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

Compliance Status (for the period of **October 2020 to March 2021)** 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 m^3 to 4,84,514 m^3 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.)

<table>
<tr><th>SN</th><th>Conditions</th><th>Status / Action taken</th></tr>
<tr><td>A-1</td><td colspan="2">WATER</td></tr>
<tr><td>1.</td><td>There shall be no increase in water consumption & waste water generation from the project expansion.</td><td>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 –
<table>
<tr><th>Year</th><th>2018-19</th><th>2019-20</th><th>2020-21</th></tr>
<tr><td>Allocated water supply by GIDC KLD</td><td>1590</td><td>1590</td><td>1590</td></tr>
<tr><td>Average consumption of water in KLD</td><td>512</td><td>651</td><td>775</td></tr>
</table>
Water consumption during October 2020 to March 2021 is 779 KLD.

Details of wastewater generated during the last 3 years is appended as below for ready reference –
<table>
<tr><th></th><th>Consented Quantity in KLD</th><th colspan="3">Generation in KL</th></tr>
<tr><th></th><th>Year</th><th>2018-19</th><th>2019-20</th><th>2020-21</th></tr>
<tr><td>Industrial</td><td>125</td><td>2.8</td><td>2.7</td><td>11.6</td></tr>
<tr><td>Domestic</td><td>40</td><td>36.33</td><td>35.43</td><td>36.80</td></tr>
</table>
<table>
<tr><th></th><th>Consented Quantity in KLD</th><th>Generation in KL</th></tr>
<tr><th></th><th>Year</th><th>2020-21 (October 2020 to March 2021)</th></tr>
<tr><td>Industrial</td><td>125</td><td>6.9</td></tr>
<tr><td>Domestic</td><td>40</td><td>39.2</td></tr>
</table>
COMPLIED.</td></tr>
</table>

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. **COMPLIED.**
A-2	**AIR**	
3	There shall be no process gas emission from the Terminal.	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. **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 4.95 KL only mostly consumed for conducting functional performance of DG Set and Diesel Generating Fire Water Pumps - 3 nos. of 710 m^3/Hr capacity. DG Set stack emission monitoring has been carried out through MoEF&CC (recognition valid till 04.01.2022 and NABL accredited laboratory (Certificate No. TC-7099, valid till 26.03.2022). Monitoring report for October 2020 to March 2021 is presented in tabular form as below for ready reference:-

Parameter –Stack	GPCB consented limit -	Average	Minimum	Maximum
PM	**150 mg/m^3**	68	63	73
SO2	**100 ppm**	23	22.50	23.50
NOx	**50 ppm**	17.34	17.01	17.66

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.

KADAM ENVIRONMENTAL CONSULTANTS
An ISO 9001-2015 Certified Company (MoEF Approved)
871/B/3, Near Himalaya Machinery, GIDC Makarpura, Vadodara-10.
Phone : (O) 0265 - 6131000, 6131001
Certificate No.: TC-7099
ENVIRONMENTAL MONITORING REPORT

LABORATORY TEST REPORT – STACK

REPORT NO.: DEC20/082/01 (ULR- TC709920000010329F)

SAMPLE DETAILS

1.	Name & Address of Client: M/s Gujarat Chemical Port Terminal Company Limited. P.O . Lakhigam Via : Dahej, Ta.: Vagra, Dist. : Bharuch – 392130.		
2.	Sample ID: 2044628246 – 082DC20SE01	3.	Client Representative: Mr. Jigar Patel
4.	Sample Date: 10.12.2020	5.	Sampling Location : D G Set (2000 KVA)
6.	Sampling Time: 12:00 hr	7.	Sampling Duration: 20 Mins
8.	Analysis commenced on: 16.12.2020	9.	Analysis Completed on : 16.12.2020
10.	Reporting Date: 29.12.2020	11.	Discipline : Chemical
12.	Sample Collected By: Mr.Vimal	13.	Group : Atmospheric Pollution
14.	Sampling Procedure: IS Method	15.	Product: Stack Emission
16.	Description of Sample: Sampling Bottles: Sealed √	Thimble:Packed√	Bladder: Clamped

STACK DETAILS

S.No.	Parameters	Unit (SI)		Description
1.	Source		:	**D G Set (2000 KVA)**
2.	Height	m	:	30
3.	Diameter	mm	:	-
4.	Temperature	°c	:	138
5.	Velocity	m/s	:	5.6
6.	Type of fuel used		:	HSD
7.	Quantity of fuel used	Kl/hr	:	0.698

TEST RESULTS

S. No.	Parameters	Unit (SI)		Results	Specification/ SPCB Norms/ BIS Standards	Method Used
1.	Particulate Matter	mg/Nm^3	:	61	150	IS 11255 (Part 1) : 1985
2.	Sulphur Dioxide(SO_2)	ppm	:	23.19	100	IS 11255 (Part 2) : 1985
3.	Oxides of Nitrogen (NOx)	ppm	:	20.82	50	IS 11255 (Part 7) : 2005

Remark :
Authorized By -
Name : Sapana Amin **Designation : Lab Incharge**

NOTE: 1) Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2) Re analysis of sample will be done, if requested within 7 days from the date of Reporting of sample if the samples are not consumed during analysis.
3) The results reported above relate to the sample identified under Sample Details.

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

LABORATORY TEST REPORT FORMAT		
DOC. NO.: LAB-FMT-052	Issue No.: 02	Revision No.: 02
Effective Date:. 01.07.2020	Issue Date: 01-01-2015	Revision Date: 01.07.2020

Page 1 of 1

COMPLIED.

5	Fugitive emission at workplace shall be controlled and kept	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.

	below the limits prescribed by the concerned authorities from time to time. At no time, the emission level shall be beyond the prescribed limits.	• 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. **<u>Monitoring of Fugitive Emission</u>** – 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 25** in the main report**.** Summary of fugitive emission monitoring for October 2020 to March 2021 is appended as below for ready reference.

Location	Average VOC (mg/m^3)
Near Atmospheric Gantry	1.14
Near Pressurize Gantry	1.24
Near BOG Area	1.25
Near LPG Tank Farm	1.32
Near Propane Tank Farm	1.14
Near Py Gas Tank Farm	1.17
Near Methanol Tank Farm	1.15
Near Px Tank Farm	1.11
Near Hydrocarbon Tank (Naphtha)	1.33
Near Acetic Acid Tank Farm	1.31

No limit prescribed for VOC.

Analytical report of one such fugitive emission monitoring is attached as **Annexure 26** in the main report**.**

Workplace monitoring –

Workplace monitoring for presence of hazardous chemicals, if any is carried out through MoEF&CC (recognition valid till 04.01.2022 and NABL accredited laboratory (Certificate No. TC-7099, valid till 26.03.2022)– M/s. Kadam Environmental Consultants, Gujarat – details attached as **Annexure 28** in the main report**.**

Summary of monitoring of hazardous chemical at workplace for the reporting period i.e., **(October 2020 to March 2021)** is appended as below for ready reference

Hazardous chemical	Average mg/m^3	Minimum mg/m^3	Maximum mg/m^3
Px	3.59	2.37	5.38
Methanol	3.12	1.61	6.12
Hydrocarbon	2.27	1.24	3.11
Butadiene	ND	ND	ND
Acetic Acid	ND	ND	ND
Caustic Fumes	ND	ND	ND
Propylene Oxide	ND	ND	ND
Propane	3.96	2.68	6.68

Report of one such workplace monitoring for the reporting period is attached as **Annexure 27** in the main report**.**

		COMPLIED.
6	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.

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<td>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.</td>
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<tr>
<td>7</td>
<td>Ambient air quality status in the area, particularly with respect to VOCs in addition to general parameters shall be monitored and its records shall be maintained.</td>
<td><u>Ambient Air Quality Monitoring (VOC)</u> –
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 25 in the main report.

Summary of fugitive emission monitoring for October 2020 to March 2021 period is appended as below for ready reference.
<table>
<tr><th>Location</th><th>Average VOC mg/m^3</th></tr>
<tr><td>Near Atmospheric Gantry</td><td>1.14</td></tr>
<tr><td>Near Pressurize Gantry</td><td>1.24</td></tr>
<tr><td>Near BOG Area</td><td>1.25</td></tr>
<tr><td>Near LPG Tank Farm</td><td>1.32</td></tr>
<tr><td>Near Propane Tank Farm</td><td>1.14</td></tr>
<tr><td>Near Py Gas Tank Farm</td><td>1.17</td></tr>
<tr><td>Near Methanol Tank Farm</td><td>1.15</td></tr>
<tr><td>Near Px Tank Farm</td><td>1.11</td></tr>
<tr><td>Near Hydrocarbon Tank (Naphtha)</td><td>1.33</td></tr>
<tr><td>Near Acetic Acid Tank Farm</td><td>1.31</td></tr>
</table>
No limit prescribed for VOC.

Analytical report of one such fugitive emission monitoring is attached as Annexure 26 in the main report.

<u>Ambient Air Quality Monitoring</u> –</td>
</tr>
</table>

Workplace monitoring for presence of hazardous chemicals, if any is carried out through MoEF&CC (recognition valid till 04.01.2022) and NABL accredited laboratory (Certificate No. TC-7099, valid till 26.03.2022)– M/s. Kadam Environmental Consultants, Gujarat – details attached as **Annexure 28** in the main report**.**

Summary of Ambient Air Quality Monitoring for the reporting period i.e., (October 2020 to March 2021) is appended as below for ready reference.

Parameter – AAQM	**GPCB consented limit / NAAQS - µg/m³**	**Average µg/m³**	**Minimum µg/m³**	**Maximum µg/m³**
PM10	100	70.83	63.67	82.00
PM2.5	60	20.22	13.67	28.00
SO2	80	8.67	7.52	9.34
NOx	80	12.33	11.36	13.10
HCL	200	6.92	0.25	15.98
Cl2	100	12.02	1.58	48.94
CO	4000	1100.11	957.67	1252.33
HC	160	N.D.	N.D.	N.D.
NH3	400	5.92	3.53	9.24
H2S	500	N.D.	N.D.	N.D.
CS2	2000	N.D.	N.D.	N.D.
HF	60	N.D.	N.D.	N.D.

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 29** 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 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/	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. **<u>AUTHORIZATION –</u>** 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 & amended order dated 2703.2020, valid upto 25.11.2023. Copy of latest CC & A is attached as **Annexure 30** in the main report. **<u>MEMBERSHIP SUBSCRIPTION –</u>**

	storage/ disposal of hazardous wastes.	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 & Ambuja Cement (October 2020 to March 2021). Copy of Consents and Authorisation for BEIL, Bombay Barrel and Ambuja Cement is attached as **Annexure 31, Annexure 32 and Annexure 33** 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	Category	Consented quantity MT/ Year	Total disposal during Apr 2020 to March 2021
1	Used or Spent Oil	5.1/I	7.48	NIL
2	ETP Sludge	35.3/I	6.0	NIL
3	Discarded Containers/Barrels/ Liners	33.1/I	3.0	2.430 MT
4	Used Foam pig of chemical	C-1/II	12.0	2.720 MT
5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL
6	Tank Sludge-Iron Sludge	3.1/I	100	NIL
	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 October 2020 to March 2021 is appended as below for ready reference.

SN	Title – Hazardous Waste	Category	Consented quantity MT/ Year	Total disposal during October 2020 to March 2021

1	Used or Spent Oil	5.1/I	7.48	NIL
2	ETP Sludge	35.3/I	6.0	NIL
3	Discarded Containers/Barrels/ Liners	33.1/I	3.0	2.430 MT
4	Used Foam pig of chemical	C-1/II	12.0	2.720 MT
5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL
6	Tank Sludge-Iron Sludge	3.1/I	100	NIL
	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 2021 is attached as **Annexure 34** 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.

<table>
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Pig Storage
Channel – Leachate collection
Pipeline to ETP – Leachate collection

COMPLIED.
</td>
</tr>
<tr>
<td>9</td>
<td>The hazardous waste shall be packed and stored in separate designated hazardous waste storage facility with impervious bottom and leachate collection facility, before its disposal.</td>
<td>
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 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 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.

<table>
<tr><th>Type of hazardous waste</th><th>Packing method</th><th>Disposal method</th></tr>
<tr><td>Spent oil/used oil</td><td>Metal container.</td><td>Authorized recycler- M/s Bombay Barrels, Ahmedabad</td></tr>
<tr><td>Discarded container/Barrels/ Liners</td><td>Direct disposal</td><td>Authorized recycler-</td></tr>
<tr><td>Used foam pig of chemical</td><td>In HDPE/LDPE liner bag of appropriate capacity – 200 kg / 500 kg.</td><td>M/s Ambuja Cement , Kodinar , Sourashtra.</td></tr>
<tr><td>Oil soaked cotton and other waste</td><td>In plastic container or HDPE/LDPE liner bag of appropriate capacity</td><td>M/s Ambuja Cement , Kodinar , Sourashtra</td></tr>
<tr><td>Tank sludge</td><td>In HDPE/LDPE liner bag.</td><td>TSDF- M/s BEIL, Dahej</td></tr>
<tr><td>ETP sludge</td><td>In HDPE/LDPE liner bag of appropriate capacity.</td><td>TSDF- M/s BEIL, Dahej</td></tr>
</table>

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

		   Pig Storage Channel – Leachate collection Pipeline to ETP – Leachate collection **COMPLIED.**
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 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.	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 & amended order dated 27.03.2020, valid upto 25.11.2023. Copy of CC & A is attached as **Annexure 30** 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 & Ambuja Cement (October 2020 to March 2021). Copy of Consents and Authorisation for BEIL, Bombay Barrel and Ambuja Cement is attached as **Annexure 31, Annexure 32 and Annexure 33** respectively in the main report. Summary of disposal of hazardous waste from April 2020 to March 2021 is appended as below for ready reference.

SN	Title – Hazardous Waste	Category	Consented quantity MT/ Year	Total disposal during Apr 2020 to March 2021
1	Used or Spent Oil	5.1/I	7.48	NIL
2	ETP Sludge	35.3/I	6.0	NIL
3	Discarded Containers/Barrels/ Liners	33.1/I	3.0	2.430 MT
4	Used Foam pig of chemical	C-1/II	12.0	2.720 MT
5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL
6	Tank Sludge-Iron Sludge	3.1/I	100	NIL
	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 from October 2020 to March 2021 is appended as below for ready reference.

SN	Title – Hazardous Waste	Category	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/Barrels/ Liners	33.1/I	3.0	2.430 MT
4	Used Foam pig of chemical	C-1/II	12.0	2.720 MT
5	Oil Soaked Cotton & Other waste	33.2/I	10.0	NIL
6	Tank Sludge-Iron Sludge	3.1/I	100	NIL

	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 2021 is attached as **Annexure 34** in the main report**.**

COMPLIED.

A-4	**SAFETY**	
11	The project management shall strictly comply with the provisions made in Manufacture Storage and Import of Hazardous Chemicals Rules, 1989 as amended in 2000, for handling of hazardous chemicals.	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 –

MSIHC Rules - Compliance of Applicable Rules

SN	Conditions	Compliance
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.	• Major Accident Hazards has been identified and incorporated in On Site Emergency Action Plan. The plan was last reviewed in January 2021. ▪ Following controls have been implemented as a part of prevention of Major Accidents → Storage tankages are confirming to API/ASTM codes and practices → Process Hazard Analysis and Risk Assessment has been carried out for bulk storage of Hazardous Chemicals and recommendations implemented. → Standard Operating Procedures are in place for handling of Hazardous Chemicals → Standard Maintenance Practices are in place for ensuring integrity of installations etc.

					→ Training and Awareness on HSE-F topics is one of the ongoing activity.
			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 15** 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	Last Statutory Safety Audit of GCPTCL industrial activities with reference to IS 14489 was carried out by an external agency M/s. Trivedi Associate in the year 2020. As per statutory requirement, it is due in year 2022. Copy of Safety Audit Report is attached as **Annexure 36A** in the main report.

			comments to the concerned Authority	
		5	An occupier shall prepare and keep up-to-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 2021.
		6	The occupier shall ensure that a mock drill of the on-site emergency plan is conducted every six months.	Noted and being complied with. Latest Mock Drill was conducted on 23.03.2021 and report is attached as **Annexure 36B** 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 pertaining information related to the industrial activity was submitted to the office of Asst. Directorate of Industrial Health and Safety (DISH) on 08.02.2021.
		8	The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about (a) the nature of the major accident hazard; and (b) the safety measures and the "Do's' and 'Don'ts" which should be adopted in the event of a major accident.	Community awareness program under title “Jan Jagruti Abhiyan” 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. Community awareness programs has been conducted for Navinagri and Lakhigam, sample photograph and further detail is provided in our reply stated in point no. 71.
		COMPLIED.		
12	Necessary permissions from various statutory authorities like PESO, Nagpur, Factory	GCPTCL had obtained requisite permissions from the relevant Government departments/authorities prior to start construction work.		

<table>
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<td>inspectorate etc. shall be obtained prior to commissioning of the additional storage tanks.</td>
<td>The details of the permissions so obtained are appended as below.
<table>
<tr><td>CTE
(Annexure 12 in the main report)</td><td>CTE Amendment No-72483 GPCBIBRCH-B/CCA-347(3)/ ID-151341 with outward date 30/09/2015.

CTE Amendment No. 101047 GPCBBRCH-B/CTE-347(5)/ID-15134 with outward date 21.05.2019</td></tr>
<tr><td>CC & A
(Annexure 13 in the main report)</td><td>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

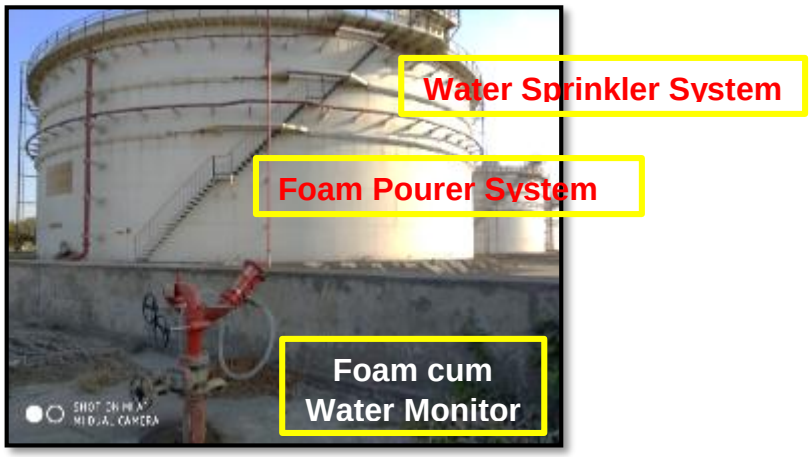
GPCB/BRCH-B/CCA-347(5)/ID-15134 dated 27.03.2020</td></tr>
<tr><td>GMB (Gujarat Maritime Board)
(Annexure 14 in the main report)</td><td>• GMB/N/PVT-1/601(10)/285/5605 dated 21.09.2015 in principle approval for construction of two Mooring Dolphins and allied facilities.
•
• GMB/N/PVT-1/601(10)/94/3512 dated 06.06.2016 for construction of two Mooring Dolphins and allied faculties.

• GMB/N/PVT/-1/229/89/3694 dated 28.05.2019 in principle approval for new development / modification at GCPTCL-Dahej</td></tr>
<tr><td>PESO (Petroleum and Explosive Safety Organization, Nagpur)
(Annexure 15 in the main report)</td><td>G-22(47)167, P2 (4) 359 dtd.28.07.2016

G-22(47)167 dtd. 06.06.2016.

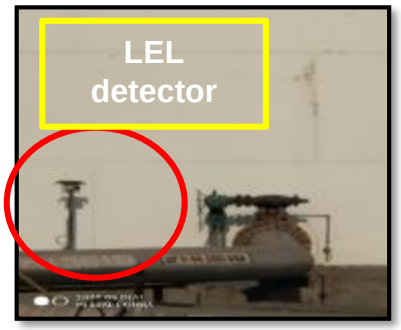
P-2(4)1005 dated 02.07.2020</td></tr>
<tr><td>DISH (Director of Industrial Safety and Health)
(Annexure 16 in the main report)</td><td>DISH/F-Map/2015/1997 dtd. 02.11.2015.

DISH/F-PLAN/2020/177 dtd 29.01.2020</td></tr>
<tr><td>Forest Division</td><td>Not Applicable</td></tr>
</table>
COMPLIED.</td>
</tr>
<tr>
<td>13</td>
<td>Design of the bulk storage installations 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.</td>
<td>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.</td>
</tr>
</table>

		 **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. **<u>At Jetty</u>** - 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. **<u>At Terminal</u>** - 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 37** in the main report**.** **COMPLIED.**

15	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 38** in the main report**.** **COMPLIED.**
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 39** in the main report**.**

		 COMPLIED.
17	The entire tank farm area shall be provided with leak detection sensors located at areas prone to fire risk / leakages.	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. 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.



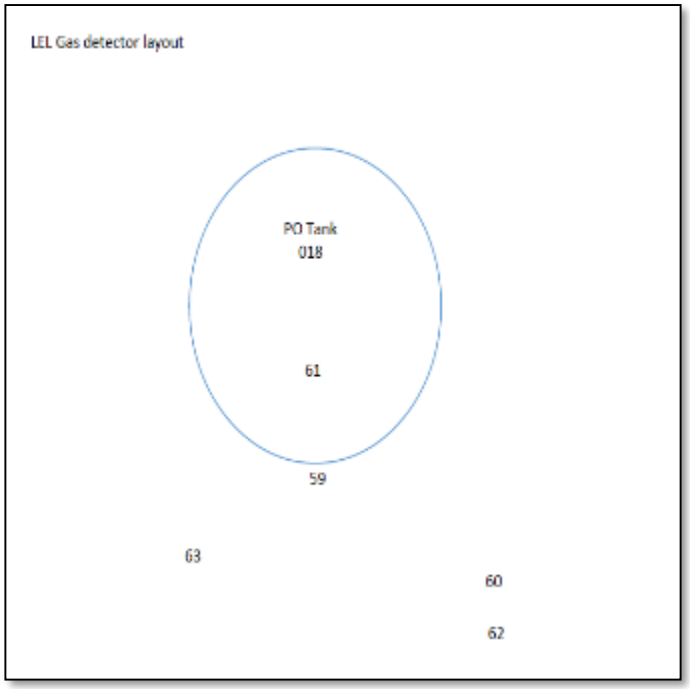
Further explanation –

- Fire and Gas detection network (LDAR System) has been established across the Terminal and Jetty area.

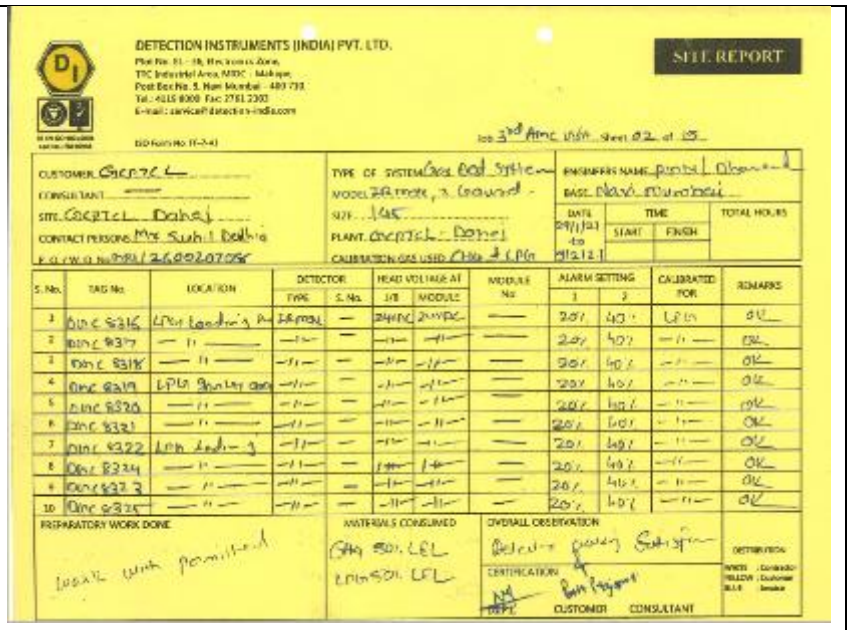
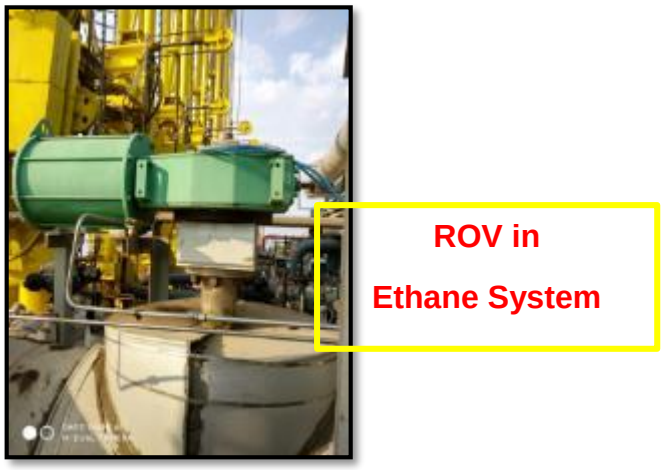
- 103 LEL gas detectors have been installed across the Terminal and Jetty area which is divided into 12 different zones for ease of identification of exact location and quick response.

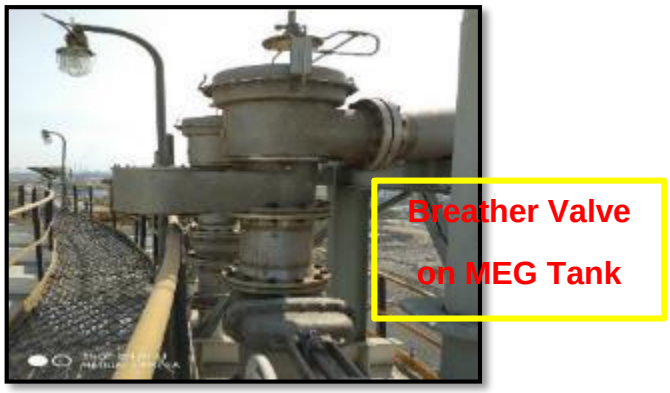
- The very basic intent of the network is to detect a gas leakage, if any in the field area and generate signal so that gas detectors can identify the leakage and initiate an alarm sequence on the panel located at control room as well as at Fire Station. Alarm communication devices are also installed in the field to generate audible and visible alarm.

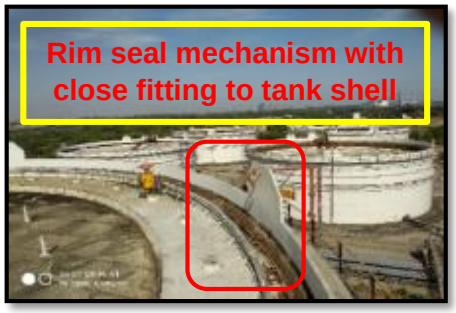
- **Installation of the detector** - The location of the detectors are so selected that it can detect gas leak, if any, on faster basis as well as to facilitate its functional testing. Graphical presentation of 12 zone as well as typical lay out of installation of Gas detector for one of the tank farm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



- **<u>Functional testing of detectors</u>**- 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 INSTRUMENTS (INDIA) PVT. LTD. SITE REPORT **COMPLIED.**
18	Remote Operated valve (ROV) shall be provided at strategic points on the pipeline circuit and also on the feeder lines. These ROV's shall be interlocked for auto-activation in the event of emergency and provision shall be made for activation by the emergency shutdown station.	ROV / MOV interlocked with auto-activation mechanism are provided in discharge line of bulk storage of products and in pipeline circuit to prevent emergency scenario. List of ROV / MOV is attached as **Annexure 40** in the main report**.**  **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 be provided for pumps/agitators for reactors for reduction of	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 41** 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.

	fugitive emissions and leakages. Traps shall be installed wherever necessary.	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.**
20	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 42** 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 is a likelihood of leakages shall be provided with Leak Detector and Repair (LDAR) system. Provisions for immediate isolation of such equipment also be made. The detector sensitivity shall be in ppm levels.	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. 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.

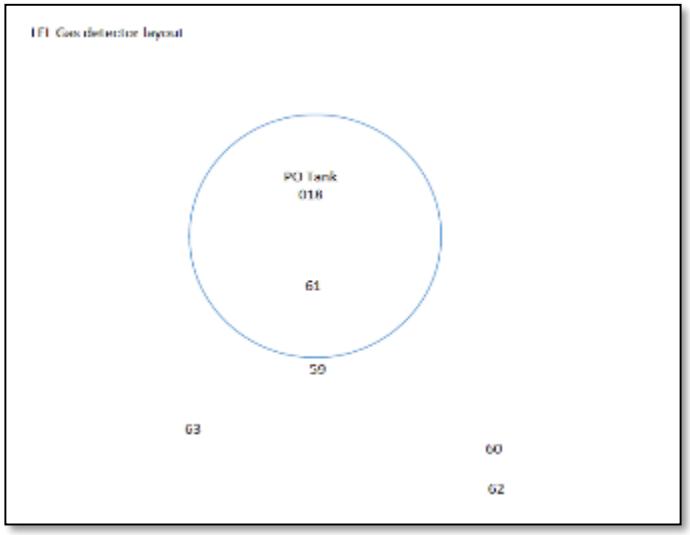
Further explanation –

- Fire and Gas detection network (LDAR System) has been established across the Terminal and Jetty area.

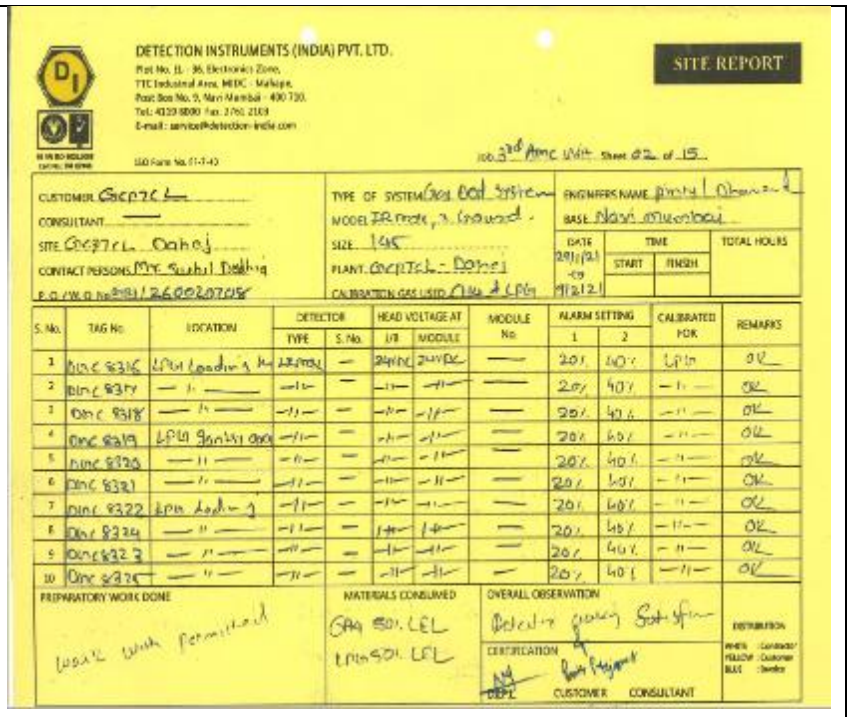
- 103 LEL gas detectors have been installed across the Terminal and Jetty area which is divided into 12 different zones for ease of identification of exact location and quick response.

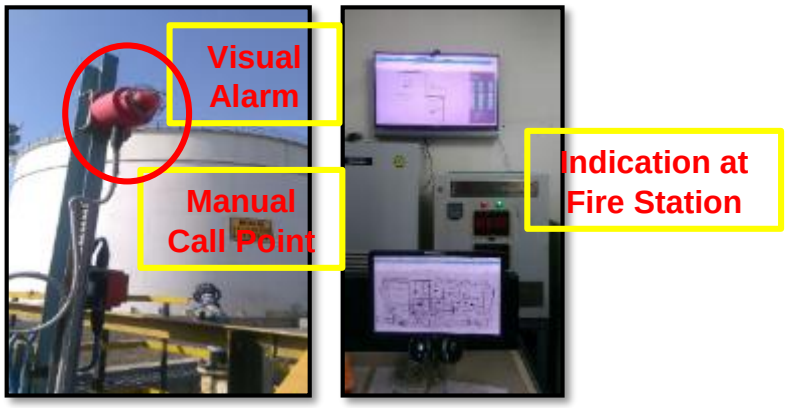
- The very basic intent of the network is to detect a gas leakage, if any in the field area and generate signal so that gas detectors can identify the leakage and initiate an alarm sequence on the panel located at control room as well as at Fire Station. Alarm communication devices are also installed in the field to generate audible and visible alarm.

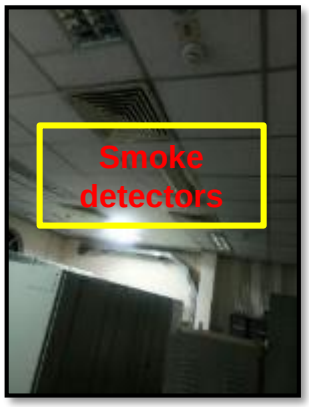
- **Installation of the detector** - The location of the detectors are so selected that it can detect gas leak, if any, on faster basis as well as to facilitate its functional testing. Graphical presentation of 12 zone as well as typical lay out of installation of Gas detector for one of the tank farm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



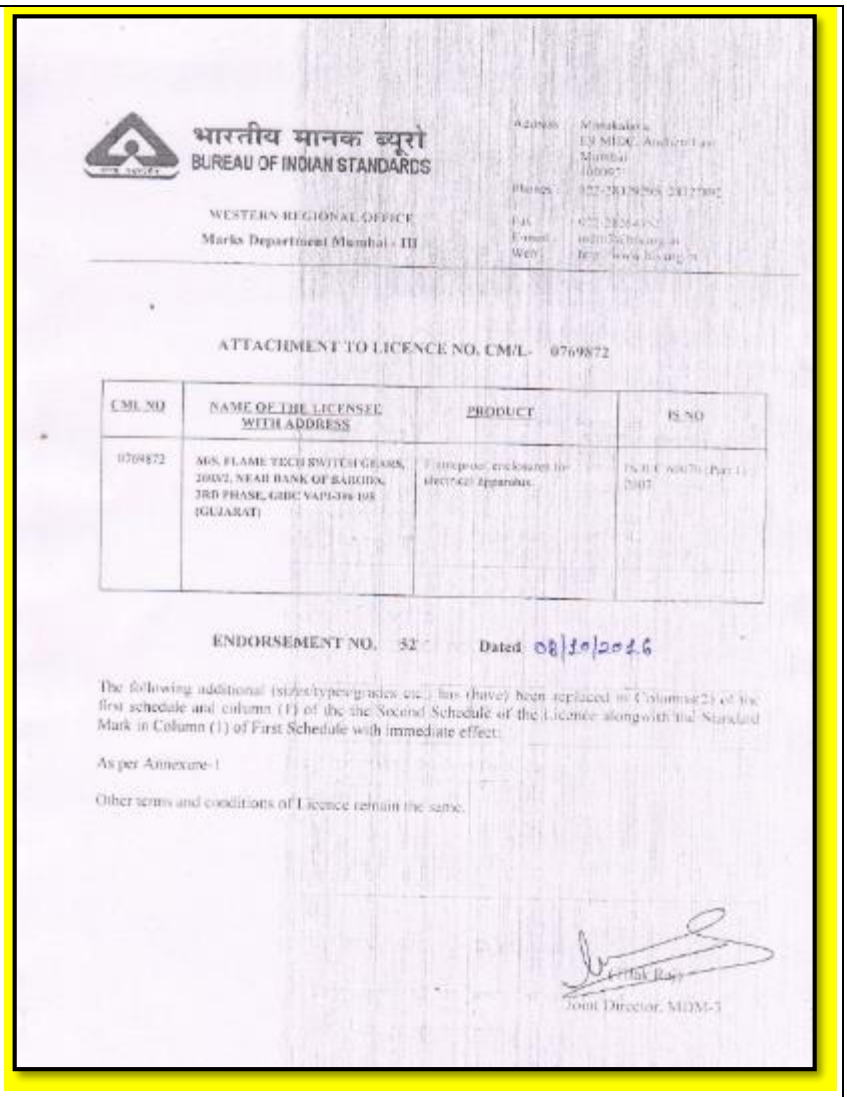
- **Functional testing of detectors**- The detectors are being tested at an interval of 06 months for checking of its healthiness by third party M/s Detection instrument, Mumbai and the records are being maintained. Typical record of functional testing of the detector is appended as below for ready reference.

		 DETECTION INSTRUMENTS (INDIA) PVT. LTD. SITE REPORT CUSTOMER GACPTCL CONSULTANT — SITE GACPTCL Dahej CONTACT PERSONS Mr. Sushil Dabhia TYPE OF SYSTEM Gas Det System MODEL IR type, 3 channel SIZE 1x5 PLANT GACPTCL - Dahej ENGINEERS NAME Pinky / Dhanesh BASE Navi Mumbai DATE 29/11/21 - 09/12/21 TIME START FINISH TOTAL HOURS S. No. / TAG No. / LOCATION / DETECTOR TYPE / DETECTOR S. No. / HEAD VOLTAGE AT I/B / HEAD VOLTAGE AT MODULE / MODULE No / ALARM SETTING 1 / ALARM SETTING 2 / CALIBRATED FOR / REMARKS 1 DNC 8316 LPG Loading H 24VDC — 24VDC 24VDC — 20% 40% LPG OK 2 DNC 8317 — " — — " — — " — — 20% 40% — " — OK 3 DNC 8318 — " — — " — — " — — 20% 40% — " — OK 4 DNC 8319 LPG Gantry dock — " — — " — — " — — 20% 40% — " — OK 5 DNC 8320 — " — — " — — " — — 20% 40% — " — OK 6 DNC 8321 — " — — " — — " — — 20% 40% — " — OK 7 DNC 8322 LPG Loading — " — — " — — " — — 20% 40% — " — OK 8 DNC 8324 — " — — " — — " — — 20% 40% — " — OK 9 DNC 8323 — " — — " — — " — — 20% 40% — " — OK 10 DNC 8325 — " — — " — — " — — 20% 40% — " — OK PREPARATORY WORK DONE Work with permission MATERIALS CONSUMED Gas 50% LEL LPG 50% LEL OVERALL OBSERVATION Detector giving satisfactory CERTIFICATION DEPL CUSTOMER CONSULTANT DISTRIBUTION WHITE : Contractor YELLOW : Customer BLUE : Vendor **COMPLIED.**
22	All the new tanks shall be provided with breather valves pressure relief valves. Nitrogen blanketing shall be provided for Methanol and Acetic acid tanks.	List of tanks including MTBE and Acetic Acid equipped with PRV/PVRV/Nitrogen blanketing is attached as **Annexure 42** in the main report. **COMPLIED.**
23	During material transfer, spillages shall be avoided and garland drain shall be constructed to avoid mixing of accidental spillages with domestic waste and storm water drain.	Following specific efforts / best practices / RAGAGEP are in place to ensure elimination/minimize spillage of hazardous chemicals during its storage and handling. • 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. • 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 43** 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 44** and **Annexure 45** respectively in the main report. 

		 **COMPLIED.**
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.

		COMPLIED.
27	All lighting/electrical equipment and instrumentation inside the installation shall be confirming to IS: 2206 (Part-I) and IS: 2148 standards.	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. Lighting fixtures installed at Jetty area are of make M/s. Flame Tech Switch Gears, Gujarat.

		 भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS WESTERN REGIONAL OFFICE Marks Department Mumbai - III ATTACHMENT TO LICENCE NO. CM/L- 0769872 CML NO | NAME OF THE LICENSEE WITH ADDRESS | PRODUCT | IS NO 0769872 | M/S. FLAME TECH SWITCH GEARS, 208/2, NEAR BANK OF BARODA, 3RD PHASE, GIDC VAPI-396 195 (GUJARAT) | Flameproof enclosures for electrical Apparatus. | IS/IEC 60079 (Part 1) 2007 ENDORSEMENT NO. 52 Dated 08/10/2026 The following additional (sizes/types/grades etc.) has (have) been replaced in Column(2) of the first schedule and column (1) of the the Second Schedule of the Licence alongwith the Standard Mark in Column (1) of First Schedule with immediate effect: As per Annexure-1 Other terms and conditions of Licence remain the same. Joint Director, MDM-3 **COMPLIED.**
28.	Growth of vegetation in the tank farm shall be removed on regular basis whenever found.	Majority of the area where hazardous chemicals are stored/handled including product transfer piping network is covered by RCC/ PCC. 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) is 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 of inspection of pumps is attached as **Annexure 46** in the main report. **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. **COMPLIED.**
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.	Visual inspection of pipeline including thickness measurement is carried out to locate leaks and corrosion monitoring aspects. Copy of SMP and duly completed report of thickness measurement of pipelines is attached as **Annexure 47 and Annexure 48** respectively in the main report. **COMPLIED.**
33.	Fire protection facilities and fighting equipment shall be maintained in the terminal as per OIDS-117.	Fire protection facilities and firefighting equipment are maintained/provided in accordance with the requirements detailed in the OISD 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. **COMPLIED.**
35	A dedicated Fire Department at the Plant	Dedicated and experienced fire team on 24 x 7 basis is available at Terminal. The team is equipped with specialized firefighting equipment

	level with fire tenders, specialized firefighting equipment and experienced manpower shall be established and kept operational.	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 2 Shift In Charge 4 Fireman – Employee 8 Supervisor 1 Driver 7 Pump Operator 3 Firemen 22 **COMPLIED.**
36	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.	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 **Annexure 49** in the main report**.** And typical inspection report for hydrant and sprinkler system is attached as **Annexure 44** and **Annexure 45** 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 is attached as **Annexure 50 and Annexure 51** respectively in the main report. **COMPLIED.**
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 shall be made to ensure that the required aids reach within the shortest possible time in case of any adverse conditions.	"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 **Annexure 52** in the main report.

		 MUTUAL AID SCHEME We, the members of Mutual Aid Scheme of Dahej industrial area hereby agree to abide by the terms & conditions. The terms and conditions of Agreement are as under: President HIL, DMD President/COO HIL Managing Director GCPTCL Sr.VP. (Plant Head) PLL G.M. (Plant Head) GACL Plant Manager (ONGC Dahej Plant) Chief Operating Officer ONGC Petro additions Limited (OPaL) Dahej Executive Director (O & M) Torrent Power Ltd. Dahej- SEZ Page 1 of 8 **COMPLIED.**
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.	Following different types of effective and faster communication is in place in case of exigencies like fire & accidents. • Walkie Talkie (VHF) sets • Intercom – base station • 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. • Siren • Mobile **COMPLIED.**
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 **Annexure 53** 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 **Annexure 54** in the main report**.** Typical photographs of such program carried out at Lakhigam and Navinagari Machibar are appended as below for ready reference.

		  COMPLIED.
44	Transportation of hazardous chemicals shall be as per the motor vehicle act & rules.	It is ensured that transportation of hazardous chemical is being done in accordance with the Central Motor Vehicle Act and Rules. For the purpose, following practice are in place – Visual inspection of the vehicle engaged for transporting hazardous chemicals is being conducted, followed by verifying the availability of documents like TREM card, license for transporting particular hazardous material issued by Petroleum Explosive and Safety Organization, driver's certified training for transporting hazardous materials etc. Copy of duly completed vehicle inspection checklist, TREM card and drivers training certificate is attached as **Annexure 55, Annexure 56 and Annexure 57** respectively in the main report. **COMPLIED.**
45	All transportation routes within the premise shall have paved roads.	All transportation routes including tanker parking area within the terminal area are paved. Sample photographs are appended below for ready reference. **COMPLIED.**

<table>
<tr><td>46</td><td>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.</td><td>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.

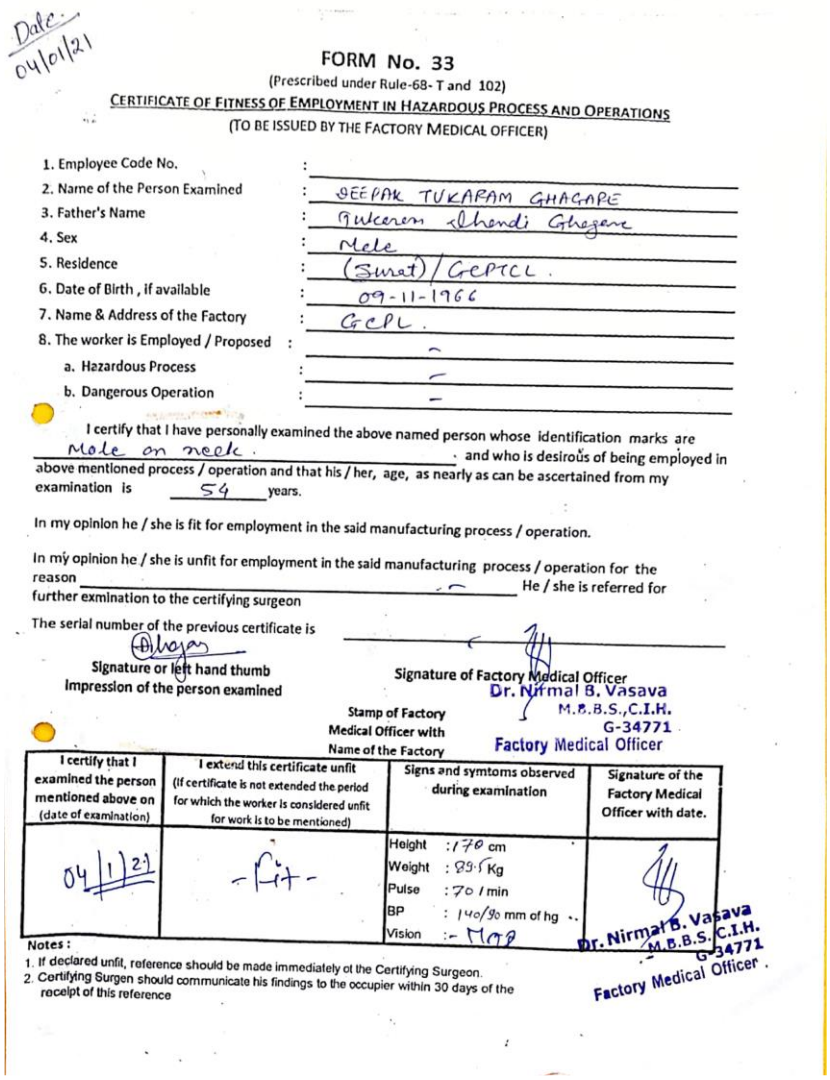
Antidote is available for snakebite.

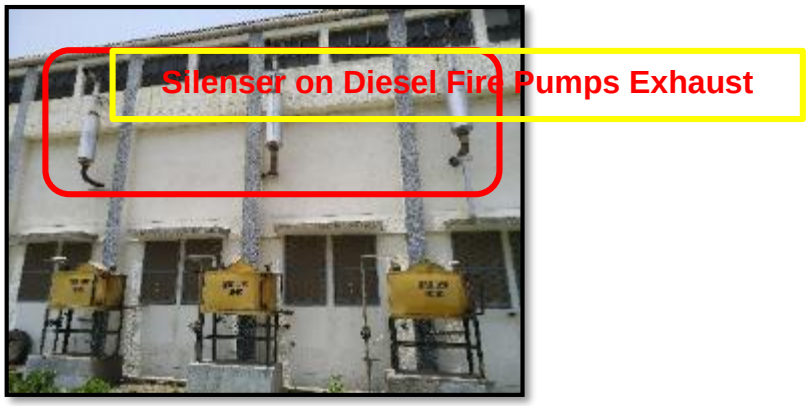
COMPLIED.</td></tr>
<tr><td>47</td><td>Personnel protective equipment shall be provided to workers and its' usage shall be ensured and supervised.</td><td>PPE like ear plugs, masks, safety goggles, helmet etc. are provided and its usage is ensured through training, display signage and supervised.

COMPLIED.</td></tr>
<tr><td>48</td><td>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.</td><td>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-
<table>
<tr><th>Fitness Examination Parameter</th><th>Pre-Employment Fitness Examination</th><th>Periodic Fitness Examination</th></tr>
<tr><td>Physician Check-up</td><td>√</td><td>√</td></tr>
<tr><td>Eye – Check-up</td><td>√</td><td>√</td></tr>
<tr><td>ENT- Check-up</td><td>√</td><td>√</td></tr>
<tr><td>X-ray</td><td>√</td><td>√</td></tr>
<tr><td>ECG</td><td>√</td><td>√</td></tr>
<tr><td>Urine Routine</td><td>√</td><td>√</td></tr>
<tr><td>CBC+ESR</td><td>√</td><td>√</td></tr>
<tr><td>Blood Group</td><td>√</td><td>√</td></tr>
<tr><td>Random Blood Sugar</td><td>√</td><td>√</td></tr>
</table></td></tr>
</table>

		Typical sample lab analysis reports of Pre-Employment as well as Periodical Fitness Examination for company employee and contractors are attached as **Annexure 63** and **Annexure 64** respectively in the main report. Records of such fitness examination are maintained in a standard template as prescribed in the Factories Act and the Gujarat Factories Rules i.e. in Form No 33 (Pre-Employment) Form No 32 (Periodical). Typical example of one such record is appended as below for ready reference.  Date: 04/01/21 FORM No. 33 (Prescribed under Rule-68- T and 102) CERTIFICATE OF FITNESS OF EMPLOYMENT IN HAZARDOUS PROCESS AND OPERATIONS (TO BE ISSUED BY THE FACTORY MEDICAL OFFICER) 1. Employee Code No. : 2. Name of the Person Examined : DEEPAK TUKARAM GHAGARE 3. Father's Name : Gulcharan Dhondi Ghagare 4. Sex : Male 5. Residence : (Surat) / GEPTCL. 6. Date of Birth, if available : 09-11-1966 7. Name & Address of the Factory : GEPL. 8. The worker is Employed / Proposed : a. Hazardous Process : – b. Dangerous Operation : – I certify that I have personally examined the above named person whose identification marks are Mole on neck. and who is desirous of being employed in above mentioned process / operation and that his / her, age, as nearly as can be ascertained from my examination is 54 years. In my opinion he / she is fit for employment in the said manufacturing process / operation. In my opinion he / she is unfit for employment in the said manufacturing process / operation for the reason – He / she is referred for further exmination to the certifying surgeon The serial number of the previous certificate is Signature or left hand thumb Impression of the person examined Signature of Factory Medical Officer Dr. Nirmal B. Vasava M.B.B.S.,C.I.H. G-34771 Factory Medical Officer Stamp of Factory Medical Officer with Name of the Factory I certify that I examined the person mentioned above on (date of examination): 04/1/21 I extend this certificate unfit (If certificate is not extended the period for which the worker is considered unfit for work is to be mentioned): -Fit- Signs and symtoms observed during examination: Height : 170 cm; Weight : 89.5 Kg; Pulse : 70 / min; BP : 140/90 mm of hg; Vision :- Mop Signature of the Factory Medical Officer with date. Dr. Nirmal B. Vasava M.B.B.S. C.I.H. G-34771 Factory Medical Officer. Notes: 1. If declared unfit, reference should be made immediately ot the Certifying Surgeon. 2. Certifying Surgen should communicate his findings to the occupier within 30 days of the receipt of this reference **COMPLIED.**
49	The project management shall prepare detailed Disaster management plan (DMP) for the project as per the	Disaster Management Plan (DMP) / On-Site Emergency Action Plan is in place. Bharuch district DMP is prepared by the district administration. Copy of relevant pages are attached as **Annexure 58** in the main report**.**

	guidelines from Directorate of Industrial Safety and health.	Site level On-Site Emergency Action Plan is prepared and was last reviewed in January 2021. Copy of plan – Index Page is attached as **Annexure 59** 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 08.02.2021. **COMPLIED.**
50	The safety report shall be complied after undertaking a safety audit of the terminal and the same shall be submitted to statutory authorities.	Safety audit of Terminal is carried out at a frequency defined in the Factories Act and the Gujarat Factories Rules, 1963 and amended thereof. Last Statutory Safety Audit of GCPTCL industrial activities with reference to IS 14489 was carried out by an external agency M/s. Trivedi Associate in the year 2020. As per statutory requirement, it is due in year 2022 and report of its recommendations is regularly submitted to DISH. **COMPLIED.**
51	The unit shall effectively implement all the recommendations of the HAZOP study, Risk analysis and disaster management plan	HAZOP of the facilities had been carried out and recommendations were implemented. **COMPLIED.**
A-5	**NOISE**	
52	The overall noise level in and around the plant area shall be kept well within the prescribed standards by providing noise control measures including acoustic insulation, hoods, silencers, enclosures vibration dampers etc. on all sources of noise generation. The ambient noise levels shell confirm to the standards prescribed under the Environment (protection) Act and Rules. Workplace noise levels for workers shall be as per the Factories Act and Rules.	The major activity is storage and handling of chemicals and as such no manufacturing activities are carried out, there is less likelihood of high noise generating machinery/equipment. However, noise suppression devices where applicable like - Pumps are provided with suitable noise suppression measures e.g. enclosure, muffler on exhaust etc. 

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 (October 2020 to March 2021) 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	52/47	66/62
Main Gate	58/53	54/49	62/59
Material Gate	59/55	56/47	64/62
Landfall Point	57/54	49/47	66/59
At Workplace Noise Monitoring – in dB(A)			
Jetty Service Platform	55/52	48/46	62/53
BOG Compressor House	62/57	59/48	66/60
Mechanical Workshop	55/51	48/46	62/58
Gantry Area	56/52	48/46	60/55

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 premises as per the CPCB guidelines, preferably with local species. Drip irrigation system shall be used for greenbelt development.	The terminal has developed and maintained green belt as mentioned below; • 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 project management shall ensure that the unit complies with all the environmental protection	All the environment protection measures, risk mitigation measures and safeguards recommended in the EIA/RA and DMP report of project are implemented.

	measures and risk mitigation measures / safeguards recommended in the EIA, EMP and DMP report of the project.	Implementation status of some of major suggestions are appended as below for ready reference. **<u>Terrestrial EIA</u>** – • 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.**
56	In the event of failure of any pollution control 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.	**Noted and being complied.**
57	The company shall strictly follow the guidelines and provisions of vessel transport management system devised for Gulf of Cambay.	GCPTCL-strictly follow the guidelines and provision of Vessel Tracking & Port Management System (VTPMS) controlled by GMB and GoG engaged BOOT (Built Own Operate and Transfer) operator M/s. AATASH NORCONTROL LTD. who is expert in Vessel Tracking & Port Management System (VTPMS) and Tracking & Warning System (TWS). 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 safety at sea. • **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. **COMPLIED.**
58	The project proponent shall adopt best industry standards for environment, occupational health and safety.	GCPTCL is certified for Integrated Management Systems (IMS) i.e. Environmental Management Systems (ISO 14001), OSHAS 18001 and Quality Management Systems (ISO 9001) and demonstrate adoption of best industry practices as a part of demonstrating continual improvement on HSE and Fire Protection Measures.

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COMPLIED.
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<td>59</td>
<td>The unit shall undertake eco-developmental measures including community welfare program most useful in the project area for the overall improvement and environment.</td>
<td>
The following socio – economic upliftment activities have been taken up in the Lakhigam village in consultation with TDO/DDO/District Collector.
<table>
<tr><th>SN</th><th>Facilities</th><th>Evidence – Refer</th><th>Cost incurred</th></tr>
<tr><td>1</td><td>Offering employment from nearby community/population.</td><td>-</td><td>+80% employment in Non-Supervisory level is from nearby community/population. This is a kind of an ongoing enablement.</td></tr>
</table>
In addition to that, following CSR activities were carried out between October 2020 to March 2021.
<table>
<tr><th>SN</th><th>Facilities</th><th>Evidence –
You may please refer</th><th>Cost incurred</th></tr>
<tr><td colspan="4"></td></tr>
<tr><td>1</td><td>Construction of Houses for BPL Families (10 + 20 = 30 Houses)</td><td>Annexure 19: in the main report letter from Sarpanch – Lakhigram dated 14.10.2020
 </td><td>Rs. 42.02 +Rs. 74.42 = Rs.116.44 Lakhs</td></tr>
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<tr><td>2</td><td>Donation to Seva Rural Trust,Jhagadia for installation of Bio Optical Meter</td><td>Annexure 20: Letter dt. 03.10.20 from Sewa Rural trust is attached.</td><td>Rs. 30 Lakhs</td></tr>
<tr><td>3</td><td>Donation to Civil Hospital for setting up New Born Hearing Centre Services</td><td>Annexure 21: Letter dt. 27.11.20 From Gujarat CSR Authority is attached</td><td>Rs. 3.42 Lacs</td></tr>
<tr><td>4</td><td>Construction of 40 nos. of houses for BPL Families</td><td>Annexure 22: Letter dt. 20.10.20 from TDO is attached</td><td>Rs. 126 lacs (In progress)</td></tr>
<tr><td>5</td><td>Construction of Sub health Centre at Lakhigam</td><td>Annexure 23: Letter dt. 31.12.20 from TDO is attached</td><td>Rs. 50 Lacs (In progress)</td></tr>
</table>

The other key CSR activities includes –

• Donation of hearing aids for new born babies at Civil Hospital, Bharuch – 4.32 Lacs
• Donation of State of the art Optical Bio-Meter to SEWA Rural Hospital, Zaghadiya, Bharuch
• Contribution to Deen Special Education Trust – 2.50 Lacs
• Play area equipments for 4 schools nearby Lakhigam village – 21.23 Lacs
• Construction of Library building with infrastructure – 9.12 Lacs

Total expenditure incurred as a part of CSR and/or socioeconomic activities during October 2020 to March 2021 was @ INR 3.63 crore.

COMPLIED.
</td>
</tr>
<tr>
<td>60</td>
<td>The management shall ensure that the unit complies with all the environmental protection measures and risk mitigation measures/ safeguards proposed by them</td>
<td>All the environment protection measures, risk mitigation measures and safeguards recommended in the EIA/RA and DMP report of project are implemented.

Implementation status of some of major suggestions are appended as below for ready reference.

<u>Terrestrial EIA</u> –
• 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.
</td>
</tr>
</table>

61	The project management shall also comply with all the environment protection measures, risk mitigation measures and safeguards recommended in the EIA/EMP report as well as other proposals made by them.	Please refer our reply in point no 60. **COMPLIED.**
62	The applicant 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.	GCPTCL will comply with the 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. **COMPLIED.**
63	No further expansion or modification in the plant shall be carried out without prior approval of the MoEF/SEIAA, as the case may be. In case of deviations or alterations in the project proposal 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.	**Noted and is being complied** GCPTCL had obtained EC & CRZ clearance from MoEF&CC (Ministry of Environment Forest and Climate Change) for expansion of existing jetty capacity from 4.979 MMTPA to 12 MMTPA by setting up second Berth & storage terminal capacity from 8.5 Lakh KL to 17.5 lakh KL by establishing additional tanks with associated facilities vide file no. 10-14/2017-IA-III dated 11.11.2020.
64	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 therein. The funds so provided shall not be diverted for any other purpose.	Budgeting for Environment protection measures and CSR including socio-economic constitutes a part of overall budget plan and sufficient funds are earmarked every year for environmental management program including monitoring and analysis. **Environment Budget: 2020 – 21** SN Item INR - Lakh 1 Environment monitoring & 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	The applicant 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 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.	Environment clearance letter published in newspaper Times of India and Gujarat Samachar dtd. 23.02.2011. Sample advertisement is appended as below for ready reference. STORE KEEPER Email: application.jan@gmail.com or P.B No.58, GIDC Industrial Estate, Ankleshwar 393 002, Dist. Bharuch. 23/02/11 સમાચાર - 23/02/2011 **COMPLIED.**
66	It shall be mandatory for the project management to submit half-yearly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June & 1st December of each calendar year.	Half yearly compliance status report of Environment Clearance is regularly submitted to MoEFCC, Bhopal. **COMPLIED.**
67	The projects authorities shall also adhere to the stipulations made by the GPCB.	**Noted and being complied.** Environmental Statement, Hazardous waste return, Water Cess are submitted timely to GPCB along with analytical reports.
68	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	**Noted and being complied.**

	authorities and the date of start of the project.	
69	The SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not found satisfactorily.	**Noted.**
70.	The above conditions shall be enforced, interalia under the provisions of the Water (Prevention & control of pollution) Act 1974, Air (Prevention & control of pollution) Act 1981, the Environment (Protection) Act 1986, Hazardous Wastes(Management, Handling & Transboundry movement) Rules 2008 and Public Liability Insurance Act 1991 along with their amendments and rules.	The site has valid Common Consent Authorization granted by GPCB and its all conditions are being complied. You may please refer **Annexure 30** in the main report**.** **COMPLIED**
71.	The Environmental Clearance is valid for five years from the date of issue.	**Noted.**