visual detection of LDAR system is integrated at main control room as well as fire station.

The system is operated in auto and contribute to early detection of leakage of products, if any taking place and subsequent initiating corrective actions.

Practice of carrying out calibration of the detectors has been established and records are maintained.

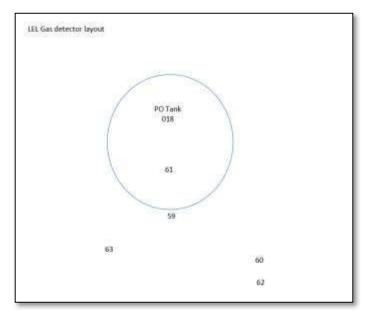




#### Further explanation -

- Fire and Gas detection network (LDAR System) has been established across the Terminal and Jetty area.
- 103 LEL gas detectors have been installed across the Terminal and Jetty area which is divided into 12 different zones for ease of identification of exact location and guick response.

- The very basic intent of the network is to detect a gas leakage, if any in the field area and generate signal so that gas detectors can identify the leakage and initiate an alarm sequence on the panel located at control room as well as at Fire Station. Alarm communication devices are also installed in the field to generate audible and visible alarm.
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  well as to facilitate its functional testing. Graphical presentation of
  12 zone as well as typical lay out of installation of Gas detector for
  one of the tank farm (PO Tank) is appended as below for ready
  reference.



• Functional testing of detectors- The detectors are being tested at an interval of 06 months for checking of its healthiness by third party M/s Detection instrument, Mumbai and the records are being maintained. Typical record of functional testing of the detector is appended as below for ready reference.

			DETECTION INSTRUMENTO IN IL. 38, Becommon Zan TC Industrial Area, MIDC - Male et Black 0, 3, Rear Marchal - 4, 41,1419 4000 Fee; 2761 2163 mail: aerivse@detectoo.indi ID Foon No. 19-741	e, 14pe, 100 730.	AJPVT.	LTD.		2 <sup>74</sup> /hr		t (		REPORT	
		CUSTOMER COMSULTANT CONSULTANT SITE CONTACT PRISONS	OTEL		SIZE	145 Grep	Menual :	Dot switch R-now his Oints \$7.044	BASE_ DATE	START	Investment	TOTAL HOURS	
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		· ·									16		4
		0014011											
22	All the new tanks shall	List of ta	<b>ED.</b> anks inclu	dina	M	TRE	an	d Ace	atic	Δςί	d enu	ipped w	vith
	be provided with		V/Nitrogen	_							-		
	breather valves pressure	main rep	_										
	relief valves. Nitrogen blanketing shall be												
	provided for Methanol	COMPLII	=D										
	and Acetic acid tanks.				, .			. =					
23	During material transfer, spillages shall be	e ensure elimination/minimize spillage of hazardous chemicals during											
	avoided and garland drain shall be	storage ar	nd handling										
	constructed to avoid		ng of prod										
	mixing of accidental		g arms for										
	spillages with domestic waste and storm water		network a ped with gra					gaske	i JOI	int a	ına va	ives (ste	;m)
	drain.			111	111	·····9							

- Material transfer pumps are of centrifugal type and are provided with double mechanical seals.
- Close drain system (OWS/PWS) independent of domestic waste and storm water drainage is provided across the Terminal area including gantry operation facility.

All gantry complete flooring is of RCC type with slope that facilitate diversion of accidental spillage, if any to collection pit from where it is further diverted to ETP through OWS/PWS channel (i.e. closed loop) for further treatment and disposal.



#### COMPLIED.

24 Fire detection & alarm system shall be installed in Terminal with sufficient nos. of smoke/ heat detectors & manual call points installed at all location inside Terminal.

Fire detection & alarm system comprising of Manual Call Point, Smoke Detector, LEL Detector, Heat Detector, and Hydrogen Detector etc. are provided across the Terminal and Jetty and the indication are integrated on panel located at Control Room and Fire Station.

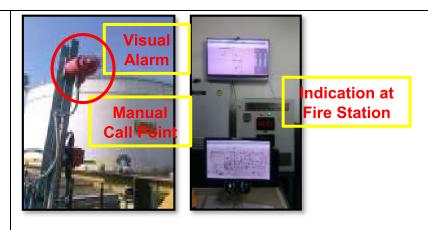
The list of LEL detectors, smoke detector, heat detector etc. is attached as **Annexure 48** in the main report.

Total 177 Manual Call Points are located across the Terminal including Jetty.

The audio – visual detection of fire and gas detection system is integrated at main control room as well as fire station.

The system is operated in auto and contribute to early detection of leakage of products, if any taking place and subsequent initiating corrective actions.

Standard Maintenance Practices (SMP) is in place for conducting functional performance testing of fire and gas detection system. Copy of one such SMP and duly completed report of FPT is attached as **Annexure 49** and **50** respectively in the main report.







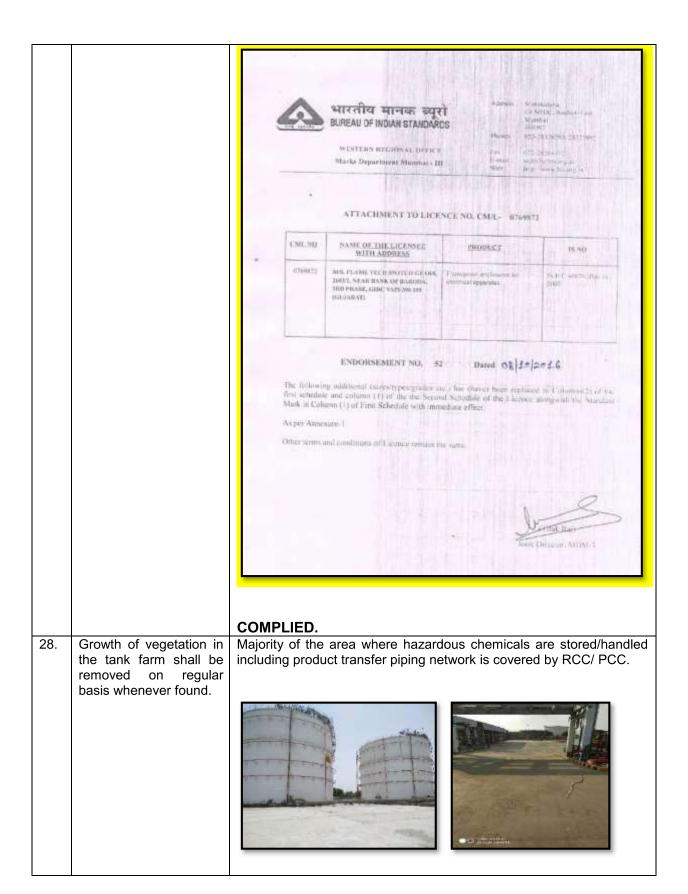
25 Automatic actuated foam folding system shall be provided for tanks having diameter larger than 60 meter.

There is no tank having diameter larger than 60 meter. However, making provision of an automatic actuated foam flooding system (Rim seal system confirming to OISD norms) for external floating roof type storage tank storing class 'A' flammable material had been considered and as on date it was completed for 5 such storage tanks.

This arrangement is in addition to provision of foam pourer system.



		COMPLIED.
26	Necessary flameproof fittings shall be provided in the storage facility.	Provision of flameproof electrical fittings across the Terminal and Jetty area in particular where hazardous chemicals are being stored and/or handled is in accordance with the hazardous area classification contour and confirming to relevant IS as well as PESO (Petroleum Explosives and Safety Organization, Nagpur) approval.
		A DOT PARSO P
		COMPLIED.
27	All lighting/electrical equipment and instrumentation inside the installation shall be confirming to IS: 2206	The lighting / electrical equipment and instrumentation provided across the Terminal and Jetty area is confirming to relevant IS and having PESO (Petroleum Explosives and Safety Organization, Nagpur) approval.
	(Part-I) and IS: 2148 standards.	Lighting fixtures installed at Jetty area are of make M/s. Flame Tech Switch Gears, Gujarat.



		Removal of vegetation, if any in the tank farm area is identified as a part of field round and will be communicated to concerned person / department for initiating corrective actions.
		COMPLIED.
29.	All the fire extinguishers shall be placed on enclosure wall, instead near to the tanks.	As a standard practice placement of fire extinguishers is done at a height and readily accessible and convenient locations.
		COMPLIED.
30.	Mechanical seals of pumps, glands and expansion joints of pipelines shall be regularly monitored to prevent leakage.	Standard Maintenance Practices (SMP) in in place for conducting Preventive Maintenance (PM) of pumps, which includes conducting checking of mechanical seals also.  PM requirement is integrated in SAP.  Copy of SMP and duly completed report of inspection of pumps is attached as <b>Annexure 51</b> and <b>52</b> respectively in the main report.
2.1		COMPLIED.
31.	Periodic inspection and maintenance of all the valves, fittings and mountings on the pipelines carrying the products shall be carried out regularly.	Standard Maintenance Practices (SMP) is in place for conducting visual inspection/examination including calibration of PSVs/TSVs installed in pipelines through an external competent agency duly authorized by PESO.
32	• •	<b>COMPLIED.</b> Visual inspection of pipeline including thickness measurement is
32	Visual inspection of pipelines shall be done regularly to locate leaks. Inspection of pipes for internal and external corrosion shall be carried out with special attention.	Complied as Annexure 53 and 54 respectively in the main report.
33.	Fire protection facilities	Fire protection facilities and firefighting equipment are
33.	and fighting equipment shall be maintained in	maintained/provided in accordance with the requirements detailed in the OISD 117.

the terminal as per OIDS-117.

Fire Protection System comprising of –

- Fire Water Reservoir
- Fire Water Piping Network with provision of Hydrant, Monitors across the premises including Jetty
- Fire Water Pumps Auto Operation
- Fixed Water Spray System for tankages
- Automatic Deluge Valve System for Spheres
- Foam System
- Portable Fire Extinguishers etc....







COMPLIED.



34 Emergency responsible vehicle (Gully sucker) and foam/water tender shall be provided in terminal to handle spillage/leakage of products and fire accidents immediately and effectively.

Emergency response vehicle such as Foam/Water tender are stationed at Terminal to handle spillage / leakage of products & fire accidents immediately & effectively and contact has been established for making gully sucker available in case of an emergency.

Total 3 fire tenders are currently available and their details are appended as below –

- 1. First Turnout 3000 L capacity for Foam and Water each
- 2. Second Turnout 6000 L capacity for Foam and 4000 L capacity for Water
- 3. DCP Turnout 2000 kg, under fabrication.



A dedicated Fire Department at the Plant level with fire tenders, specialized firefighting equipment and experienced manpower shall be established and kept operational.

Dedicated and experienced fire team on 24 x 7 basis is available at Terminal. The team is equipped with specialized firefighting equipment as detailed in OISD 117 and are maintained in ready to operate condition.

The total fire service team comprising of -

Head – HSEF 1
HSE Manger 1
Shift In Charge 4
Fireman – Employee 8
Supervisor 1
Driver 7
Pump Operator 3
Firemen 22

#### COMPLIED.

Firefighting facility shall comprise of adequate number of diesel operated and electrically operated jokey pumps with auto-changeover to diesel driven pumps and a jokey pumps to ensure that the circuit pressure is adequately

maintained.

The following firefighting facilities have been provided -

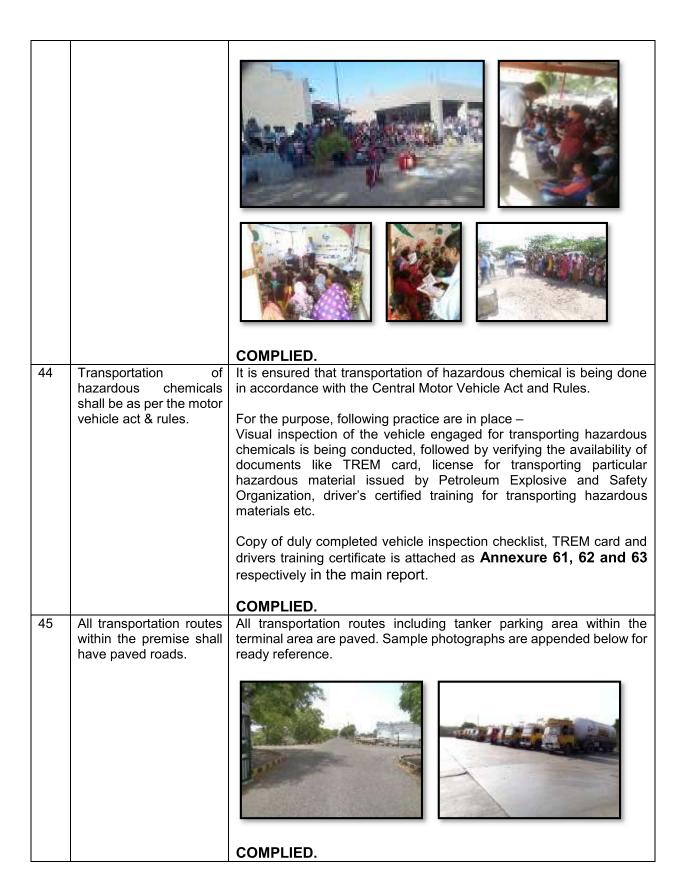
- 02 Jockey pumps of cap. 70 kl/hr (each)
- Three electrical driven fire water pumps of cap. 710 kl/hr (each)
- Three diesel operated fire water pumps of cap. 710 kl/hr (each)

Fire Water pressure in the system is maintained in auto start mode @ 7 kg/cm2.



		COMPLIED
37	All hydrant points shall be easily accessible. It shall be assured that the pressure is maintained at minimum 7 kgs/cm2 at the farthest point (Foam the hydrant pump house) in the hydrant line.	COMPLIED.  All the hydrants points located in fire water network system are easily accessible.  Pressure, in the system, is maintained at minimum 7 Kg/cm2 at the farthest point.  COMPLIED.
38	Periodic preventive maintenance of all the firefighting equipment and all other rotating equipment, transformers, DG sets etc. shall be carried out.	Established practices of conducting preventive maintenance of all firefighting equipment & all other rotating equipment, transformers, D.G. sets etc. are in place  The fire protection facilities and firefighting equipment are inspected/tested and maintained in accordance with the requirements of OISD 117.  Copy of schedule detailing inspection, service and/or functional performance testing/checking is attached as <b>Annexure 55</b> in the main report. And typical inspection report for hydrant and sprinkler system is attached as <b>Annexure 49</b> and <b>50</b> in the main report.  Standard Maintenance Practices (SMP) is in place for conducting visual inspection/monitoring functional performance of DG Set, transformer etc.  Copy of duly completed template of report for transformer and DG set logbook is attached as <b>Annexure 56 and 57</b> respectively in the main report. <b>COMPLIED.</b>
39	A well designed mutual aid agreement amongst the neighbouring industries shall be done and renewed time to time to combat the fire emergency. Necessary tie up with the nearby fire station and other emergency services	"Mutual Aid agreement with neighbouring industries and membership with Dahej Industrial Association – Disaster Management Cell is in place to summon help in case of Level II and higher category actual emergency/mock drill situation.  Copy of mutual aid agreement is attached as <b>Annexure 58</b> in the main report.

	shall be made to ensure that the required aids reach within the shortest possible time in case of any adverse conditions.	MUTUAL AID SCHEME  We, the members of Mutual Aid Scheme of Dahej inclustrial area besetty agree to abide by the terms of conditions. The terms and conditions of Agreement are an under.  We, the members of Mutual Aid Scheme of Agreement are an under.  We, the members of Mutual Aid Scheme of Agreement are an under.  Managing St. VP. G.M. 1 and Phan President Office (Plant Head) (Phus Head)
40.	It shall be assured that the siren to declare emergency are different in nearby installation to avoid confusion.	Emergency siren code is different than that of other industries located nearby.  COMPLIED.
41	All the alternatives of modern effective communication system shall be installed inside the terminal for obvious and faster communication in case of exigencies like fire and accidents, thereby minimising loss of human lives and property.	<ul> <li>Following different types of effective and faster communication is in place in case of exigencies like fire &amp; accidents.</li> <li>Walkie Talkie (VHF) sets</li> <li>Intercom – base station</li> <li>Manual Call Points (MCP)/Smoke detector /Hydrogen detector - indication of operation/activation of MCP is integrated on panel located at main control room as well as fire station.</li> <li>Siren</li> <li>Mobile</li> <li>COMPLIED.</li> </ul>
42	As per the factories act, first aid training given to all terminal person regularly. Training shall be given to the terminal person on safety and health aspects.	Trained First Aider are available at Terminal as well as Jetty.  List of trained First Aider is attached as <b>Annexure 59</b> in the main report.  Raising awareness on health and safety aspects, amongst the company employees and contractor workers, is one of the ongoing efforts at GCPTCL.  COMPLIED.
43	Local people shall be informed about the risks and its consequences. They shall be taught the methods and action plan in case of emergency with the formation of local committees.	Community awareness program under title "Jan JagrutiAbhiyan" is conducted at least once in a year or on need basis for the people/community staying in close vicinity to the organization with special attention to HSE risks and its consequences in case disaster including industrial disaster.  A pocket booklet in local language on basic safety requirements/expectations for the villagers is distributed amongst them during the awareness program. Copy of the booklet is attached as <b>Annexure 60</b> in the main report.  Typical photographs of such program carried out at Lakhigam and Navinagari Machibar are appended as below for ready reference.



Fire extinguishers, foams, sand, first aid box and required antidotes for the materials in the terminal shall be made readily available in adequate quantity at all the time.

Sufficient number of fire extinguishers & required quantities of foam, sand buckets and first aid boxes are readily made available across the Terminal and Jetty.

Total 11 First Aid boxes provided.

Antidote is available for snakebite.



### COMPLIED.

Personnel protective equipment shall be provided to workers and its' usage shall be ensured and supervised.

PPE like ear plugs, masks, safety goggles, helmet etc. are provided and its usage is ensured through training, display signage and supervised.

### COMPLIED.

48 Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per Factories Act and Rules. Pre-employment and periodical medical examination for all workers shall be undertaken as per statutory requirement.

Occupational Health Surveillance of the workers (both contractors as well as company employees) is one of the on-going activities at GCPTCL and is carried out at a frequency prescribed in the Factories Act and Gujarat Factory Rules and the records are being maintained in OHC.

Occupational Health Surveillance is carried out -

- → At the time of joining formality (i.e. Pre-Employment Fitness Examination)
- → At every six months for all workers engaged in hazardous process (i.e. Periodic Fitness Examination)

Details of checks conducted at the time of Fitness Examination is appended as below for ready reference-

Fitness Examination Parameter	Pre-Employment Fitness Examination	Periodic Fitness Examination
Physician Check-up		
Eye – Check-up	$\sqrt{}$	
ENT- Check-up	$\sqrt{}$	
X-ray		
ECG	$\sqrt{}$	
Urine Routine		V
CBC+ESR		V
Blood Group	V	V

			Random Blood Sugar	V	V	
			Typical sample lab and Periodical Fitness Exam are attached as <b>Annex</b> main report.  Records of such fitness	nination for company enure 70 and 71A and 7 see examination are ma	nployee and contract <b>1 B</b> respectively in the stand	ors the ard
			template as prescribed Rules i.e. in Form No 33	3 (Pre-Employment) Fo	rm No 32 (Periodica	l).
			Typical example of one reference.	such record is append	ded as below for rea	ady
			1. Employee Code No. 2. Name of the Person Examined 3. Father's Name 4. Sex 5. Residence 6. Date of Birth , if available 7. Name & Address of the Factory 8. The worker is Employed / Proposed a. Hazardous Process b. Dangerous Operation 7. Certify that I have personally examination is 30 years in my opinion he / she is fit for employments.	amirned the above named person whose ide  Act and who is des  of that his / her, age, as nearly as can be aso  ent in the said manufacturing process / operations  ent in the said manufacturing process / operate is  Signature of factory Medical Officer with  Name of the Factory  Medical Officer with  Name of the Factory  Medical Officer with  Mark of the Factory  Medi	I colony - og Tambag ** 8  Locker Dist Bharne  Intification marks are  irrous of being employed in  ertained from my  ation.  beration for the  he is referred for  ical officer  ed Signature of the  Factory Medical  Officer with date.	Lq.
49	The	project		Plan (DMP) / On-Site Er	mergency Action Pla	n is

The management prepare Disaster ma project shall detailed management

Disaster Management Plan (DMP) / On-Site Emergency Action Plan is in place.

(DMP) for the Bharuch district DMP is prepared by the district administration. Copy plan project as the of relevant pages are attached as **Annexure 64** in the main report. per quidelines from Directorate of Industrial Site level On-Site Emergency Action Plan is prepared and was last Safety and health. reviewed in January. 2020. Copy of plan - Index Page is attached as Annexure 65 in the main report. Copy of the plan had been submitted to the office of Directorate of Industrial Health and Safety (DISH) vide our letter. Dated 13 August.2020 COMPLIED. Safety audit of Terminal is carried out at a frequency defined in the 50 The safety report shall complied Factories Act and the Gujarat Factories Rules, 1963 and amended undertaking a safety thereof. audit of the terminal and the same shall Last Safety audit was carried out in 2018 by external competent submitted to statutory agency (i.e. M/s Eco Safe Consultant) and report of its authorities. recommendations is regularly submitted to DISH. COMPLIED. 51 The unit shall effectively HAZOP of the facilities had been carried out and recommendations implement all the were implemented. recommendations of the HAZOP study, Risk analysis and disaster COMPLIED. management plan A-5 NOISE The overall noise level in 52 The major activity is storage and handling of chemicals and as such no and around the plant manufacturing activities are carried out, there is less likelihood of high area shall be kept well noise generating machinery/equipment. However, noise suppression within the prescribed devices where applicable like standards by providing noise control measures Pumps are provided with suitable noise suppression measures e.g. including acoustic enclosure, muffler on exhaust etc. insulation, hoods. enclosures silencers. vibration dampers etc. on all sources of noise generation. The ambient noise levels shell on Dies umps Exhaust confirm to the standards prescribed under the Environment (protection) and Rules. Act Workplace noise levels for workers shall be as per the Factories Act and Rules.



Practice is in place for monitoring of Noise level, at periodic level, within the complex at workplace as well as at the extreme perimeter through MoEF&CC and NABL recognized third party as well as by internal resource and records are maintained.

Summary of noise level monitoring for the reporting period (April. to September 2020) is presented as below for ready reference.

Area/Location	Average	Minimum	Maximum	
Ambient Air Noise Monitoring – DAY/NIGHT in dB(A)				
Nearby Store	56/52	47/46	66/60	
Main Gate	61/55	54/52	70/62	
Material Gate	60/55	56/51	68/64	
Landfall Point	57/55	51/50	61/58	
At Workplace Noise Mon	At Workplace Noise Monitoring – in dB(A)			
Jetty Service Platform	58/52	54/48	66/59	
BOG Compressor House	64/55	55/49	70/68	
Mechanical Workshop	57/52	51/50	62/58	
Gantry Area	60/50	57/42	63/60	

# COMPLIED.

# A-6 WASTE MINIMIZATION 53 The unit shall undertake

following waste minimization measures:

- Use of automated and close filling to minimize spillages.
- Venting equipment through vapour recovery system

Implemented automated and close filling operation including venting, if any through vapour recovery system for operations like loading of chemicals into tanker at pressurized gantry.

At the gantry, installed set stop valve for product transfer operation. The valve automatically closed once the controller read the limit feed by the operator to avoid overfill of product from the tanker.

# COMPLIED.

### A-7 | GREENBELT

54 The unit shall develop greenbelt in minimum 35 Ha land area within

The terminal has developed and maintained green belt as mentioned below;

premises as per the CPCB guidelines, preferably with local species. Drip irrigation system shall be used for greenbelt development.

- Greenbelt width of 100 meters in the periphery of the company having density of ~ 1000 trees/Acre
- Total green belt area: 35 Hectors
- Total no. of trees: 87500

Green belt has been developed using native plant species (Azadiractaindica, Peltophorumindica, Kejurina, Bahomiapurpuria, ficusreligiosa, Ficusbenghalensis, TerminaliaArjuna etc.) of plants and is being maintained.

Water sprinkling and drip irrigation system are being used for the green belt development / horticulture purpose.











 In Addition to this, saplings planted along the roadside boundary/open space available outside the company premises as well as in the neighbouring villages in consultation with GIDC, Dahej during 2018-19, 2019-20 and 2020-21.

# COMPLIED.

#### A-8 **GENERAL CONDITIONS** 55 The All the environment protection measures, risk mitigation measures and project management shall safeguards recommended in the EIA/RA and DMP report of project are ensure that the unit implemented. complies with all the environmental protection Implementation status of some of major suggestions are appended as and below for ready reference. measures risk mitigation measures / safeguards Terrestrial EIA recommended in the Provision of ETP EIA, EMP and DMP Hazardous Waste Storage Facility and membership subscription report of the project. for its disposal in environment friendly manner Bulk storage of chemicals - bunding provided to accommodate 1.10 times of the maximum volume of chemical stored Carrying out Ambient Air Quality Monitoring thru' MoEF&CC and NABL accredited laboratory... COMPLIED. 56 In the event of failure of Noted and being complied. pollution control anv system adopted by the unit, the facility shall be safely closed down and shall not be restarted until the desired efficiency of the control equipment has been achieved. 57 GCPTCL-strictly follow the guidelines and provision of Vessel The company shall Tracking & Port Management System (VTPMS) controlled by GMB and strictly follow the quidelines and GoG engaged BOOT (Built Own Operate and Transfer) operator M/s. provisions of vessel AATASH NORCONTROL LTD. who is expert in Vessel Tracking & Port Management System (VTPMS) and Tracking & Warning System transport management system devised for Gulf (TWS). of Cambay. One of the vital features of the VTPMS is to improve safety and efficiency of vessel traffic and to protect the environment. The other key important features of VTPMS are -**Information Service [INS] -** processes and disseminates information about conditions and events important to shipping and Traffic Organisation Service [TOS] - manage space in the waterway in particular allocate arrival or departure times, assign anchorage space, manage traffic in one way zones. Navigational Assistance Service [NAS] - positioning or navigation assistance on request. Repeater of VTPMS system, through GPS server, is installed at GCPTCL Jetty Control Room and is being monitored by competent person.

	1				
58	The project proponent shall adopt best industry standards for environment, occupational health and safety.	Environi and Qu adoption	CL is certified mental Manag lality Manage n of best indus	gement Systems (IS ment Systems (IS	agement Systems (IMS) i.e. SO 14001), OSHAS 18001 O 9001) and demonstrate rt of demonstrating continual Measures.
		tification	P.C Bureau System with	LAKHIGAM, VIA: DAHEJ, TAL \ GUJRAT  Verita's Certification Holding SAS— of the above organization has bee the requirements of the Managem  Stance  SO 9001:2015, IS	UK Branch certifies that the Management en audited and found to be in accordance ent system standards detailed below.
		Bureau Veritas Certification	TRANSFI AND Original cycle Expiry date of Recertification Recertification Subject to the	start date: 12 May 2008 previous cycle: 11 May 2020 n Audit date: 11 May 2020 n cycle start date 22 May 2020 continued satisfactory operation of expires on: 11 November 2020	ertification  NS FOR RECEIPT, STORAGE AND DUCTS, PETROLEUM PRODUCTS LUDING CHEMICALS & OILS  of the organization's Management System.
		0	Jagdhoesh N. Heed CERTI Commodities, Certics	will of BVCH*SAS_LUK Branch MANIAN FICATION, South Asia Indicatiny & Faccilities Division from hody Im Piece of Peaced Dress Lindon Teas  Dress Vertex (India) Press Lindon To Susiness Park, Mirror Indiastrial Americ (Sas), Marrol - 450 050  Lindon Carrol Turber chartering the acque of To check this sertificate widthy please call	ed (Cartification Business) Area, MIDC Cross Road "C" India This conflicts of the applicability of the obtained by consulting the organization.
59	The unit shall undertake eco-developmental measures including community welfare	up in th	owing socio – ne Lakhigam r.	village in consulta	nt activities have been taken tion with TDO/DDO/District
	program most useful in the project area for the overall improvement and environment.	1	Facilities Offering employment from nearby	Evidence – Refer	+80% employment in Non- Supervisory level

community/p opulation.	is from nearby community/popula tion. This is a kind of an ongoing enablement.
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In addition to that, following CSR activities were carried out in Lakhigam as requested by the local people during the last 2 years.

SN	Facilities	Evidence –	Cost
		You may please refer	incurred
1	Assembly Hall at Lakhigam	Annexure 19 in the main report Letter from Principal Government Secondary and Higher Secondary School – Lakhigam dated 17.09.2019	Rs. 33.19 Lacs
			4000
	T 2		
2	Construction of Houses for BPL Families (10 + 20 = 30 Houses)	Annexure 20 : in the main report letter from Sarpanch – Lakhigram dated 14.10.2020	Rs. 42.02 +Rs. 74.42 = Rs.116.4 4 Lakhs
3	Maths/Science Laboratory at Secondary & Primary School, Lakhigam	Annexure 21 in the main report Letter from Principal of Primary School Lakhigam	Rs. 25.48 Lakhs
4	Chief Minister Relief Fund for COVID -19	Annexure 22: Acknowledgement letter to main report for Contribution to GSDMA-CSR Fund dated 05.09.2020	Rs. 500 Lakhs

7	Donation to Seva Rural Trust, Jhagadia for installation of Bio Optical Meter Donation to	• Annexure 23 Letter dt. 03.10.20 from Sewa Rural trust is attached.	Rs. 30 Lakhs
	Gram Seva Trust, Kharel for upgradation of NICU/ICU facilities	Annexure 24: in main report letter dt.18.09.20 from Gram Seva Trust Kharel	Lakhs
8	Donation to Civil Hospital for setting up New Born Hearing Centre	Annexure 25 A: in main report letter from Gujarat CSR Authority dated 09.07.2019	Rs. 12.11 Lacs
9	Donation to Civil Hospital for setting up New Born Hearing Centre Services	Annexure 25 B: Letter dt. 27.11.20 From Gujarat CSR Authority is attached	Rs. 3.42 Lacs
10	Construction of Cooking Shed at Lakhigam	Annexure 26: cooking shade is provided at Lakhigam	Rs. 9.04 lacs
11	Donation to N D Desai Hospital and Medical Collage	Annexure 26 A: in the main report letter dated 28.09.2020 to provide 20 NICU beds	Rs. 50 Lacs
12	Construction of 40 nos. of houses for BPL Families	Annexure 27 Letter dt. 20.10.20 from TDO is attached	Rs. 126 lacs (In progress)
13	Construction of Sub health Centre at Lakhigam	Annexure 28 Letter dt. 31.12.20 from TDO is attached	Rs. 50 Lacs (In progress)

The other key CSR activities includes -

- Construction of PHC Building 0.99 Lacs Installation of R O Water Plant at Community Hall 5.86 lacs
- Water Tank for bath at Lakhabava Temple 3.06 lacs
- Contribution to Shilpa School Rs. 3 Lacs
- Contribution to Navratri Festival Rs. 1 lacs

Food Distribution during flood – Rs. 3 Lacs MS Grill at Govt. Office - Rs. 0.4 Lacs Distribution of School Bags, Uniform, etc at secondary school & Construction of Roof - Rs. 4.63 lacs Laboratory Building Secondary School – Rs. 3.71 Lacs Donation of tarpaulin sheet in Kerala – 17.09 lacs Summit of IIT - 5.9 lacs Contribution to mentally disabled children society 5 lacs Distribution of Masks and Food at Lakhigam during Covid pandemic Total expenditure incurred as a part of CSR and/or socioeconomic activities during the last 2 years was @ INR 10.34 crore. COMPLIED. 60 The management shall All the environment protection measures, risk mitigation measures and ensure that the unit safeguards recommended in the EIA/RA and DMP report of project are complies with all the implemented. environmental protection Implementation status of some of major suggestions are appended as measures and risk below for ready reference. mitigation measures/ safeguards proposed by them **Terrestrial EIA** – Provision of ETP Hazardous Waste Storage Facility and membership subscription for its disposal in environment friendly manner Bulk storage of chemicals - bunding provided to accommodate 1.10 times of the maximum volume of chemical stored Carrying out Ambient Air Quality Monitoring thru' MoEF&CC and NABL accredited laboratory... COMPLIED. Please refer our reply in point no 60. 61 The project management shall also comply with all the COMPLIED. environment protection measures. mitigation measures and safeguards recommended in the EIA/EMP report as well as other proposals made by them. 62 The applicant shall also GCPTCL will comply with the additional condition that may be imposed by the SEAC or the SEIAA or any other competent authority for the comply with any purpose of the environmental protection and management. additional condition that

63	may be imposed by the SEAC or the SEIAA or any other competent authority for the purpose of the environmental protection and management.	COMPLIED.
63	any other competent authority for the purpose of the environmental protection and	COMPLIED.
63	authority for the purpose of the environmental protection and	COMPLIED.
63	of the environmental protection and	COMPLIED.
63	l ·	
63	management.	
63	1	
	No further expansion or	Noted and is being complied
	modification in the plant	GCPTCL had obtained EC & CRZ clearance from SEIAA (State Level
	shall be carried out	Environment Impact Assessment Authority, Gujarat) for expansion in
	without prior approval of	the existing isolated chemical storage by addition of 19 storage tanks
	the MoEF/SEIAA, as the	and modification of the existing jetty by addition of two mooring
	case may be. In case of	dolphins and two breasting dolphins including extension of existing
	deviations or alterations	pipe rack vide letter no. SEIAA/GUJ/EC/6(b) & 7(e)/28/2016 dated
	in the project proposal	27.01.2016.
	from those submitted to MoEF/SEIAA/SEAC for	
	clearance. A fresh	
	reference shall be made	
	to the SEIAA/SEAC to	
	assess the adequacy of	
	conditions imposed and	
	to add additional	
	environmental protection	
	measures required, if	
	any.	
64	The project authorities	Budgeting for Environment protection measures and CSR including
	shall earmark adequate	socio-economic constitutes a part of overall budget plan and sufficient
	funds to implement the	funds are earmarked every year for environmental management
	conditions stipulated by SEIAA as well as GPCB	program including monitoring and analysis.
	along with the	
	implementation	
	schedule for all the	Environment Budget: 2020 – 21
	conditions stipulated	SN Item INR - Lakh
	l ·	1014 Itom
	therein. The funds so	1 Environment monitoring &
	provided shall not be	
		1
	provided shall not be	Hazardous waste management 13.45
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.
G.F.	provided shall not be diverted for any other purpose.	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.  COMPLIED.
65	provided shall not be diverted for any other purpose.  The applicant inform the	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.  COMPLIED.  Environment clearance letter published in newspaper Times of India
65	provided shall not be diverted for any other purpose.  The applicant inform the public that the project	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.  COMPLIED.  Environment clearance letter published in newspaper Times of India and Gujarat Samachar dtd. 23.02.2011. Sample advertisement is
65	provided shall not be diverted for any other purpose.  The applicant inform the public that the project has been accorded	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.  COMPLIED.  Environment clearance letter published in newspaper Times of India
65	provided shall not be diverted for any other purpose.  The applicant inform the public that the project has been accorded environmental clearance	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.  COMPLIED.  Environment clearance letter published in newspaper Times of India and Gujarat Samachar dtd. 23.02.2011. Sample advertisement is
65	provided shall not be diverted for any other purpose.  The applicant inform the public that the project has been accorded	Hazardous waste management 13.45 2 Oil spill response 54.69 3 Green belt/horticulture 19.00 4 Housekeeping 19 5 Drain cleaning 1.0 Total - Lakhs 107.14  Note: Budget Under the Activities Listed as above may subject to change based on inputs / discussion/ issues shortlisted/ identified/ presented during the Public Hearing.  COMPLIED.  Environment clearance letter published in newspaper Times of India and Gujarat Samachar dtd. 23.02.2011. Sample advertisement is
	provided shall not be diverted for any other	Hazardous waste management 13.45 2 Oil spill response 54.69

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	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 newspaper, that are widely circulated in the region, one of which shall be in the gujarati language and the other in English. A copy each of the same shall be forwarded to the concerned Regional office of the Ministry.	STORE KEDPER  THE THE OLD THE STORE AND THE STORES OF THE
66	It shall be mandatory for	Half yearly compliance status report of Environment Clearance is
	the project management to submit half-yearly compliance report in	regularly submitted to MoEFCC, Bhopal.  COMPLIED.
	respect of the stipulated prior environmental clearance terms and	
	conditions in hard and soft copies to the	
	regulatory authority concerned, on 1st June & 1st December of each	
	calendar year.	
67	The projects authorities	Noted and being complied.
	shall also adhere to the stipulations made by the	Environmental Statement, Hazardous waste return, Water Cess are
	GPCB.	submitted timely to GPCB along with analytical reports.
68	The project authorities shall inform the GPCB,	Noted and being complied.
	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.	
69	The SEIAA may revoke	Noted.
	or suspend the	
	clearance, if implementation of any of	
	the above conditions is	
	not found satisfactorily.	
70.	The above conditions shall be enforced,	The site has valid Common Consent Authorization granted by GPCB and its all conditions are being complied.
		J 17-11-11

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		interalia under the	
		provisions of the Water	You may please refer <b>Annexure 35</b> in the main report.
		Prevention & control of	roa may prodes roter runnestance so in the main reporti
		pollution) Act 1974, Air	COMPLIED
		(Prevention & control of	
		pollution) Act 1981, the	
		Environment	
		(Protection) Act 1986,	
		Hazardous	
		Wastes(Management,	
		Handling &	
		Transboundry	
		movement) Rules 2008	
		,	
		and Public Liability	
		Insurance Act 1991	
		along with their	
		amendments and rules.	
	71.	The Environmental	Noted.
		Clearance is valid for	1101041
		five years from the date	
		of issue.	