

BRIEF NOTE IN THE MATTER OF ORIGINAL APPLICATION NO. 220 OF 2023 (WZ)

EARLIER ORIGINAL APPLICATION NO. 718 OF 2023 (PB)

IN THE MATTER OF:

IN RE : NEWS ITEM APPEARING IN THE INDIAN EXPRESS

DT. 30-11-2023 TILED FIRE AT CHEMICAL PLANT

IN SURAT 24 WORKERS INJURED.

.....APPLICANT

VERSUS

STATE OF GUJARAT THROUGH THE CHIEF SECRETARY & ORS.....RESPONDENTS

BASIC INFORMATION

- M/s. Aether Industries is an Synthetic Organic Chemical (i.e. Active Pharmaceuticals Ingredients (API) & API Intermediate, Research & Development (R & D) Centre along with Pilot Plant) manufacturing unit located at Plot No. 8203, GIDC – Sachin – 394 230, Ta – Chorasi, Dist- Surat.
- Unit obtained Environment Clearance (EC) from State Level Environment Impact Assessment Authority (SEIAA), Gujarat on 05/11/2020.
- Unit having Consent to Operate/Consolidate Consent and Authorisation (CTO/CC&A) of the Board, which is valid up to date: 06/04/2028 for the total production quantity: 475 MT/Month. **[Copy of CTO/CC&A is attached as “Annexure – 1”]**

ABOUT INCIDENT

- Fire incident occurred in this unit on dated: 29/11/2023 (@1:30 to 01:45 AM).
The officials of Board and Directorate of Industrial safety and Health (DISH) were on the site and as per reports, observations are as follows: **[Copy of DISH order and Inspection Report of the Board officials are attached as “Annexure – 2 & 3”]**
 - (1) According to DISH authority report dated: 29/11/2023, Fire incident occurred on 29/11/2023, @1:45 AM due to leakage of solvent (i.e. Tetra Hydro Furan, Toluene) & water mixer in solvent recovery tank located at ground floor of Plant No. 2, and 26 workers are injured.
 - (2) Mr. Nayan Jadav (company representative) informed that, this incident happened around 1:30 AM & it might be due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.
 - (3) THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast

affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm.

- (4) Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.
- (5) During rescue, 07 dead bodies were found within the affected area (up to dated: 30/11/2023).
- (6) During inspection, VOC - 398 PPM and NO₂ - 0.3 PPM is measured @50 meter away from incident site using wireless portable multi gas monitor (MultiRAE Lite) handy sampler for VOC and NO₂ parameters. Due to high VOC level, incident location could not be accessed and verified.
- (7) Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor.

ACTIONS TAKEN BY THE BOARD

- Gujarat Pollution Control Board (GPCB) has issued Closure Direction to unit under section – 31(A) of the Air Act – 1981 with immediate effect and **imposed Rs. 50 Lakh interim Environmental Damage Compensation (EDC)** with following directions: **[Copy of issued Closure Direction is attached as “Annexure – 4”]**
 - (i) Unit shall comply with DISH direction and submit it’s compliance report.
 - (ii) To submit safety Audit report & HAZOP study report.
 - (iii) To collect & dispose generated wastewater, burned/partially burned material due to fire incident in a scientific manner and submit details.
 - (iv) Unit shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT.
 - (v) Unit shall not carry out any production activity without prior permission of the Board.

SUO MOTU TAKEN BY THE HON’BLE NGT (PRINCIPAL BENCH)

- This Hon’ble Tribunal (NGT, PB) has taken *suo motu* cognizance of an incident of fire which took place on 29.11.2023 in a chemical plant at Surat on the basis of reporting of such incident in the newspapers.

- Initially a action taken report had been filed by the Board concerning the incident to the Hon'ble NGT, PB on 06/12/2023. [Copy of report file by Board to the Hon'ble NGT (PB) is attached as "Annexure – 5"].

THE MATTER TRANSMITTED TO THE HON'BLE NGT (WESTERN ZONE)

- The Hon'ble Tribunal (PB), after perusal of the report, this matter is transmitted to the Hon'ble NGT, Western Bench. The Hon'ble NGT (WZ) has proceeded with the hearing of the case and ordered the Board to file an affidavit in reply and to calculate final amount of compensation.
- Further, Board has filed affidavit in reply to the Hon'ble NGT on 14/03/2024. [Copy of affidavit in reply file by Board to the Hon'ble NGT (PB) is attached as "Annexure – 6"].
- The Hon'ble Tribunal, after perusal of the affidavit in reply, ordered the project proponent (Industry) to obtain report from NEERI within four week's time period and ordered GPCB to calculate the final amount of EDC on the NEERI report.

PRESENT STATUS:

- Industry has paid Rs. 50 Lakh amount of interim Environmental Damage Compensation EDC.
- Three months trial run revocation issued to the industry on 05/01/2024 (on the basis of order of The Directorate of Industrial Safety and Health Department) with condition to carry out 25% production only. **[Copy of issued three month trial run Revocation is attached as "Annexure – 7"]**
- Industry has been inspected on 12.05.2024 and found complying with the directions issued by Board. [Copy of Inspection Report of the Board officials are attached as "Annexure – 8"]
- Industry has submitted Environmental Damage Cost Assessment report of CSIR – National Environmental Engineering Research Institute (NEERI) through E-mail on 25/04/2024 and as per the report final amount of Environmental Damage Compensation (EDC) due to fire incident is Rs. 11,93,561.7/- **[Copy of NEERI Report is attached as "Annexure – 9"]**.



Annexure - 1
GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

"CCA-Amendment"
(No: W-126157)

BY R.P.A.D.

NO: GPCB/CCA-SRT-2000(4)/ID_45359/

Date:

To,
M/s. Aether Industries Ltd.
Plot No: 8203, Sachin GIDC,
Sachin-394230,
Tal: Chorasi, Dist: Surat.

- Sub: Amendment in the consolidated consent & Authorization of the Board
Ref: (1) CCA order No: AWH-118971, Dated: 18/06/2012 under various Environmental Acts/Rules.
(2) This office CTE-amendment order no: GPCB/CCA-SRT-2000(3)/ID-45359/704809, Dated: 01/03/2023.
(3) Your CCA Amendment Application Inward ID No: 273363 dated: 16/02/2023.

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution) Act-1981 and Authorization under rule 6(2) of the Hazardous and Other Waste (Management and Trans Boundary Movement) Rules, 2016 & framed under the Environmental (Protection) Act-1986. This Board has Granted CC&A vide order No. AWH - 118971 issued vide this office letter no: GPCB/CCA-SRT-2000 (2)/ID-45359/675486 dated 18/06/2022, valid up to 06/04/2028.

The Board has right to review and amend the conditions of the said CCA order.
The said CCA order is further amended as below.

- This order shall be read as CCA-Amendment Order No. W-126157 date of issued 08/05/2023 valid up to 06/04/2028.
- The consents shall be valid up to 06/04/2028 for use of outlet for the discharge of trade effluent & emission due to operation of industrial plant for manufacture of the additional items/products i.e. Ethylene Chlorohydrin (Group C), p-Hydroxy phenethyl methyl ether (Group H), 3-Hydroxymethyl-2-methylbiphenyl (Group H), Tert-Butyl Chloride (Group M), 5-Chlorovaleryl Chloride (Group M) which are incorporated with existing products as under:

Sr. No.	Product Name	Existing Production Capacity (MT/Month)	Applied Quantity (MT/Month)	Total Quantity (Product Mix) (MT/Month)
Group A	Research & Development (R & D) Centre along with Pilot Plant and Crams Products	10	NIL	10
Group B	Active Pharmaceuticals Intermediates			
1	1-[2-(2-Hydroxyethoxy)ethyl]piperazine	25	NIL	25
	MEP Derivatives			
2	1-(4-(2-methoxyethyl)phenoxy)propan-2-ol			
Group C	Hydrogenation Derivatives			
	Secondary amine Derivatives			
3	(2R, 3R, 4R, 5S)-6-(octylamino)hexane-1,2,3,4,5-pentaol	70	NIL	70

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Sr. No.	Product Name	Existing Production Capacity (MT/Month)	Applied Quantity (MT/Month)	Total Quantity (Product Mix) (MT/Month)
4	(2R, 3R, 4R, 5S)-6-(Methylamino)hexane-1,2,3,4,5-pentaol			
5	(2R, 3R, 4R, 5S)-6-(ethylamino)hexane-1,2,3,4,5-pentaol			
	Cyclohexyl Derivatives			
6	Trans-4-Amino cyclohexanol			
7	Ethylene Chlorohydrin	NIL	70	
Group D	Halogenation Derivatives			
	Benzylbromide Derivatives			
8	4'-(bromomethyl)-[1,1'-biphenyl]-2-carbonitrile	20	NIL	20
	Naphthoquinone Derivatives			
9	2-chloronaphthalene-1,4-dione			
Group E	Etherification			
10	2-(2-(2-Chloro ethoxyethoxy) ethanol			
11	Isopropoxy ethanol			
12	1-(2-Hydroxyethyl) piperazine (HEP)			
13	2-Chloro Ethanol (transfer from L-Group)	75	NIL	75
14	2-(2-Chloroethoxy) Ethanol (transfer from L-Group)			
15	4-Fluoro-3-phenoxybenzaldehyde			
Group F	Specialty Chemicals (Electronic Chemicals, Fragrance & Flavors and Specialty Monomers and Polymers)			
16	PPC Polyol			
17	1-(tert-butoxy)-4-chlorobenzene (BPCP)	40	NIL	40
18	Tetrahydro-2H-pyran-2-one			
19	1-chloro-3-methoxy-2-methylbenzene			
Group G	Heterocyclic Derivatives / Polycyclic Derivative			
20	2-Thiophenecarboxylic acid			
21	2-Thiophenecarbonyl chloride			
	Furan Derivatives			
22	2,3-dihydro furan			
	Thiophene Derivatives			
23	2-(thiophen-2-yl)ethanamine	40	NIL	40
24	2-(thiophen-2-yl)ethanol			
	Pyran Derivatives			
25	3,4-Dihydro-2H-pyran			
Group H	Oxidation Derivatives			
26	Isobutylene oxide	40	NIL	
27	O-tolylbenzotrile			
28	p-Hydroxy phenethyl methyl ether	NIL	40	40
29	3-Hydroxymethyl-2-methylbiphenyl	NIL	40	
Group I	Carboxylic Acid Derivatives			
	Benzonitrile Derivatives			
30	4-chlorobenzonitrile	30	NIL	30
	Aryl Acetyl Derivatives			



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Sr. No.	Product Name	Existing Production Capacity (MT/Month)	Applied Quantity (MT/Month)	Total Quantity (Product Mix) (MT/Month)
31	2-Acetylthiophene			
	Aryl Acid chloride Derivatives			
32	3-methoxy-2methyl benzoyl chloride			
Group J	Basic Aromatic Intermediates			
33	2-methyl-3-phenylbenzyl alcohol	25	NIL	25
Group K	Chiral Resolution Derivatives			
34	Remdesivir Intermediate (REM-5)			
35	7-bromopyrrolo[2,1-f][1,2,4]triazin-4-amine	5	NIL	5
36	(3R,4R,5R)-3,4-bis(benzyloxy)-5-((benzyloxy)methyl)dihydrofuran-2(3H)-one			
Group L	Ethylene Oxide an Isobutylene Intermediates			
	Alkyl Ethylene Oxide Derivatives			
37	Hydroxynovaldiamine			
38	2-Acetylbutyrolactone			
39	2-(Eihylamino)ethanol	75	NIL	75
	Aryl Ethylene Oxide Derivatives			
40	4 - (2 - methoxyethyl)phenol			
41	4 - (2 - hydroxyethyl)phenol			
Group M	Organomettalic Chemistry Derivatives (Grignard, Lithiation, Coupling)			
42	tert-Butyl chloroacetate			
	Biaryl Derivatives			
43	4'-methyl-2-cyanobiphenyl			
44	2,4-Difluorobiphenyl	20	NIL	20
	Styrene Derivatives			
45	4-vinylphenyl acetate			
46	1-chloro-4-vinylbenzene			
47	Tert-Butyl Chloride	NIL	20	
48	5-Chlorovaleryl Chloride	NIL	20	
Total		475 MT/Month		475 MT/Month

SUBJECT TO THE FOLLOWING CONDITIONS:

- I. Unit shall provide online Continuous Monitoring System (OCEMS) for emission monitoring and strictly comply with their undertaking dated: 28/07/2022
- II. Applicant shall comply with conditions of Environment Clearance granted by SEIAA no: SEIAA/GUJ/EC/5(f)/1324/2020, dated: 05/11/2020.
- III. All the other conditions of issued CCA vide letter No. GPCB/CCA-SRT-2000(2)/ID_45359/675486 on dated: 18/06/2022, validity 06/04/2028 shall remain unchanged in this CCA-Amendment, You are directed to comply with these conditions.
- IV. Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).

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- V. As per provisions of rule 18 of solid waste management rules -2016 you are directed to make an arrangement in utilities to replace at least five (5%) of your solid fuels requirement by refused derived fuels.
- VI. To do retrofitting at D.G Set for emission control and unit shall submit compliance with respect to Board circular No GPCB/Air Action -03(1) (E) /599145/, dated: 27/08/2021 in the matter of NGT O.A. No. 681/2018.

3. CONDITIONS UNDER THE WATER ACT:

- 3.1 Source of water: Sachin Notified Area Authority.
- 3.2 The quantity of the fresh water consumption for industrial purpose shall not exceed 760 KL/Day.
- 3.3 The quantity of the water consumption for domestic purpose shall not exceed 36 KL/Day.
- 3.4 The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 189 KL/Day.
- 3.5 Dilute steam wastewater is treated in primary treatment followed by SBT (Soil Bio Technology) treatment and treated effluent is sent to CETP of GECL, Sachin for further treatment through designated tanker.
- 3.6 Low COD stream wastewater after treatment in the separate primary ETP & it will be feed into RO Plant. RO permeate will be reused while RO reject wastewater will be send to Common MEE facility of M/s. Detox India Pvt. Ltd. till M/s. MEPPPL will install MEE for the treatment of industrial effluent of Member Industry Once M/s. MEPPPL will install MEE, we will send our concentrate effluent to M/s. MEPPPL for the treatment/ in house MEE and MVR.
- 3.7 Concentrated stream wastewater is given primary treatment and feed into MEE and MVR or sent to common MEE facility of Detox India Pvt. Ltd. till MEPPPL will install MEE once MEPPPL will install MEE, Unit will send effluent to MEPPPL for treatment. Unit has provided in house MEE/MVR with solvent stripper and ATFD. High COD (concentrated) stream wastewater is sent to common MEE facility of Detox India Pvt. Ltd. till MEPPPL will install MEE once MEPPPL will install MEE, unit will send effluent to MEPPPL for treatment through tankers.
- 3.8 The quantity of the domestic waste water (Sewage) shall not exceed 16 KL/Day.
- 3.9 Domestic effluent shall be disposed off through septic tank/soak pit system.
- 3.10 The applicant shall operate effluent treatment system efficiently so that diluted effluent stream from the industrial unit shall conform to the CETP inlet norms mentioned below however the final discharge of treated effluent from CETP shall adhere to the prescribed standards for CETP of M/s. Globe Enviro care Ltd. (GECL).

PARAMETERS	CETP NORMS
pH	6.5 TO 8.5
Temperature	40° C
Colour (pt.co.scale) in units	100 units
Suspended Solids	300 mg/L
Oil and Grease	10 mg/L
Phenolic Compounds	1 mg/L
Sulphides	2 mg/L
Ammonical Nitrogen	50 mg/L
Total Chromium	2 mg/L
Hexavalent Chromium	0.1 mg/L
BOD (5 days at 20°C)	1200 mg/L
COD	3000 mg/L



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Total Dissolved Solids	2100 mg/L
Copper	3 mg/L
Nickel	3 mg/L
Zinc	5 mg/L
Lead	0.1 mg/L

- 3.11 The final treated effluent conforming to the above standards shall be fully conveyed into CETP of M/s. Globe Enviro care Ltd. (GECL) through underground drainage system of GECL & in no case effluent shall be discharged in to Environment by any means.
- 3.12 In case of failure of CETP, applicant shall have to treat the trade effluent of their unit fully so as to achieve the quality of the treated effluent from their industrial premises as per the GPCB norms mentioned below:-

PARAMETERS	GPCB NORMS
pH	6.5 TO 8.5
Temperature	40° C
Suspended Solids	100 mg/L
Oil and Grease	10 mg/L
Total Dissolved Solids	2100 mg/L
Phenolic Compounds	1 mg/L
Sulphides	2.0 mg/L
Ammonical Nitrogen	50 mg/L
Total Chromium	2 mg/L
Hexavalent Chromium	0.1 mg/L
BOD (5 days at 20°C)	30 mg/L
COD	100 mg/L
Chlorides	600 mg/L
Sulphate	1000 mg/L

OR

- The applicant shall either stop or curtail its production activities if the effluent is not adequately treated by the CETP of GECL to conform to the standards specified by G.P.C.B.
- 3.13 The applicant shall be responsible for conveyance of entire treated effluent to the CETP of M/s. GECL & due care shall be taken to avoid any leakage or spillage of effluent during conveyance of treated effluent through drain.
- 3.14 Unit shall provide flow meters at inlet & outlet of ETP & maintain its record.
- 3.15 The applicant shall inform renewal/termination of CETP membership well in advance to GPCB.
- 3.16 The applicant shall be required to make storage facilities to store the primary treated effluent for at least 48 hours by providing acid proof brick lined impervious tanks/HDPE tanks.
- 3.17 The applicant shall make fixed arrangement for loading the effluent after primary treatment to the CETP. The unit shall not keep any by-pass line or system or loose or flexible pipe line for discharging effluent into the underground drainage system of GECL.
- 3.18 Leachate from the hazardous solid waste, if any shall also be connected into a collection tank through leachate collection facilities and shall be conveyed along with industrial effluent to the CETP of GECL.
- 3.19 Magnetic flow meters shall be installed at the inlet & outlet of effluent collection tanks/ETP to measure the quantity of effluent discharging in to underground drainage system of GECL.
- 3.20 The entire quantity of industrial effluent shall have to be conveyed by GECL. In no circumstances the effluent either treated or untreated shall be discharged anywhere else.

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- 3.21 Disposal system for storm water shall be provided separately. In no circumstances storm water shall be mixed with the industrial effluent.
- 3.22 GECL member unit have to modify / improve performance of existing Effluent treatment facilities for efficiency & adequacy in order to comply with prescribed in let standards.
- 3.23 The applicant shall keep accurate records of quantity of production of each product, quantity of water consumption, quantity of effluent generated and consumption of electricity on day to day basis and required to submit the complied record of one month to GPCB & GECL on or before fifth day of the succeeding month.
- 3.24 In case of shut-down of plant for more than three days for any reason, the GECL unit member shall intimate to GECL authority & GPCB well in advance for the better operation & management of CETP.
- 3.25 The authorized representative of GECL may have right of entry at any time for the purpose of inspection and monitoring the effluent collection facilities/EETP (if required) of the applicant.
- 3.26 If the GECL authority terminates the membership of the applicant for CETP, the GECL member unit shall have to close down the manufacturing activities/industrial operation of the process plant immediately until the GECL membership is resumed.
- 3.27 The applicant shall put up at the entrance a board displaying GECL membership number & date of joining of GECL, the name of unit, particulars of the products/ process and the name of proprietor/partners /directors of the unit and the electricity consumer number as on the record of GSECL.

4. CONDITIONS UNDER THE AIR ACT:

- 4.1 The following shall be used as fuel in fuel in Steam Boiler, Thermo Pack, and D.G. Sets.

Sr. No.	Utility	Fuel	Quantity
1	Steam Boiler (4 MT/Hr)	Natural Gas	3180 m ³ /Hr
2	Steam Boiler (12 MT/Hr)	Natural Gas	1060 m ³ /Hr
3	Thermopack (400 U)	Natural Gas OR LDO	24 m ³ /Hr OR 40 Liters/Hr.
4	Thermopack (400 U)	Natural Gas OR LDO	24 m ³ /Hr OR 40 Liters/Hr.
5	Thermopack (600 U)	Natural Gas	90 m ³ /Hr
6	Thermopack (600 U)	Natural Gas	90 m ³ /Hr
7	Thermopack (1000 U)	Natural Gas	150 m ³ /Hr
8	D.G. Sets (2250 KVA×2)	Diesel	450 Lit/Hr

- 4.2 The applicant shall install and operate air pollution control system in order to achieve norms prescribed Norms
- 4.3 The flue gas emission through stack attached to Steam Boiler, Thermo Pack, and D.G. Sets shall conform to the following standards.

Stack No.	Stack attached to	Stack height in Meter	Parameter	Permissible Limit
1	Steam Boiler (4 MT/Hr)	36 (Common Stack)	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm



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2	Steam Boiler (12 MT/Hr)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
3	Thermopack (400 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
4	Thermopack (400 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
5	Thermopack (600 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
6	Thermopack (600 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
7	Thermopack (1000 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
8	D. G. Set Stand By (2250 KVA)	11	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
9	D. G. Set Stand By (2250 KVA)	11	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm

4.4 The process emission through various stack / vent Reaction vessel shall confirm to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameters	Permissible Limit
1.	Reactors	15	Water Scrubber followed by Alkali Scrubber	HCl, SO ₂ , HBr	20 mg/Nm ³ 40 mg/Nm ³ 30 mg/Nm ³
2.	Reactors	15	Water Scrubber followed by Alkali Scrubber	HCl, SO ₂ , HBr	20 mg/Nm ³ 40 mg/Nm ³ 30 mg/Nm ³
3.	Reactors	15	Water Scrubber followed by Alkali Scrubber	HCl, SO ₂ , HBr	20 mg/Nm ³ 40 mg/Nm ³ 30 mg/Nm ³

4.5 Applicant shall comply with National Ambient Air Quality Standards notified by Central Pollution Control Board, New Delhi time to time under the provision of the Environment (Protection) Act-1986 for all the parameters. The concentration of all parameters in the ambient air within the premises of the industry and a distance of 10 meters from the sources (other than the stack/vent) shall not exceed than the permissible limit.

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Parameters	Permissible Limit ($\mu\text{g}/\text{m}^3$)	
	Annual	24 Hrs Average
Particulate Matter-10 (PM_{10})	60	100
Particulate Matter-2.5 ($\text{PM}_{2.5}$)	40	60
SO_2	50	80
NO_x	40	80

- 4.6 The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
- 4.7 The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6 a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

5. **D.G. Sets Conditions:**

The D. G. Set shall have acoustic enclosure and shall comply with the standards specified at sr. no. 95 of Schedule-I of the rule-3 of E.P. Rules - 1986 and Noise pollution level as per the Air Act - 1981.

D. G. Set Standards:

- The flue gas emission through stack attached to D. G. Sets shall conform to the following standards.
- The minimum height of stack to be provided with each of the generator set shall be $H - h + 0.2 (\text{KVA})^{1/2}$, where H = Total stack height in meter, h = height of the building in meters where or by the side of which the generator set is installed.
- Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end.
- The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may be possible to check the performance of the acoustic enclosure / acoustic treatment, under such circumstances the performance may be checked for noise reduction up to actual ambient noise level preferably, in the night time). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure/room, and the averaged.
- The D.G set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).
- All efforts shall be made to bring down the noise level due to the D. G. Set, outside the premises, within the ambient noise requirements by proper siting and control measures.
- Installation of a D. G. Sets must be strictly in compliance with the recommendations of the D. G. Set manufacturer.
- A proper routine and preventive maintenance procedure for the D. G. Set should be set and followed in consultation with the DG Sets manufacture which would help prevent noise levels of the DG Set from deteriorating with use.



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6. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]

From the grant of authorization for occupier or operator handling Hazardous waste

- 6.1 Authorizations order No: **W-126157** of Issue: **08/05/2023**.
 6.2 **M/s. Aether Industries Limited** is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at **Plot No: 8203, Sachin GIDC, Sachin-394230, Tal: Chorasi, Dist: Surat**.

Sr. No.	Waste	Quantity	Schedule-I/ Category	Facility
1	ETP Sludge	250 MT/Year	35.3	Collection, Storage, Transportation and send to TSDf site
	Mixed Solvents	240 MT/Year		Collection, Storage, Transportation and send to M/s. Recycling Solutions Pvt. Ltd. (RSPI.) for Co-Processing / sell to 1. M/s. Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. Rhythem Chemicals Pvt. Ltd. 6. Darshan Chemicals Pvt. Ltd. 7. Nandani Chemicals
	Scrubber Bleed	8395 KI/Year		Collection and send to ETP for further treatment
	Sewage Sludge	3.6 MT/Year		Collected and reused as manure activity
	MEE Salt	600 MT/Year (In case of Sent to CMEP) or 600 MT/Month (In case of Operate own MEE)		Collection, Storage, Transportation and send to TSDf site of M/s. Saurashtra Enviro Projects Pvt. Ltd. for Secured Land Filling or other register TSDf Site a. M/s. Detox India Pvt. Ltd. b. M/s. Safe Enviro Pvt. Ltd. c. M/s. Bharuch Enviro Infrastructure Pvt. Ltd.
2	Used Oil	1.02 MT/Year	5.1	Collection, Storage, Transportation and sent to registered recycler / reuse as a lubricant
3	Discarded containers / bags / liners / Barrels	96 MT/Year	33.1	Collection, Storage, Transportation and send to registered recycler / send back to supplier
4	Process Sludge	576 MT/Year	28.1	Collection, Storage, Transportation and send to RSPI. 1 and RSPI. 2, Panoli for Co-processing / send to TSDf site of M/s. Saurashtra Enviro Projects Pvt. Ltd. / M/s. Green gene Enviro Protection and Infra Structure Pvt. Ltd. For co-processing & to TSDf site for Secured Land Filling
5	Spent Catalyst	372 MT/Year	28.2	Recovered and Reused in to Process or

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				Collection, Storage, Transportation and send to regeneration unit i.e. M/s. Evonik Catalyst India Pvt. Ltd.
	Raney Nickel	26.4 MT/Year	28.2	Recovered and Reused in to Process or Collection, Storage, Transportation and sent and send to TSDF site for Secured Land Filling/ Regeneration unit i.e. Evonick Catalyst India Pvt. Ltd. Or M/s. Om Balaji Inorgo Metal Pvt. Ltd.
6	Distillation Residue	2436 MT/Year	20.3	Collection, Storage, Transportation and send to RSPL 1 and RSPL 2, Panoli for Co-processing or sent to cement industries for co processing i.e. Ultratech Cement Ltd Rajula, Shree Cement Ltd., Karnataka or M/s Shree Raipur Cement Plant, (A Unit of Shree Cement Limited), Bhatapara, or M/s. Dalmia Cement Limited / send to Green gene Enviro Protection and Infra Structure Pvt Ltd., Rajasthan or Incinerable Site i.e M/s. Saurashtra Enviro Projects Pvt. Ltd. Bharuch Enviro Infrastructure Pvt. Ltd. Or other register CIWTSDF site.
7	NaCl Salt	228 MT/Year	B2040	Collection, Storage, Transportation and send to TSDF site of M/s. Saurashtra Enviro Projects Pvt. Ltd. for Secured Land Filling 1. M/s. Detox India Pvt. Ltd. 2. M/s. Safe Enviro Pvt. Ltd.
8	Spent HCl	660 MT/Year	B15	Collection, Storage, reused in to same group of product.
9	Sodium Sulphate	180 MT/Year	B23	Collection, Storage, reused in to same group of product.
	Magnesium Sulphate	36 MT/Year	B23	Collection, Storage, Transportation and send to TSDF site
10	Mix Fractions	2448 MT/Year	D3	Collection, Storage, Transportation and Sell to authorized end user 1. M/s Shyam Sizors 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. Rhythem Chemicals Pvt. Ltd. 6. Darshan Chemicals Pvt. Ltd. 7. Nandani Chemicals
	2-Chloroethoxy ethanol	48 MT/Year	28.6	Collection, Storage, reused in to same process
11	4,4-Dimethyl Biphenyl	384 MT/Year	28.6	Collection, Storage, reused in to same process
	Phenol	456 MT/Year	28.6	Collection, Storage, reused in to same process



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TMS	60 MT/Year	28.6	Collection, Storage, reused in to same process
TMSOH	372 MT/Year	28.6	Collection, Storage, reused in to same process
Trimethyl borate benzyl chloride	48 MT/Year 204 MT/Year	28.6 28.6	Collection, Storage, reused in to same process
N-Ethyldiethanola mine	228 MT/Year	28.6	Collection, Storage, reused in to same process
Spent Solvent			
Piperazine	3468 MT/Year	28.6	Collection, Storage, reused in to same process
Toluene	16248 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. M/s. Shivam Organics 4. Om organics 5. Darshan Chemicals Pvt. Ltd. 6. Nandani Chemicals 7. Maa Krupa Distributors 8. Rhythem Chemicals Pvt. Ltd.
Methanol	25632 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
IPA	9108 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
EDC	8280 MT/Year	28.6	Collection, Storage, reused in to same process

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				process/ Sell to authorized end user Rhythem Chemicals Pvt. Ltd.
MFG	2292 MT/Year	28.6		Collection, Storage, reused in to same process
MCB	9972 MT/Year	28.6		Collection, Storage, reused in to same process
THF	24552 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors.
Ehtyl Acetate	792 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
Hexane	312 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. Om organics
Acetic Acid	72 MT/Year	28.6		Collection, Storage, reused in to same group of product.
MDC	1356 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd.



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			9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
DMF	228 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
Ethanol	228 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors

6.3 The authorization shall be valid up to **06/04/2028**.

6.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

6.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.5.2 to the industry having valid CCA of this Board.

7. TERMS AND CONDITIONS OF AUTHORISATION:

- 7.1 The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
- 7.2 The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
- 7.3 The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
- 7.4 Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.

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- 7.5 The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as NPICSL larges, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
- 7.6 The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
- 7.7 It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
- 7.8 An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
- 7.9 The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
- 7.10 The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
- 7.11 The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
- 7.12 The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
- 7.13 Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
- 7.14 The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
- 7.15 Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.
- 7.16 In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
- 7.17 As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
- 7.18 Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
- 7.19 In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
- 7.20 Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.



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- 7.21 Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
- 7.22 Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

8. GENERAL CONDITIONS:

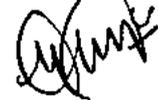
- 8.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.
- 8.2 Applicant shall also comply with the general conditions given in annexure I.
- 8.3 Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.
- 8.4 In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.
- 8.5 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.
- 8.6 The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.
- 8.7 The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.
- 8.8 In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
- 8.9 Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w.p. no. 657 of 1995 dated 14th October 2003.

9. SPECIFIC CONDITIONS:

- 9.1 The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.
- 9.2 Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.
- 9.3 In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.

- 9.4 The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.
- 9.5 Unit shall comply provisions of E-Waste Management Rules-2016.
- 9.6 The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.
- 9.7 The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding ninety days. Prior permission of the Board shall be obtained for extension of the storage period.
- 9.8 The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.
- 9.9 The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.
10. The conditions of the earlier issued CCA order No: AWH-118971 shall be supersede by this CCA – Amendment order.

For and on behalf of
Gujarat Pollution Control Board



(M. R. Macwana)
Unit Head, Surat

Outward No: 745824, 23/06/2023



સંયુક્ત નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્યની કચેરી, સુરત રીજીયન સુરત

"બી બ્લોક", દફતો માળ, જીલ્લા સેવા સદન-૨, અઠવાવાઈ-સુરત
ફોન નં ૦૨૬૧-૨૬૫૩૫૦૨, ફેક્સ નં ૦૨૬૧-૨૬૫૩૫૦૧

હાથોહાથ.

ક્રમાંક/સં.નિ/ઓ.સ.સ્વ./સુ.રીજી/૧૦૫૧/૨૦૨૩

તા. / / ૨૦૨૩

29 NOV 2023

પ્રતિ,

✓ કબજેદારશ્રી/ વ્યવસ્થાપકશ્રી
શ્રી રોહન અશ્વિનભાઈ દેસાઈ
એથર ઇન્ડસ્ટ્રીઝ લી.
પ્લોટ નં.૮૨૦૩, રોડ નં.૮૨,
જી.આઈ.ડી.સી. સચીન, ચોર્યાસી, સુરત.

વિષય :- કારખાના અધિનિયમ-૧૯૪૮ ની કલમ ૪૦(૨) હેઠળ બંધના હુકમ બાબત.

- (૧) કારખાનામાં તા.૨૯/૧૧/૨૦૨૩ ના રોજ શ્રી આર.એ.પટેલ, સંયુક્ત નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત, શ્રી આર.આર.જોષી, મદદનીશ નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત, શ્રી એસ.એ.ચૌહાણ, મદદનીશ નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત, શ્રી વી.વી.ચૌહાણ, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય અધિકારી, સુરત સાથે આગના બનાવ બાબતે મુલાકાત લીધી.
- (૨) કારખાનામાં આશરે ૫૨૫ જેટલા પુખ્તવયના શ્રમયોગીઓને કામે રોકીને વિદ્યુત શક્તિનો ઉપયોગ કરીને કારખાનામાં ઇથીલીન ઓકસાઇડ, મીથેનોલ, ડ્રાય એચ. સી.એલ. ગેસ, આઇસો બ્યુટીનીલ, ટેટ્રા હાઇડ્રો ફ્યુરાન (THF), હાઇડ્રોજન ગેસ, સોલ્વન્ટ વગેરે જેવા કેમીકલનો ઉપયોગ કરીને કલોરો ઇથોક્સી ઇથીલીન તથા સ્પેશીયાલીટી કેમિકલ્સ બનાવવાની ઉત્પાદન પ્રક્રિયા કરવામાં આવે છે. કારખાનું કારખાના ધારા -૧૯૪૮ ની કલમ ૨(એમ)(૧) હેઠળ પાત્ર છે તથા કારખાનું એમ.એ.એચ.(MAH) પ્રકારનું છે. કારખાનાનું લાયસન્સ નંબર-૨૭૯૨૬ જે ૧૦૦૦ શ્રમયોગી તથા ૫૦૦૦ થી વધુ હોર્સપાવર માટે વર્ષ-૨૦૨૫ સુધી રીન્યુ થયેલ છે.
- (૩) કારખાનામાં તા.૨૯/૧૧/૨૦૨૩ ના રોજ વહેલી સવારના ૦૧:૪૫ કલાકે કારખાનામા આવેલા પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકીમાં આવેલ બોટમ વાલ્વ ની ફ્લેન્જમાં મિક્ષ સોલ્વન્ટ કે જેમાં ટેટ્રા હાઇડ્રો ફ્યુરાન, ટોલ્યુઇન તથા પાણીના મિશ્રણનું લિકેજ થયેલ અને વાતાવરણમાં રહેલી હવા સાથે તેનું સળગી ઉઠે તેવું મિશ્રણ બનેલ અને આ મિશ્રણ કારખાનામાં ફેલાઇ જવા પામેલ. આ સળગી ઉઠે તેવા મિશ્રણને કોઇ જગ્યાએથી સળગવાનો સ્રોત મળતા આ સળગી ઉઠે તેવા મિશ્રણમાં ધડાકા સાથે આગ લાગેલ અને આ લાગેલ આગ પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકીના બોટમ વાલ્વની ફ્લેન્જ જોઇંટ કે જ્યાથી લિકેજ થતું હતું ત્યા ફ્લેશબેક થયેલ અને આ પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકી ફાટી ગયેલ અને આગ પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકીના બોટમ વાલ્વની ફ્લેન્જ જોઇંટ પર કેંદ્રિત થયેલ. સદરહું આગ સાથે ધડાકાના બનાવના લીધે કારખાનામાં કામ કરતા ૨૬ શ્રમયોગીઓને ઇજા થયેલ છે. જેઓની હાલમાં સુરત ખાતેના વિવિધ હોસ્પિટલોમાં સારવાર ચાલુમાં છે. સદરહું આગ સાથે

ઘડાકાના લીધે કારખાનામાં આવેલ ટેક ફાઈના સ્ટ્રક્ચરને તથા ટેક ફાઈની બાજુમાં રહેલ પ્લાંટ નં.૨ માં પણ નુકશાન થયેલ છે તથા તેમાં આવેલ પાઇપલાઇનો તથા વેસલોમાં નુકશાન થવા પામેલ છે તથા સદરહુ બનાવના લીધે કારખાનામાં અન્ય કોઇપણ વિસ્તારમાં તથા પ્લાંટ નં.૨ માં આવેલ પાઇપલાઇનો તથા વેસલોમાં જો સળગે તેવા કેમિકલનુ લિકેજ થાય તો સદરહુ કારખાનામાં ફરી આગ લાગવાની શક્યતાઓ હોઇ સમગ્ર કારખાનામાં ઉત્પાદન પ્રક્રિયા કરવામા આવે તો ત્યા કામ કરતા શ્રમયોગીઓની જીંદગીને તાકિદનુ જોખમ રહેલ છે. આથી હું શ્રી બી.એ.ચૌહાણ, નાયબ નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત કારખાના ધારા-૧૯૪૮ ની કલમ-૮ નીચે નીમાયેલ કારખાના નિરીક્ષક, કારખાનાધારા ૧૯૪૮ ની કલમ-૯ હેઠળ મળેલ સત્તાની રૂચે કારખાનાધારા ૧૯૪૮ ની કલમ-૪૦(૨) હેઠળ સમગ્ર કારખાનામાં નીચેના સલામતીના પગલા લીધા સિવાય ઉત્પાદન પ્રક્રિયા બંધ કરવાનો હુકમ કરૂ છુ.

સલામતીના પગલા :-

- (i) કારખાનાના નુકશાન પામેલ તમામ બાંધકામનુ સમારકામ/ નવિનીકરણ કરાવી તેનો કારખાના તરીકે ઉપયોગ કરતા પહેલા બાંધકામની મજબુતાઇ અંગેનુ સ્ટેબીલીટી સર્ટીફિકેટ ગુજરાત કારખાનાના નિયમો-૧૯૬૩ ના નિયમ-૩(સી) હેઠળ ફોર્મ નં.૧-એ પ્રમાણે નિયામકશ્રી, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય ગુજરાત રાજ્ય અમદાવાદ માન્ય કોમ્પીટન્ટ પર્સન પાસેથી મેળવીને રજૂ કરવુ.
- (ii) આગ ઘડાકાને કારણે કારખાનાનાં ઇલેક્ટ્રીક કેબલ્સ તથા ઇલેક્ટ્રિક ફીટીંગ્સને નુકશાન થયેલ છે જેને યોગ્ય સુપરવીઝનમાં વ્યક્તિની દેખરેખની નીચે સલામત રીતે દુર કરી તેની જગ્યાએ નવા ફ્લેમપ્રૂફ ઇલેક્ટ્રીક કેબલ્સ તથા ફીટીંગ્સ લગાવી તે વાપરવા લાયક છે તે બાબતનું સરકાર માન્ય ઇલેક્ટ્રીક સુપરવાઇઝર પાસેથી સર્ટીફિકેટ મેળવી રજૂ કરવું.
- (iii) કારખાનાની પ્રોસેસનો રી-હેઝોપ સ્ટડી નિષ્ણાંત વ્યક્તિ/ એજન્સી પાસે કરાવી તેમાં જણાવેલ સુચનોનાં પાલન અંગેનો રિપોર્ટ અત્રેની કચેરીએ રજૂ કરવો.
- (iv) કારખાનામાં સદર અકસ્માતના કારણે ક્ષતિગ્રસ્ત થયેલ સ્ટ્રક્ચર/બિલ્ડીંગ, મશીનરી વિગેરેના કાટમાળને ખસેડવાની તથા તેને રીપેર/ રિસ્ટ્રેથનીંગ કરવાની કામગીરી વર્ક પરમીટ સિસ્ટમ દ્વારા કરવી અને પ્રોસેસ વેસલ તથા રીએક્ટરમાં રહેલ રસાયણોને સલામત રીતે ખાલી કરી નિકાલ કરવાની કામગીરી યોગ્ય સુપરવીઝનમાં ભારતીય ધારાધોરણો/ ઇન્ટરનેશનલ સ્ટાન્ડર્ડ મુજબના યોગ્ય અને પુરતા કામને અનુરૂપ સ્વ રક્ષણાત્મક સાધનો પહેરીને પુર્ણ કરવી.

સ્થળ :- સુરત

તા.૨૬/૧૧/૨૦૨૩



(બી.એ.ચૌહાણ)

નાયબ નિયામક

ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય,

સુરત

નકલ સવિનય રવાના :- નિયામકશ્રી, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, ગુજરાત રાજ્ય, અમદાવાદ તરફ જાણ સારૂ.

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Reg. - Accident occurred at M/s. Aether Industries Ltd., Sachin GIDC
(PCB ID: 45359)

Dr. Jignasa D Oza(GoG-GPCB Dept.)

Thu 30-11-2023 05:33 PM

To:Unit Head Surat (GoG-GPCB Dept.) <uh-gpcb-sura@gujarat.gov.in>;

Cc:Next to Unit Head Surat (GoG-GPCB Dept.) <nuh-gpcb-sura@gujarat.gov.in>;

📎 3 attachments (2 MB)

Accident Report Aether.pdf; DISH Report.pdf; NEI.pdf;

Dear Sir,

In connection to the accident occurred at M/s. Aether Industries Ltd., Sachin GIDC (PCB ID: 45359), as per record verification, presence of 07 workers were not verified. Afterword, as per telephonic order given by District Magistrate; off site emergency team has inspected the site and during rescue 07 dead bodies were found within the affected area which were sent for forensic post mortem at civil hospital, surat for further investigation.

Investigation report of FSL and Post Mortem Reports are awaited.

Looking to the condition of case, Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor i.e. high to severe at the time of fire incidence.

DISH Report, NEI attached herewith.

Recommendation : Strict action may be initiated.

Thanking You,

(Dr Jignasa Oza)
Regional Officer,
Gujarat Pollution Control Board
Plot No: 11 - 12/2, 3
GIDC PANDESARA,
SURAT-394221
Phone: (0261) 2891696,
E-mail : ro-gpcb-sura@gujarat.gov.in

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Accident Report

Name and Address	Aether Industries Ltd., (GPCB ID- 45359), Plot No. 8203, Sachin GIDC, Tal : Chorasi, Dist. Surat
Time of incident :	@ 01:30AM 29/11/2023.
Time of Inspection :	11:50 AM, 29/11/2023.
Inspection team :	C.C. Hadia, SSA, B.C. Gosai, AEE
Reason :	yet not identified
Injury :	24 human injured (as informed by contacted person)
Casualty :	Nil at the time of inspection
Environment al issue :	Heavy dense smoke emission occurred at the time of fire/blast incident and ambient air quality was severe at the time of fire/blast incidence.
Pollution level monitoring :	Unit has used respective fire extinguisher for controlling fire and leachate is collected in ETP collection. During visit one water sample is collected from ETP collection tank. During visit VOC – 398 PPM and NO2-0.3 PPM is measured @ 50 meter away from incident site.
Observations :	<p>This unit is visited with reference to telephonic message regarding incident.</p> <ul style="list-style-type: none">• Unit has valid CCA up to 06/04/2028.• During visit unit is found not in operation.• Contacted person Mr. Nayan Jadav inform that this incident happened around 1:30 am.• On further inquiry he has informed that it might due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.• Contacted person inform that THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm. During visit VOC – 398 PPM and NO2-0.3 PPM is measured @ 50 meter away from incident site. Due to high VOC level other information could not be verified.• Contacted person has not aware about source of fire/blast and casualty/injured hence instructed to submit detailed investigation report with necessary documents.• Contacted person inform that total 24 nos of workers are injured and admitted to hospital.• DISH and FSL investigation is going on hence reason of fire/blast is yet not identified.• Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.• DISH has issued closure direction to Mr. Rohan A. Desai, Aether Industries Ltd vide letter no. ક્રમાંક/સં.નિ./ઔ.સ.સ્વ./સુ.રીજી/૭૦૫૧/૨૦૨૩ ૨૯/૧૧/૨૦૨૩ (Copy attached herewith).• As per DISH report of dated 29/11/2023 submitted by unit, incident happened around 01:45 AM on plant no. 02 ground floor. Solvent recovery tank bottom valve flange was leaked which was filled with tetra hydro furan, toluene, water has created vapour cloud after coming in contact with air and took fire and finally

converted into blast. This fire/blast affected plant number 02 and tank farm area.

- Mr. B. D. Gohil, AEE, Mr. N.M. Kavar, SO, Dr. J.D. Oza, Regional Officer has visited this unit for rescue purpose as part of off site emergency response team as per the intimation from SDM and details are sent through email.

During visit below mentioned written instruction are issued to the unit.

1. આજરોજ એકમમાં લાગેલ આગના કારણ સાથે વિગતવાર અહેવાલ રજુ કરવો.
2. આગની ઘટનાને કારણે બળી ગયેલ મટેરીયલ/વેસ્ટનો પર્યાવરણીય નિયમ મુજબ સુરક્ષિત નિકાલ કરી તે અંગેના દસ્તાવેજ પુરાવા આપવા.
3. આજરોજ એકમમાં લાગેલ આગની ઘટના અંગેનો DISH નો રીપોર્ટ રજુ કરવો.
4. આગની ઘટના બાદ સલામતીના તમામ પગલા લીધા બાદ કરેલ તમામ કાર્યવાહી અંગેનો અહેવાલ ઉત્પાદન કાર્ય પુનઃ શરૂ કરતા પહેલા બોર્ડમાં રજુ કરવો.
5. એકમમાં લાગેલ આગની ઘટના દરમ્યાન જો કોઈ ઈજાગ્રસ્ત/જનહાની થઈ હોય તો તે અંગેની વિગતો રજુ કરવી.
6. આગની ઘટના દરમ્યાન આગને નિયંત્રણ લેવા વપરાયેલ પાણીના ફાયર ટેન્કર/વપરાયેલ ફોમ અંગેની વિગતો રજુ કરવી.



ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ, સુરત

પ્રાદેશિક કચેરી, સુરત

પ્લોટ નં.: ૧૧-૧૨/૨,૩, જી.આઈ.ડી.સી., પાંડેસરા, સુરત- ૩૯૪ ૨૨૧(ગુજરાત)
ફોન નં. (૦૨૬૧) ૨૮૯૧૬૯૬

IS/ISO - 9001:2015, IS/ISO-14001:2015 & IS/ISO:45001:2018 Certified

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GST No. : 24SRTG00481F1DK

તપાસ માટે દાખલ થવાની સૂચના (નોટીસ)

નં : ૧૨૩૯૭

પાણી અધિનિયમ ૧૯૭૪ ની કલમ - ૨૩, હવા અધિનિયમ ની ૧૯૮૧ ની કલમ-૨૪ અને પર્યાવરણ (સુરક્ષા) અધિનિયમ - ૧૯૮૬ ની કલમ-૧૦ હેઠળ અમોને મળેલ સત્તાની રૂએ અમો નીચે સહી કરનાર અમોને જરૂરી લાગે તેની સહાય લઈને તમામ સમયે નીચેના હેતુઓ માટે આપની જગ્યામાં દાખલ થવાનો અને તપાસ કરવાનો અધિકાર ધરાવીએ છીએ.

- (૧) અમોને સોંપેલા રાજ્ય બોર્ડ/કેન્દ્ર સરકારનાં કાર્ય બજાવવાના હેતુ માટે,
- (૨) આવા કોઈ કાર્યો બજાવવાના છે કે કેમ અને તેમ હોય તો કઈ રીતે તે બજાવવાના છે અથવા આ અધિનિયમ અથવા તે હેઠળ કરેલા નિયમોની અથવા આ અધિનિયમ હેઠળ બજાવેલી કોઈ નોટીસની, કરેલા કોઈ હુકમની, આદેશની અથવા આપેલા કોઈ અધિકારપત્રની કોઈ ખોટાઈ/ખોટાઈ પાલન કરવામાં આવી રહ્યું છે કે પાલન કરવામાં આવ્યું છે કે કેમ તે નક્કી કરવાના હેતુ માટે,
- (૩) કોઈ સાધન સામગ્રી, ઔદ્યોગિક પ્લાન્ટ, રેકર્ડ, રજીસ્ટર, દસ્તાવેજ અથવા અન્ય કોઈ મહત્વની વસ્તુની તપાસ કરવા અને તેની કસોટી કરવાના હેતુ માટે અથવા જે જગ્યામાં તેને એમ માનવાને કારણ હોય કે આ કાયદા કે તે હેઠળ કરેલા નિયમો મુજબ કોઈ ગુનો કરાવામાં આવ્યો છે અથવા થવાની તૈયારીમાં છે. તેવી કોઈ જગ્યાની ઝડતી લેવા માટે અને તેને એમ માનવાને કારણ હોય કે આ કાયદા કે તે હેઠળ કરેલા નિયમો હેઠળ શિક્ષાપાત્ર કોઈ ગુનો કર્યાનો પુરાવો, તેવા સાધન સામગ્રી, ઔદ્યોગિક પ્લાન્ટ, રેકર્ડ, રજીસ્ટર, દસ્તાવેજ અથવા અન્ય મહત્વની વસ્તુ કબજે લેવા માટે અમે નીચે જણાવેલ સમયે દાખલ થઈએ છીએ

ઉદ્યોગ/કારખાનામાં દાખલ થવાનો સમય : ૧૦:૩૦ કલાક તા ૨૫ / ૧૧ / ૨૦૧૩
અમારી સાથે મુલાકાત સમયે સહાય માટે નીચેના અધિકારીશ્રી / કર્મચારીશ્રી હાજર રહેલા છે.

ક્રમ અધિકારીશ્રી / કર્મચારીશ્રી

(૧) C. C. Hindia

(૨)

(૩)

હોદ્દો

S. S. P.

પ્રતિશ્રી,

Aether Ind. Ltd
Plot No 8703.
Sachin GIOC
Surat.

સહી

અધિકારીનું નામ B. C. Dasu.

હોદ્દો A.C.C.

આ સૂચના (નોટીસ) મેળવનારની સહી :

Mujun Indrajiv Nigam
(Ass. Enr.)

AETHER INDUSTRIES LIMITED
Plot No. 8203, Main Road No. 82,
Beside Shakti Distilleries Pvt. Ltd.,
Sachin GIOC, Sachin, Surat-394230



Annexure - 4
654
GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

BY R.P.A.D.

CLOSURE DIRECTION UNDER SECTION 31(A) OF THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT - 1981 [HEREINAFTER REFERRED TO AS THE "AIR ACT"] AS AMENDED FROM TIME TO TIME

WHEREAS you are having an industrial plant namely M/s. Aether Industries Ltd. located at Plot No: 8203, Sachin GIDC, Sachin - 394230, Tal: Chorasi, Dist: Surat.

AND WHEREAS the Gujarat Pollution Control Board has granted Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWH-118971 & W-126157 which is valid up to 06/04/2028.

AND WHEREAS, during the inspection of your industrial plant on 30/11/2023 (10:45 AM) under Section-24 of the Air Act by the authorized officers of the Board with reference to Fire Incident occurred on dated: 29/11/2023 (@ 01:50 AM) following non-compliances was observed:

1. According to DISH authority report dated: 29/11/2023, Fire Incident occurred on 29/11/2023, @1:50 AM due to leakage of solvent (i.e. Tetra Hydro Furan, Toluene) & water mixer in solvent recovery tank located at ground floor of Plant No. 2, and 26 workers are injured.
2. Mr. Nayan Jadav (company representative) informed that, this incident happened around 1:30 AM & it might be due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.
3. THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm.
4. Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.
5. During rescue 07 dead bodies were found within the affected area.
6. During visit, VOC-398 PPM and NO₂-0.3 PPM is measured @50 meter away from incident site. Due to high VOC level other information could not be verified.
7. Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor.

AND WHEREAS Industry has submitted following representation/request on dated: 30/11/2023.

- a. To submit the compliance of DISH directions as suggested in DISH report and for the same required repairing / removing some equipment's, electric cable work in effected area, which required power.
- b. Unit having many solvent in storage tank and it need to be stored under Nitrogen which requires power in nitrogen generate plant.
- c. Unit having Ethylene Oxide in storage tank which has to be stored under chilled condition, required chilling plant, hence need Power to operate such plant.
- d. Certain dismantle work has to be carried out for safety purpose which required power.

UNDER THE CIRCUMSTANCES, I, **Dr. S. N. Agravat, Unit Head, Surat** of Gujarat Pollution Control Board, is directed to issue the directions under Section - 31A of The Air (Prevention and Control of Pollution) Act-1981 as under:

- I. This order shall be effective with **immediate effect**.

M/s. Aether Industries Ltd. (ID: 45359)

Page 1 of 2

- II. Unit shall comply with DISH direction and submit it's compliance report.
- III. To submit safety Audit report & HAZOP study report.
- IV. To collect & dispose generated wastewater, burned/partially burned material due to fire incident in a scientific manner and submit details.
- V. Unit shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT, as per the latest guideline of CPCB/Hon'ble NGT directions.
- VI. Unit shall not carry out any production activity without prior permission of the Board.

Pay **Rs. 50 Lakh** as Interim Environment Damage Compensation through your online XGN Portal.

Details regarding action taken in this regard shall be communicated on following mail especially with UTR No.

1) uh-gpcb-sura@gujarat.gov.in
2) nuh-gpcb-acc5@gujarat.gov.in
3) nuh-gpcb-sura@gujarat.gov.in

If the above directions are not complied, you are liable for prosecution under Section 37 of the Air (Prevention and Control of Pollution) Act-1981 which provides punishment with imprisonment for a term not less than one year and six months and may extend to six years and with fine.

If any person aggrieved by the aforesaid direction, you may file an appeal under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 before Appellate Authority (Forests & Environment Department, Government of Gujarat) within thirty days from the date of this order.

This order is issued after approval of competent authority.

For and on behalf of
Gujarat Pollution Control Board,


(Dr. S. N. Agravat)
Unit Head, Surat

NO: GPCB/CCA-SRT-2000(5)/ID_45359/

To:

M/s. Aether Industries Ltd,
Plot No: 8203, Sachin GIDC,
Sachin - 394230,
Tal: Chorasi, Dist: Surat.

Date:

Outward No: 759643, 30/11/2023

***NEWS ITEM APPEARING IN THE INDIAN EXPRESS DATED 30.11.2023 ENTITLED
“FIRE AT CHEMICAL PLANT IN SURAT 24 WORKERS INJURED”***

BASIC INFORMATION

- M/s. Aether Industries is an Synthetic Organic Chemical (i.e. Active Pharmaceuticals Ingredients (API) & API Intermediate, Research & Development (R & D) Centre along with Pilot Plant) manufacturing unit located at Plot No. 8203, GIDC – Sachin – 394 230, Ta – Chorasi, Dist- Surat.
- Unit obtained Environment Clearance (EC) from State Level Environment Impact Assessment Authority (SEIAA), Gujarat on 05/11/2020.
- Unit having Consent to Operate/Consolidate Consent and Authorisation (CTO/CC&A) of the Board, which is valid up to date: 06/04/2028 for the total production quantity: 475 MT/Month. **[Copy of CTO/CC&A is attached as “Annexure – A”]**
- There is no any previous legal action against to this unit.

ABOUT INCIDENT

- Fire incident occurred in this unit on dated: 29/11/2023 (@1:30 to 01:45 AM).
The officials of Board and Directorate of Industrial safety and Health (DISH) were on the site and as per reports, observations are as follows: **[Copy of DISH order and Inspection Report of the Board officials are attached as “Annexure – B & C”]**
 - (1) According to DISH authority report dated: 29/11/2023, Fire incident occurred on 29/11/2023, @1:45 AM due to leakage of solvent (i.e. Tetra Hydro Furan, Toluene) & water mixer in solvent recovery tank located at ground floor of Plant No. 2, and 26 workers are injured.
 - (2) Mr. Nayan Jadav (company representative) informed that, this incident happened around 1:30 AM & it might be due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.
 - (3) THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm.

- (4) Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.
- (5) During rescue, 07 dead bodies were found within the affected area (up to dated: 30/11/2023).
- (6) During inspection, VOC - 398 PPM and NO₂ - 0.3 PPM is measured @50 meter away from incident site using wireless portable multi gas monitor (MultiRAE Lite) handy sampler for VOC and NO₂ parameters. Due to high VOC level, incident location could not be accessed and verified.
- (7) Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor.

ACTIONS TAKEN BY THE BOARD

- Gujarat Pollution Control Board (GPCB) has issued Closure Direction to unit under section – 31(A) of the Air Act – 1981 with immediate effect and **imposed Rs. 50 Lakh interim Environmental Damage Compensation (EDC)** with following directions: **[Copy of issued Closure Direction is attached as “Annexure – D”]**
 - (i) Unit shall comply with DISH direction and submit it’s compliance report.
 - (ii) To submit safety Audit report & HAZOP study report.
 - (iii) To collect & dispose generated wastewater, burned/partially burned material due to fire incident in a scientific manner and submit details.
 - (iv) Unit shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT.
 - (v) Unit shall not carry out any production activity without prior permission of the Board.

PRESENT STATUS:

- The District Collector & Magistrate, Surat, constituted a Joint Committee of (1) Directorate of Industrial safety and Health (DISH), (2) Chief Fire Officer, Surat Municipal Corporation (SMC), Surat, (3) Regional Officer, GPCB, Surat, (4) Police Inspector, Sachin GIDC, Surat and their investigation is going on.



Annexure - A
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GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

"CCA-Amendment"
(No: W-126157)

BY R.P.A.D.

NO: GPCB/CCA-SRT-2000(4)/ID_45359/

Date:

To,
M/s. Aether Industries Ltd.
Plot No: 8203, Sachin GIDC,
Sachin-394230,
Tal: Chorasi, Dist: Surat.

- Sub: Amendment in the consolidated consent & Authorization of the Board
Ref: (1) CCA order No: AWH-118971, Dated: 18/06/2012 under various Environmental Acts/Rules.
(2) This office CTE-amendment order no: GPCB/CCA-SRT-2000(3)/ID-45359/704809, Dated: 01/03/2023.
(3) Your CCA Amendment Application Inward ID No: 273363 dated: 16/02/2023.

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution) Act-1981 and Authorization under rule 6(2) of the Hazardous and Other Waste (Management and Trans Boundary Movement) Rules, 2016 & framed under the Environmental (Protection) Act-1986. This Board has Granted CC&A vide order No. AWH - 118971 issued vide this office letter no: GPCB/CCA-SRT-2000 (2)/ID-45359/675486 dated 18/06/2022, valid up to 06/04/2028.

The Board has right to review and amend the conditions of the said CCA order.
The said CCA order is further amended as below.

- This order shall be read as CCA-Amendment Order No. W-126157 date of issued 08/05/2023 valid up to 06/04/2028.
- The consents shall be valid up to 06/04/2028 for use of outlet for the discharge of trade effluent & emission due to operation of industrial plant for manufacture of the additional items/products i.e. Ethylene Chlorohydrin (Group C), p-Hydroxy phenethyl methyl ether (Group H), 3-Hydroxymethyl-2-methylbiphenyl (Group H), Tert-Butyl Chloride (Group M), 5-Chlorovaleryl Chloride (Group M) which are incorporated with existing products as under:

Sr. No.	Product Name	Existing Production Capacity (MT/Month)	Applied Quantity (MT/Month)	Total Quantity (Product Mix) (MT/Month)
Group A	Research & Development (R & D) Centre along with Pilot Plant and Crams Products	10	NIL	10
Group B	Active Pharmaceuticals Intermediates			
1	1-[2-(2-Hydroxyethoxy)ethyl]piperazine	25	NIL	25
	MEP Derivatives			
2	1-(4-(2-methoxyethyl)phenoxy)propan-2-ol			
Group C	Hydrogenation Derivatives			
	Secondary amine Derivatives			
3	(2R, 3R, 4R, 5S)-6-(octylamino)hexane-1,2,3,4,5-pentaol	70	NIL	70

M/s. Aether Industries Ltd. (ID: 45359)

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Website : <https://gpcb.gujarat.gov.in>

Sr. No.	Product Name	Existing Production Capacity (MT/Month)	Applied Quantity (MT/Month)	Total Quantity (Product Mix) (MT/Month)
4	(2R, 3R, 4R, 5S)-6-(Methylamino)hexane-1,2,3,4,5-pentaol			
5	(2R, 3R, 4R, 5S)-6-(ethylamino)hexane-1,2,3,4,5-pentaol			
	Cyclohexyl Derivatives			
6	Trans-4-Amino cyclohexanol			
7	Ethylene Chlorohydrin	NIL	70	
Group D	Halogenation Derivatives			
	Benzylbromide Derivatives			
8	4'-(bromomethyl)-[1,1'-biphenyl]-2-carbonitrile	20	NIL	20
	Naphthoquinone Derivatives			
9	2-chloronaphthalene-1,4-dione			
Group E	Etherification			
10	2-(2-(2-Chloro ethoxyethoxy) ethanol			
11	Isopropoxy ethanol			
12	1-(2-Hydroxyethyl) piperazine (HEP)			
13	2-Chloro Ethanol (transfer from L-Group)	75	NIL	75
14	2-(2-Chloroethoxy) Ethanol (transfer from L-Group)			
15	4-Fluoro-3-phenoxybenzaldehyde			
Group F	Specialty Chemicals (Electronic Chemicals, Fragrance & Flavors and Specialty Monomers and Polymers)			
16	PPC Polyol			
17	1-(tert-butoxy)-4-chlorobenzene (BPCP)	40	NIL	40
18	Tetrahydro-2H-pyran-2-one			
19	1-chloro-3-methoxy-2-methylbenzene			
Group G	Heterocyclic Derivatives / Polycyclic Derivative			
20	2-Thiophenecarboxylic acid			
21	2-Thiophenecarbonyl chloride			
	Furan Derivatives			
22	2,3-dihydro furan			
	Thiophene Derivatives			
23	2-(thiophen-2-yl)ethanamine	40	NIL	40
24	2-(thiophen-2-yl)ethanol			
	Pyran Derivatives			
25	3,4-Dihydro-2H-pyran			
Group H	Oxidation Derivatives			
26	Isobutylene oxide	40	NIL	
27	O-tolylbenzotrile			40
28	p-Hydroxy phenethyl methyl ether	NIL	40	
29	3-Hydroxymethyl-2-methylbiphenyl	NIL	40	
Group I	Carboxylic Acid Derivatives			
	Benzonitrile Derivatives			
30	4-chlorobenzonitrile	30	NIL	30
	Aryl Acetyl Derivatives			



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PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

Sr. No.	Product Name	Existing Production Capacity (MT/Month)	Applied Quantity (MT/Month)	Total Quantity (Product Mix) (MT/Month)
31	2-Acetylthiophene			
	Aryl Acid chloride Derivatives			
32	3-methoxy-2methyl benzoyl chloride			
Group J	Basic Aromatic Intermediates			
33	2-methyl-3-phenylbenzyl alcohol	25	NIL	25
Group K	Chiral Resolution Derivatives			
34	Remdesivir Intermediate (REM-5)			
35	7-bromopyrrolo[2,1-f][1,2,4]triazin-4-amine	5	NIL	5
36	(3R,4R,5R)-3,4-bis(benzyloxy)-5-((benzyloxy)methyl)dihydrofuran-2(3H)-one			
Group L	Ethylene Oxide an Isobutylene Intermediates			
	Alkyl Ethylene Oxide Derivatives			
37	Hydroxynovaldiamine			
38	2-Acetylbutyrolactone			
39	2-(Eihylamino)ethanol	75	NIL	75
	Aryl Ethylene Oxide Derivatives			
40	4 - (2 - methoxyethyl)phenol			
41	4 - (2 - hydroxyethyl)phenol			
Group M	Organomettalic Chemistry Derivatives (Grignard, Lithiation, Coupling)			
42	tert-Butyl chloroacetate			
	Biaryl Derivatives			
43	4'-methyl-2-cyanobiphenyl			
44	2,4-Difluorobiphenyl	20	NIL	20
	Styrene Derivatives			
45	4-vinylphenyl acetate			
46	1-chloro-4-vinylbenzene			
47	Tert-Butyl Chloride	NIL	20	
48	5-Chlorovaleryl Chloride	NIL	20	
Total		475 MT/Month		475 MT/Month

SUBJECT TO THE FOLLOWING CONDITIONS:

- I. Unit shall provide online Continuous Monitoring System (OCEMS) for emission monitoring and strictly comply with their undertaking dated: 28/07/2022
- II. Applicant shall comply with conditions of Environment Clearance granted by SEIAA no: SEIAA/GUJ/EC/5(f)/1324/2020, dated: 05/11/2020.
- III. All the other conditions of issued CCA vide letter No. GPCB/CCA-SRT-2000(2)/ID_45359/675486 on dated: 18/06/2022, validity 06/04/2028 shall remain unchanged in this CCA-Amendment, You are directed to comply with these conditions.
- IV. Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)).

M/s. Aether Industries Ltd. (ID: 45359)

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- V. As per provisions of rule 18 of solid waste management rules -2016 you are directed to make an arrangement in utilities to replace at least five (5%) of your solid fuels requirement by refused derived fuels.
- VI. To do retrofitting at D.G Set for emission control and unit shall submit compliance with respect to Board circular No GPCB/Air Action -03(1) (E) /599145/, dated: 27/08/2021 in the matter of NGT O.A. No. 681/2018.

3. CONDITIONS UNDER THE WATER ACT:

- 3.1 Source of water: Sachin Notified Area Authority.
- 3.2 The quantity of the fresh water consumption for industrial purpose shall not exceed 760 KL/Day.
- 3.3 The quantity of the water consumption for domestic purpose shall not exceed 36 KL/Day.
- 3.4 The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations shall not exceed 189 KL/Day.
- 3.5 Dilute steam wastewater is treated in primary treatment followed by SBT (Soil Bio Technology) treatment and treated effluent is sent to CETP of GECL, Sachin for further treatment through designated tanker.
- 3.6 Low COD stream wastewater after treatment in the separate primary ETP & it will be feed into RO Plant. RO permeate will be reused while RO reject wastewater will be send to Common MEE facility of M/s. Detox India Pvt. Ltd. till M/s. MEPPPL will install MEE for the treatment of industrial effluent of Member Industry Once M/s. MEPPPL will install MEE, we will send our concentrate effluent to M/s. MEPPPL for the treatment/ in house MEE and MVR.
- 3.7 Concentrated stream wastewater is given primary treatment and feed into MEE and MVR or sent to common MEE facility of Detox India Pvt. Ltd. till MEPPPL will install MEE once MEPPPL will install MEE, Unit will send effluent to MEPPPL for treatment. Unit has provided in house MEE/MVR with solvent stripper and ATFD. High COD (concentrated) stream wastewater is sent to common MEE facility of Detox India Pvt. Ltd. till MEPPPL will install MEE once MEPPPL will install MEE, unit will send effluent to MEPPPL for treatment through tankers.
- 3.8 The quantity of the domestic waste water (Sewage) shall not exceed 16 KL/Day.
- 3.9 Domestic effluent shall be disposed off through septic tank/soak pit system.
- 3.10 The applicant shall operate effluent treatment system efficiently so that diluted effluent stream from the industrial unit shall conform to the CETP inlet norms mentioned below however the final discharge of treated effluent from CETP shall adhere to the prescribed standards for CETP of M/s. Globe Enviro care Ltd. (GECL).

PARAMETERS	CETP NORMS
pH	6.5 TO 8.5
Temperature	40° C
Colour (pt.co.scale) in units	100 units
Suspended Solids	300 mg/L
Oil and Grease	10 mg/L
Phenolic Compounds	1 mg/L
Sulphides	2 mg/L
Ammonical Nitrogen	50 mg/L
Total Chromium	2 mg/L
Hexavalent Chromium	0.1 mg/L
BOD (5 days at 20°C)	1200 mg/L
COD	3000 mg/L



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Total Dissolved Solids	2100 mg/L
Copper	3 mg/L
Nickel	3 mg/L
Zinc	5 mg/L
Lead	0.1 mg/L

- 3.11 The final treated effluent conforming to the above standards shall be fully conveyed into CETP of M/s. Globe Enviro care Ltd. (GECL) through underground drainage system of GECL & in no case effluent shall be discharged in to Environment by any means.
- 3.12 In case of failure of CETP, applicant shall have to treat the trade effluent of their unit fully so as to achieve the quality of the treated effluent from their industrial premises as per the GPCB norms mentioned below:-

PARAMETERS	GPCB NORMS
pH	6.5 TO 8.5
Temperature	40° C
Suspended Solids	100 mg/L
Oil and Grease	10 mg/L
Total Dissolved Solids	2100 mg/L
Phenolic Compounds	1 mg/L
Sulphides	2.0 mg/L
Ammonical Nitrogen	50 mg/L
Total Chromium	2 mg/L
Hexavalent Chromium	0.1 mg/L
BOD (5 days at 20°C)	30 mg/L
COD	100 mg/L
Chlorides	600 mg/L
Sulphate	1000 mg/L

OR

The applicant shall either stop or curtail its production activities if the effluent is not adequately treated by the CETP of GECL to conform to the standards specified by G.P.C.B.

- 3.13 The applicant shall be responsible for conveyance of entire treated effluent to the CETP of M/s. GECL & due care shall be taken to avoid any leakage or spillage of effluent during conveyance of treated effluent through drain.
- 3.14 Unit shall provide flow meters at inlet & outlet of ETP & maintain its record.
- 3.15 The applicant shall inform renewal/termination of CETP membership well in advance to GPCB.
- 3.16 The applicant shall be required to make storage facilities to store the primary treated effluent for at least 48 hours by providing acid proof brick lined impervious tanks/HDPE tanks.
- 3.17 The applicant shall make fixed arrangement for loading the effluent after primary treatment to the CETP. The unit shall not keep any by-pass line or system or loose or flexible pipe line for discharging effluent into the underground drainage system of GECL.
- 3.18 Leachate from the hazardous solid waste, if any shall also be connected into a collection tank through leachate collection facilities and shall be conveyed along with industrial effluent to the CETP of GECL.
- 3.19 Magnetic flow meters shall be installed at the inlet & outlet of effluent collection tanks/ETP to measure the quantity of effluent discharging in to underground drainage system of GECL.
- 3.20 The entire quantity of industrial effluent shall have to be conveyed by GECL. In no circumstances the effluent either treated or untreated shall be discharged anywhere else.

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- 3.21 Disposal system for storm water shall be provided separately. In no circumstances storm water shall be mixed with the industrial effluent.
- 3.22 GECL member unit have to modify / improve performance of existing Effluent treatment facilities for efficiency & adequacy in order to comply with prescribed in let standards.
- 3.23 The applicant shall keep accurate records of quantity of production of each product, quantity of water consumption, quantity of effluent generated and consumption of electricity on day to day basis and required to submit the complied record of one month to GPCB & GECL on or before fifth day of the succeeding month.
- 3.24 In case of shut-down of plant for more than three days for any reason, the GECL unit member shall intimate to GECL authority & GPCB well in advance for the better operation & management of CETP.
- 3.25 The authorized representative of GECL may have right of entry at any time for the purpose of inspection and monitoring the effluent collection facilities/EETP (if required) of the applicant.
- 3.26 If the GECLL authority terminates the membership of the applicant for CETP, the GECL member unit shall have to close down the manufacturing activities/industrial operation of the process plant immediately until the GECL membership is resumed.
- 3.27 The applicant shall put up at the entrance a board displaying GECLL membership number & date of joining of GECL, the name of unit, particulars of the products/ process and the name of proprietor/partners /directors of the unit and the electricity consumer number as on the record of GSECL.

4. CONDITIONS UNDER THE AIR ACT:

- 4.1 The following shall be used as fuel in fuel in Steam Boiler, Thermo Pack, and D.G. Sets.

Sr. No.	Utility	Fuel	Quantity
1	Steam Boiler (4 MT/Hr)	Natural Gas	3180 m ³ /Hr
2	Steam Boiler (12 MT/Hr)	Natural Gas	1060 m ³ /Hr
3	Thermopack (400 U)	Natural Gas OR LDO	24 m ³ /Hr OR 40 Liters/Hr.
4	Thermopack (400 U)	Natural Gas OR LDO	24 m ³ /Hr OR 40 Liters/Hr.
5	Thermopack (600 U)	Natural Gas	90 m ³ /Hr
6	Thermopack (600 U)	Natural Gas	90 m ³ /Hr
7	Thermopack (1000 U)	Natural Gas	150 m ³ /Hr
8	D.G. Sets (2250 KVA×2)	Diesel	450 Lit/Hr

- 4.2 The applicant shall install and operate air pollution control system in order to achieve norms prescribed Norms
- 4.3 The flue gas emission through stack attached to Steam Boiler, Thermo Pack, and D.G. Sets shall conform to the following standards.

Stack No.	Stack attached to	Stack height in Meter	Parameter	Permissible Limit
1	Steam Boiler (4 MT/Hr)	36 (Common Stack)	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm



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2	Steam Boiler (12 MT/Hr)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
3	Thermopack (400 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
4	Thermopack (400 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
5	Thermopack (600 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
6	Thermopack (600 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
7	Thermopack (1000 U)	30	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
8	D. G. Set Stand By (2250 KVA)	11	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
9	D. G. Set Stand By (2250 KVA)	11	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm

4.4 The process emission through various stack / vent Reaction vessel shall confirm to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control System	Parameters	Permissible Limit
1.	Reactors	15	Water Scrubber followed by Alkali Scrubber	HCl, SO ₂ , HBr	20 mg/Nm ³ 40 mg/Nm ³ 30 mg/Nm ³
2.	Reactors	15	Water Scrubber followed by Alkali Scrubber	HCl, SO ₂ , HBr	20 mg/Nm ³ 40 mg/Nm ³ 30 mg/Nm ³
3.	Reactors	15	Water Scrubber followed by Alkali Scrubber	HCl, SO ₂ , HBr	20 mg/Nm ³ 40 mg/Nm ³ 30 mg/Nm ³

4.5 Applicant shall comply with National Ambient Air Quality Standards notified by Central Pollution Control Board, New Delhi time to time under the provision of the Environment (Protection) Act-1986 for all the parameters. The concentration of all parameters in the ambient air within the premises of the industry and a distance of 10 meters from the sources (other than the stack/vent) shall not exceed than the permissible limit.

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Parameters	Permissible Limit ($\mu\text{g}/\text{m}^3$)	
	Annual	24 Hrs Average
Particulate Matter-10 (PM_{10})	60	100
Particulate Matter-2.5 ($\text{PM}_{2.5}$)	40	60
SO_2	50	80
NO_x	40	80

- 4.6 The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
- 4.7 The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6 a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

5. **D.G. Sets Conditions:**

The D. G. Set shall have acoustic enclosure and shall comply with the standards specified at sr. no. 95 of Schedule-I of the rule-3 of E.P. Rules - 1986 and Noise pollution level as per the Air Act - 1981.

D. G. Set Standards:

- The flue gas emission through stack attached to D. G. Sets shall conform to the following standards.
- The minimum height of stack to be provided with each of the generator set shall be $H - h + 0.2 (\text{KVA})^{1/2}$, where H = Total stack height in meter, h = height of the building in meters where or by the side of which the generator set is installed.
- Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end.
- The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may be possible to check the performance of the acoustic enclosure / acoustic treatment, under such circumstances the performance may be checked for noise reduction up to actual ambient noise level preferably, in the night time). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure/room, and the averaged.
- The D.G set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).
- All efforts shall be made to bring down the noise level due to the D. G. Set, outside the premises, within the ambient noise requirements by proper siting and control measures.
- Installation of a D. G. Sets must be strictly in compliance with the recommendations of the D. G. Set manufacturer.
- A proper routine and preventive maintenance procedure for the D. G. Set should be set and followed in consultation with the DG Sets manufacture which would help prevent noise levels of the DG Set from deteriorating with use.



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6. AUTHORIZATION as per HAZARDOUS AND OTHER WASTE (MANAGEMENT AND TRANSBOUNDARY) RULES, 2016 Form-2 [See rule 6 (2)]

From the grant of authorization for occupier or operator handling Hazardous waste

6.1 Authorizations order No: **W-126157** of Issue: **08/05/2023**.

6.2 **M/s. Aether Industries Limited** is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at **Plot No: 8203, Sachin GIDC, Sachin-394230, Tal: Chorasi, Dist: Surat.**

Sr. No.	Waste	Quantity	Schedule-I/ Category	Facility
1	ETP Sludge	250 MT/Year	35.3	Collection, Storage, Transportation and send to TSDf site
	Mixed Solvents	240 MT/Year		Collection, Storage, Transportation and send to M/s. Recycling Solutions Pvt. Ltd. (RSPI.) for Co-Processing / sell to 1. M/s. Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. Rhythem Chemicals Pvt. Ltd. 6. Darshan Chemicals Pvt. Ltd. 7. Nandani Chemicals
	Scrubber Bleed	8395 KI/Year		Collection and send to ETP for further treatment
	Sewage Sludge	3.6 MT/Year		Collected and reused as manure activity
	MEE Salt	600 MT/Year (In case of Sent to CMEP) or 600 MT/Month (In case of Operate own MEE)		Collection, Storage, Transportation and send to TSDf site of M/s. Saurashtra Enviro Projects Pvt. Ltd. for Secured Land Filling or other register TSDf Site a. M/s. Detox India Pvt. Ltd. b. M/s. Safe Enviro Pvt. Ltd. c. M/s. Bharuch Enviro Infrastructure Pvt. Ltd.
2	Used Oil	1.02 MT/Year	5.1	Collection, Storage, Transportation and sent to registered recycler / reuse as a lubricant
3	Discarded containers / bags / liners / Barrels	96 MT/Year	33.1	Collection, Storage, Transportation and send to registered recycler / send back to supplier
4	Process Sludge	576 MT/Year	28.1	Collection, Storage, Transportation and send to RSPI. 1 and RSPI. 2, Panoli for Co-processing / send to TSDf site of M/s. Saurashtra Enviro Projects Pvt. Ltd. / M/s. Green gene Enviro Protection and Infra Structure Pvt. Ltd. For co-processing & to TSDf site for Secured Land Filling
5	Spent Catalyst	372 MT/Year	28.2	Recovered and Reused in to Process or

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				Collection, Storage, Transportation and send to regeneration unit i.e. M/s. Evonik Catalyst India Pvt. Ltd.
	Raney Nickel	26.4 MT/Year	28.2	Recovered and Reused in to Process or Collection, Storage, Transportation and sent and send to TSDF site for Secured Land Filling/ Regeneration unit i.e. Evonick Catalyst India Pvt. Ltd. Or M/s. Om Balaji Inorgo Metal Pvt. Ltd.
6	Distillation Residue	2436 MT/Year	20.3	Collection, Storage, Transportation and send to RSPL 1 and RSPL 2, Panoli for Co-processing or sent to cement industries for co processing i.e. Ultratech Cement Ltd Rajula, Shree Cement Ltd., Karnataka or M/s Shree Raipur Cement Plant, (A Unit of Shree Cement Limited), Bhatapara, or M/s. Dalmia Cement Limited / send to Green gene Enviro Protection and Infra Structure Pvt Ltd., Rajasthan or Incinerable Site i.e M/s. Saurashtra Enviro Projects Pvt. Ltd. Bharuch Enviro Infrastructure Pvt. Ltd. Or other register CIW/TSDF site.
7	NaCl Salt	228 MT/Year	B2040	Collection, Storage, Transportation and send to TSDF site of M/s. Saurashtra Enviro Projects Pvt. Ltd. for Secured Land Filling 1. M/s. Detox India Pvt. Ltd. 2. M/s. Safe Enviro Pvt. Ltd.
8	Spent HCl	660 MT/Year	B15	Collection, Storage, reused in to same group of product.
9	Sodium Sulphate	180 MT/Year	B23	Collection, Storage, reused in to same group of product.
	Magnesium Sulphate	36 MT/Year	B23	Collection, Storage, Transportation and send to TSDF site
10	Mix Fractions	2448 MT/Year	D3	Collection, Storage, Transportation and Sell to authorized end user 1. M/s Shyam Sizors 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. Rhythem Chemicals Pvt. Ltd. 6. Darshan Chemicals Pvt. Ltd. 7. Nandani Chemicals
	2-Chloroethoxy ethanol	48 MT/Year	28.6	Collection, Storage, reused in to same process
11	4,4-Dimethyl Biphenyl	384 MT/Year	28.6	Collection, Storage, reused in to same process
	Phenol	456 MT/Year	28.6	Collection, Storage, reused in to same process



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TMS	60 MT/Year	28.6	Collection, Storage, reused in to same process
TMSOH	372 MT/Year	28.6	Collection, Storage, reused in to same process
Trimethyl borate	48 MT/Year	28.6	Collection, Storage, reused in to same process
benzyl chloride	204 MT/Year	28.6	
N-Ethyldiethanola mine	228 MT/Year	28.6	Collection, Storage, reused in to same process
Spent Solvent			
Piperazine	3468 MT/Year	28.6	Collection, Storage, reused in to same process
Toluene	16248 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. M/s. Shivam Organics 4. Om organics 5. Darshan Chemicals Pvt. Ltd. 6. Nandani Chemicals 7. Maa Krupa Distributors 8. Rhythem Chemicals Pvt. Ltd.
Methanol	25632 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
IPA	9108 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
EDC	8280 MT/Year	28.6	Collection, Storage, reused in to same process

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				process/ Sell to authorized end user Rhythem Chemicals Pvt. Ltd.
MFG	2292 MT/Year	28.6		Collection, Storage, reused in to same process
MCB	9972 MT/Year	28.6		Collection, Storage, reused in to same process
THF	24552 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors.
Ehtyl Acetate	792 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
Hexane	312 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. Om organics
Acetic Acid	72 MT/Year	28.6		Collection, Storage, reused in to same group of product.
MDC	1356 MT/Year	28.6		Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizars 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd.



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			9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
DMF	228 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors
Ethanol	228 MT/Year	28.6	Collection, Storage, Transportation and reused in to Process / Sell to authorized end user 1. M/s Shyam Sizers 2. M/s. Square Petrofield Pvt. Ltd. 3. Om organics 4. KP industries 5. M/s. Shivam Organics 6. M/s. Acquire Chemicals 7. Rhythem Chemicals Pvt. Ltd. 8. Darshan Chemicals Pvt. Ltd. 9. Nandani Chemicals 10. M/s. Maa Krupa Distributors

6.3 The authorization shall be valid up to **06/04/2028**.

6.4 The authorization is subject to the conditions stated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

6.5 The authorization is granted to operate a facility for collection, storage within factory premises transportation and ultimate disposal of Hazardous wastes as per condition no.5.2 to the industry having valid CCA of this Board.

7. TERMS AND CONDITIONS OF AUTHORISATION:

- 7.1 The applicant shall comply with the provisions of the Environment (Protection) Act-1986 and the rules made there under.
- 7.2 The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
- 7.3 The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
- 7.4 Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.

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- 7.5 The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as NPICSL larges, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
- 7.6 The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Wastes and Penalty"
- 7.7 It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
- 7.8 An application for the renewal of an authorization shall be made as laid down in rules 6(2) under Hazardous Waste and Other Waste Rules, 2016.
- 7.9 The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
- 7.10 The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
- 7.11 The hazardous and other wastes which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorization.
- 7.12 The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
- 7.13 Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
- 7.14 The waste generator shall be totally responsible for (i.e. collection, storage, transportation and ultimate disposal) the wastes generated.
- 7.15 Records of waste generation, its management and annual return shall be submitted to Gujarat Pollution Control Board in Form-4 by 30th day of June of every year for the preceding period April to March.
- 7.16 In case of any accident, details of the same shall be submitted on Form-11 to Gujarat Pollution Control Board.
- 7.17 As per "Public Liability Insurance Act-91" company shall get Insurance Policy, if applicable.
- 7.18 Empty drums and containers of toxic and hazard material shall be treated as per guideline published for "Management & Handling of discarded containers". Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly.
- 7.19 In case of transport of hazardous wastes to a facility for (i.e. treatment, storage and disposal) existing in a State other than the State where hazardous wastes are generated, the occupier shall obtain 'No Objection Certificate' from the State Pollution Control Board or Committee of the concerned State of Union Territory Administration where the facility exists.
- 7.20 Unit shall take all concrete measures to show tangible results in waste generation, reduction, avoidance, reuse and recycle. Actions taken in this regard shall be submitted within three months and also along with Form-4.



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- 7.21 Industry shall have to display the relevant information with regards to hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No.657 of 1995 dated 14th October, 2003.
- 7.22 Industry shall have to display on-line data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including wastewater and air emissions and solid hazardous wastes generated within the factory premises.

8. GENERAL CONDITIONS:

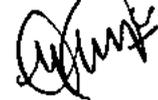
- 8.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.
- 8.2 Applicant shall also comply with the general conditions given in annexure I.
- 8.3 Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body.
- 8.4 In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.
- 8.5 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell/Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.
- 8.6 The Environmental audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.
- 8.7 The Board reserves the right to review and/or revoke the consent and/or make variations in the conditions, which the Board deems, fit in accordance with Section 27 of the Act.
- 8.8 In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
- 8.9 Industry shall have to display the relevant information with regard to hazardous waste as indicated in the Hon. Supreme order in w.p. no. 657 of 1995 dated 14th October 2003.

9. SPECIFIC CONDITIONS:

- 9.1 The authorized actual user of hazardous and other wastes shall maintain records of hazardous and other wastes purchased in a passbook issued by the State Pollution Control Board along with the authorization.
- 9.2 Handling over of the hazardous and other wastes to the authorized actual user shall be only after making the entry in the passbook of the actual user.
- 9.3 In case of renewal of authorization, a self-certified compliance report in respect of effluent, emission standards and the conditions specified in the authorization for hazardous and other wastes shall be submitted to SPCB.

- 9.4 The occupier of the facility shall comply Standard operating procedure/guidelines published by MOEF&CC or CPCB or GPCB from time to time.
- 9.5 Unit shall comply provisions of E-Waste Management Rules-2016.
- 9.6 The disposal of Hazardous Waste shall be carried out as per the waste Management hierarchy.
- 9.7 The occupiers of facilities shall not store the hazardous and other wastes for a period not exceeding ninety days. Prior permission of the Board shall be obtained for extension of the storage period.
- 9.8 The occupier shall maintain the records of generation, sale, storage, transport, recycling, co processing and disposal of hazardous waste and make available during the inspection.
- 9.9 The transportation of the hazardous waste shall be carried out in GPS mounted dedicated vehicles.
10. The conditions of the earlier issued CCA order No: AWH-118971 shall be supersede by this CCA – Amendment order.

For and on behalf of
Gujarat Pollution Control Board



(M. R. Macwana)
Unit Head, Surat

Outward No: 745824, 23/06/2023



સંયુક્ત નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્યની કચેરી, સુરત રીજીયન સુરત

"બી બ્લોક", દફતો માળ, જીલ્લા સેવા સદન-૨, અઠવાવાઈ-સુરત

ફોન નં ૦૨૬૧-૨૬૫૩૫૦૨, ફેક્સ નં ૦૨૬૧-૨૬૫૩૫૦૧

હાથોહાથ.

ક્રમાંક/સં.નિ/ઓ.સ.સ્વ./સુ.રીજી/૧૦૫૧/૨૦૨૩

તા. / / ૨૦૨૩

29 NOV 2023

પ્રતિ,

✓ કબજેદારશ્રી/ વ્યવસ્થાપકશ્રી

શ્રી રોહન અશ્વિનભાઈ દેસાઈ

એથર ઇન્ડસ્ટ્રીઝ લી.

પ્લોટ નં.૮૨૦૩, રોડ નં.૮૨,

જી.આઈ.ડી.સી. સચીન, ચોર્યાસી, સુરત.

વિષય :- કારખાના અધિનિયમ-૧૯૪૮ ની કલમ ૪૦(૨) હેઠળ બંધના હુકમ બાબત.

- (૧) કારખાનામાં તા.૨૯/૧૧/૨૦૨૩ ના રોજ શ્રી આર.એ.પટેલ, સંયુક્ત નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત, શ્રી આર.આર.જોષી, મદદનીશ નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત, શ્રી એસ.એ.ચૌહાણ, મદદનીશ નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત, શ્રી વી.વી.ચૌહાણ, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય અધિકારી, સુરત સાથે આગના બનાવ બાબતે મુલાકાત લીધી.
- (૨) કારખાનામાં આશરે ૫૨૫ જેટલા પુખ્તવયના શ્રમયોગીઓને કામે રોકીને વિદ્યુત શક્તિનો ઉપયોગ કરીને કારખાનામાં ઇથીલીન ઓકસાઇડ, મીથેનોલ, ડ્રાય એચ. સી.એલ. ગેસ, આઇસો બ્યુટીનીલ, ટેટ્રા હાઇડ્રો ફ્યુરાન (THF), હાઇડ્રોજન ગેસ, સોલ્વન્ટ વગેરે જેવા કેમીકલનો ઉપયોગ કરીને કલોરો ઇથોક્સી ઇથીલીન તથા સ્પેશીયાલીટી કેમિકલ્સ બનાવવાની ઉત્પાદન પ્રક્રિયા કરવામાં આવે છે. કારખાનું કારખાના ધારા -૧૯૪૮ ની કલમ ૨(એમ)(૧) હેઠળ પાત્ર છે તથા કારખાનું એમ.એ.એચ.(MAH) પ્રકારનું છે. કારખાનાનું લાયસન્સ નંબર-૨૭૯૨૬ જે ૧૦૦૦ શ્રમયોગી તથા ૫૦૦૦ થી વધુ હોર્સપાવર માટે વર્ષ-૨૦૨૫ સુધી રીન્યુ થયેલ છે.
- (૩) કારખાનામાં તા.૨૯/૧૧/૨૦૨૩ ના રોજ વહેલી સવારના ૦૧:૪૫ કલાકે કારખાનામા આવેલા પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકીમાં આવેલ બોટમ વાલ્વ ની ફ્લેન્જમાં મિક્ષ સોલ્વન્ટ કે જેમાં ટેટ્રા હાઇડ્રો ફ્યુરાન, ટોલ્યુઇન તથા પાણીના મિશ્રણનું લિકેજ થયેલ અને વાતાવરણમાં રહેલી હવા સાથે તેનું સળગી ઉઠે તેવું મિશ્રણ બનેલ અને આ મિશ્રણ કારખાનામાં ફેલાઇ જવા પામેલ. આ સળગી ઉઠે તેવા મિશ્રણને કોઇ જગ્યાએથી સળગવાનો સ્રોત મળતા આ સળગી ઉઠે તેવા મિશ્રણમાં ઘડાકા સાથે આગ લાગેલ અને આ લાગેલ આગ પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકીના બોટમ વાલ્વની ફ્લેન્જ જોઇંટ કે જ્યાથી લિકેજ થતું હતું ત્યા ફ્લેશબેક થયેલ અને આ પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકી ફાટી ગયેલ અને આગ પ્લાંટ નં.૨ ના ગ્રાઉંડ ફ્લોર પર આવેલ સોલ્વન્ટ રીકવરીની ટાંકીના બોટમ વાલ્વની ફ્લેન્જ જોઇંટ પર કેંદ્રિત થયેલ. સદરહું આગ સાથે ઘડાકાના બનાવના લીધે કારખાનામાં કામ કરતા ૨૬ શ્રમયોગીઓને ઇજા થયેલ છે. જેઓની હાલમાં સુરત ખાતેના વિવિધ હોસ્પિટલોમાં સારવાર ચાલુમાં છે. સદરહું આગ સાથે

ઘડાકાના લીધે કારખાનામાં આવેલ ટેક ફાઈના શેડના સ્ટ્રક્ચરને તથા ટેક ફાઈની બાજુમાં રહેલ પ્લાંટ નં.૨ માં પણ નુકશાન થયેલ છે તથા તેમાં આવેલ પાઇપલાઇનો તથા વેસલોમાં નુકશાન થવા પામેલ છે તથા સદરહુ બનાવના લીધે કારખાનામાં અન્ય કોઇપણ વિસ્તારમાં તથા પ્લાંટ નં.૨ માં આવેલ પાઇપલાઇનો તથા વેસલોમાં જો સળગે તેવા કેમિકલનુ લિકેજ થાય તો સદરહુ કારખાનામાં ફરી આગ લાગવાની શક્યતાઓ હોઇ સમગ્ર કારખાનામાં ઉત્પાદન પ્રક્રિયા કરવામા આવે તો ત્યા કામ કરતા શ્રમયોગીઓની જીંદગીને તાકિદનુ જોખમ રહેલ છે. આથી હું શ્રી બી.એ.ચૌહાણ, નાયબ નિયામક, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, સુરત કારખાના ધારા-૧૯૪૮ ની કલમ-૮ નીચે નીમાયેલ કારખાના નિરીક્ષક, કારખાનાધારા ૧૯૪૮ ની કલમ-૯ હેઠળ મળેલ સત્તાની રૂચે કારખાનાધારા ૧૯૪૮ ની કલમ-૪૦(૨) હેઠળ સમગ્ર કારખાનામાં નીચેના સલામતીના પગલા લીધા સિવાય ઉત્પાદન પ્રક્રિયા બંધ કરવાનો હુકમ કરૂ છુ.

સલામતીના પગલા :-

- (i) કારખાનાના નુકશાન પામેલ તમામ બાંધકામનુ સમારકામ/ નવિનીકરણ કરાવી તેનો કારખાના તરીકે ઉપયોગ કરતા પહેલા બાંધકામની મજબુતાઇ અંગેનુ સ્ટેબીલીટી સર્ટીફિકેટ ગુજરાત કારખાનાના નિયમો-૧૯૬૩ ના નિયમ-૩(સી) હેઠળ ફોર્મ નં.૧-એ પ્રમાણે નિયામકશ્રી, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય ગુજરાત રાજ્ય અમદાવાદ માન્ય કોમ્પીટન્ટ પર્સન પાસેથી મેળવીને રજૂ કરવુ.
- (ii) આગ ઘડાકાને કારણે કારખાનાનાં ઇલેક્ટ્રીક કેબલ્સ તથા ઇલેક્ટ્રિક ફીટીંગ્સને નુકશાન થયેલ છે જેને યોગ્ય સુપરવીઝનમાં વ્યક્તિની દેખરેખની નીચે સલામત રીતે દુર કરી તેની જગ્યાએ નવા ફ્લેમપ્રૂફ ઇલેક્ટ્રીક કેબલ્સ તથા ફીટીંગ્સ લગાવી તે વાપરવા લાયક છે તે બાબતનું સરકાર માન્ય ઇલેક્ટ્રીક સુપરવાઇઝર પાસેથી સર્ટીફિકેટ મેળવી રજૂ કરવું.
- (iii) કારખાનાની પ્રોસેસનો રી-હેઝોપ સ્ટડી નિષ્ણાંત વ્યક્તિ/ એજન્સી પાસે કરાવી તેમાં જણાવેલ સુચનોનાં પાલન અંગેનો રિપોર્ટ અત્રેની કચેરીએ રજૂ કરવો.
- (iv) કારખાનામાં સદર અકસ્માતના કારણે ક્ષતિગ્રસ્ત થયેલ સ્ટ્રક્ચર/બિલ્ડીંગ, મશીનરી વિગેરેના કાટમાળને ખસેડવાની તથા તેને રીપેર/ રિસ્ટ્રેથનીંગ કરવાની કામગીરી વર્ક પરમીટ સિસ્ટમ દ્વારા કરવી અને પ્રોસેસ વેસલ તથા રીએક્ટરમાં રહેલ રસાયણોને સલામત રીતે ખાલી કરી નિકાલ કરવાની કામગીરી યોગ્ય સુપરવીઝનમાં ભારતીય ધારાધોરણો/ ઇન્ટરનેશનલ સ્ટાન્ડર્ડ મુજબના યોગ્ય અને પુરતા કામને અનુરૂપ સ્વ રક્ષણાત્મક સાધનો પહેરીને પુર્ણ કરવી.

સ્થળ :- સુરત

તા.૨૬/૧૧/૨૦૨૩



(બી.એ.ચૌહાણ)

નાયબ નિયામક

ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય,

સુરત

નકલ સવિનય રવાના :- નિયામકશ્રી, ઔદ્યોગિક સલામતી અને સ્વાસ્થ્ય, ગુજરાત રાજ્ય, અમદાવાદ તરફ જાણ સારૂ.

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Reg. - Accident occurred at M/s. Aether Industries Ltd., Sachin GIDC
(PCB ID: 45359)

Dr. Jignasa D Oza(GoG-GPCB Dept.)

Thu 30-11-2023 05:33 PM

To:Unit Head Surat (GoG-GPCB Dept.) <uh-gpcb-sura@gujarat.gov.in>;

Cc:Next to Unit Head Surat (GoG-GPCB Dept.) <nuh-gpcb-sura@gujarat.gov.in>;

📎 3 attachments (2 MB)

Accident Report Aether.pdf; DISH Report.pdf; NEI.pdf;

Dear Sir,

In connection to the accident occurred at M/s. Aether Industries Ltd., Sachin GIDC (PCB ID: 45359), as per record verification, presence of 07 workers were not verified. Afterword, as per telephonic order given by District Magistrate; off site emergency team has inspected the site and during rescue 07 dead bodies were found within the affected area which were sent for forensic post mortem at civil hospital, surat for further investigation.

Investigation report of FSL and Post Mortem Reports are awaited.

Looking to the condition of case, Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor i.e. high to severe at the time of fire incidence.

DISH Report, NEI attached herewith.

Recommendation : Strict action may be initiated.

Thanking You,

(Dr Jignasa Oza)
Regional Officer,
Gujarat Pollution Control Board
Plot No: 11 - 12/2, 3
GIDC PANDESARA,
SURAT-394221
Phone: (0261) 2891696,
E-mail : ro-gpcb-sura@gujarat.gov.in

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Accident Report

Name and Address	Aether Industries Ltd., (GPCB ID- 45359), Plot No. 8203, Sachin GIDC, Tal : Chorasi, Dist. Surat
Time of incident :	@ 01:30AM 29/11/2023.
Time of Inspection :	11:50 AM, 29/11/2023.
Inspection team :	C.C. Hadia, SSA, B.C. Gosai, AEE
Reason :	yet not identified
Injury :	24 human injured (as informed by contacted person)
Casualty :	Nil at the time of inspection
Environment al issue :	Heavy dense smoke emission occurred at the time of fire/blast incident and ambient air quality was severe at the time of fire/blast incidence.
Pollution level monitoring :	Unit has used respective fire extinguisher for controlling fire and leachate is collected in ETP collection. During visit one water sample is collected from ETP collection tank. During visit VOC – 398 PPM and NO2-0.3 PPM is measured @ 50 meter away from incident site.
Observations :	<p>This unit is visited with reference to telephonic message regarding incident.</p> <ul style="list-style-type: none">• Unit has valid CCA up to 06/04/2028.• During visit unit is found not in operation.• Contacted person Mr. Nayan Jadav inform that this incident happened around 1:30 am.• On further inquiry he has informed that it might due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.• Contacted person inform that THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm. During visit VOC – 398 PPM and NO2-0.3 PPM is measured @ 50 meter away from incident site. Due to high VOC level other information could not be verified.• Contacted person has not aware about source of fire/blast and casualty/injured hence instructed to submit detailed investigation report with necessary documents.• Contacted person inform that total 24 nos of workers are injured and admitted to hospital.• DISH and FSL investigation is going on hence reason of fire/blast is yet not identified.• Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.• DISH has issued closure direction to Mr. Rohan A. Desai, Aether Industries Ltd vide letter no. ક્રમાંક/સં.નિ./ઔ.સ.સ્વ./સુ.રીજી/૭૦૫૧/૨૦૨૩ ૨૯/૧૧/૨૦૨૩ (Copy attached herewith).• As per DISH report of dated 29/11/2023 submitted by unit, incident happened around 01:45 AM on plant no. 02 ground floor. Solvent recovery tank bottom valve flange was leaked which was filled with tetra hydro furan, toluene, water has created vapour cloud after coming in contact with air and took fire and finally

converted into blast. This fire/blast affected plant number 02 and tank farm area.

- Mr. B. D. Gohil, AEE, Mr. N.M. Kavar, SO, Dr. J.D. Oza, Regional Officer has visited this unit for rescue purpose as part of off site emergency response team as per the intimation from SDM and details are sent through email.

During visit below mentioned written instruction are issued to the unit.

1. આજરોજ એકમમાં લાગેલ આગના કારણ સાથે વિગતવાર અહેવાલ રજુ કરવો.
2. આગની ઘટનાને કારણે બળી ગયેલ મટેરીયલ/વેસ્ટનો પર્યાવરણીય નિયમ મુજબ સુરક્ષિત નિકાલ કરી તે અંગેના દસ્તાવેજ પુરાવા આપવા.
3. આજરોજ એકમમાં લાગેલ આગની ઘટના અંગેનો DISH નો રીપોર્ટ રજુ કરવો.
4. આગની ઘટના બાદ સલામતીના તમામ પગલા લીધા બાદ કરેલ તમામ કાર્યવાહી અંગેનો અહેવાલ ઉત્પાદન કાર્ય પુનઃ શરૂ કરતા પહેલા બોર્ડમાં રજુ કરવો.
5. એકમમાં લાગેલ આગની ઘટના દરમ્યાન જો કોઈ ઈજાગ્રસ્ત/જનહાની થઈ હોય તો તે અંગેની વિગતો રજુ કરવી.
6. આગની ઘટના દરમ્યાન આગને નિયંત્રણ લેવા વપરાયેલ પાણીના ફાયર ટેન્કર/વપરાયેલ ફોમ અંગેની વિગતો રજુ કરવી.



ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ, સુરત

પ્રાદેશિક કચેરી, સુરત

પ્લોટ નં.: ૧૧-૧૨/૨,૩, જી.આઈ.ડી.સી., પાંડેસરા, સુરત- ૩૯૪ ૨૨૧(ગુજરાત)
ફોન નં. (૦૨૬૧) ૨૮૯૧૬૯૬

IS/ISO - 9001:2015, IS/ISO-14001:2015 & IS/ISO:45001:2018 Certified

Website : www.gpcb.gov.in

XGN website : http://gpcb.xgn.gujarat.gov.in

E-mail : ro-gpcb-sura@gujarat.gov.in

GST No. : 24SRTG00481F1DK

તપાસ માટે દાખલ થવાની સૂચના (નોટીસ)

નં : ૧૨૩૯૭

પાણી અધિનિયમ ૧૯૭૪ ની કલમ - ૨૩, હવા અધિનિયમ ની ૧૯૮૧ ની કલમ-૨૪ અને પર્યાવરણ (સુરક્ષા) અધિનિયમ - ૧૯૮૬ ની કલમ-૧૦ હેઠળ અમોને મળેલ સત્તાની રૂએ અમો નીચે સહી કરનાર અમોને જરૂરી લાગે તેની સહાય લઈને તમામ સમયે નીચેના હેતુઓ માટે આપની જગ્યામાં દાખલ થવાનો અને તપાસ કરવાનો અધિકાર ધરાવીએ છીએ.

- (૧) અમોને સોંપેલા રાજ્ય બોર્ડ/કેન્દ્ર સરકારનાં કાર્ય બજાવવાના હેતુ માટે,
- (૨) આવા કોઈ કાર્યો બજાવવાના છે કે કેમ અને તેમ હોય તો કઈ રીતે તે બજાવવાના છે અથવા આ અધિનિયમ અથવા તે હેઠળ કરેલા નિયમોની અથવા આ અધિનિયમ હેઠળ બજાવેલી કોઈ નોટીસની, કરેલા કોઈ હુકમની, આદેશની અથવા આપેલા કોઈ અધિકારપત્રની કોઈ જોગવાઈનું પાલન કરવામાં આવી રહ્યું છે કે પાલન કરવામાં આવ્યું છે કે કેમ તે નક્કી કરવાના હેતુ માટે,
- (૩) કોઈ સાઘન સામગ્રી, ઔદ્યોગિક પ્લાન્ટ, રેકર્ડ, રજીસ્ટર, દસ્તાવેજ અથવા અન્ય કોઈ મહત્વની વસ્તુની તપાસ કરવા અને તેની કસોટી કરવાના હેતુ માટે અથવા જે જગ્યામાં તેને એમ માનવાને કારણ હોય કે આ કાયદા કે તે હેઠળ કરેલા નિયમો મુજબ કોઈ ગુનો કરાવામાં આવ્યો છે અથવા થવાની તૈયારીમાં છે. તેવી કોઈ જગ્યાની ઝડતી લેવા માટે અને તેને એમ માનવાને કારણ હોય કે આ કાયદા કે તે હેઠળ કરેલા નિયમો હેઠળ શિક્ષાપાત્ર કોઈ ગુનો કર્યાનો પુરાવો, તેવા સાઘન સામગ્રી, ઔદ્યોગિક પ્લાન્ટ, રેકર્ડ, રજીસ્ટર, દસ્તાવેજ અથવા અન્ય મહત્વની વસ્તુ કબજે લેવા માટે અમે નીચે જણાવેલ સમયે દાખલ થઈએ છીએ

ઉદ્યોગ/કારખાનામાં દાખલ થવાનો સમય : ૧૦:૩૦ કલાક તા ૨૫ / ૧૧ / ૨૦૧૩
અમારી સાથે મુલાકાત સમયે સહાય માટે નીચેના અધિકારીશ્રી / કર્મચારીશ્રી હાજર રહેલા છે.

ક્રમ અધિકારીશ્રી / કર્મચારીશ્રી

(૧) C. C. Hindia

(૨)

(૩)

હોદ્દો

S. S. P.

પ્રતિશ્રી,

Aether Ind. Ltd
Plot No 8703.
Sachin GIOC
Surat.

સહી

અધિકારીનું નામ B. C. Dasu.

હોદ્દો A. G. G.

આ સૂચના (નોટીસ) મેળવનારની સહી :

Mujun Tulsav Nagan
(Ass. Engr.)

AETHER INDUSTRIES LIMITED
Plot No. 8203, Main Road No. 82,
Beside Shakti Distilleries Pvt. Ltd.,
Sachin GIOC, Sachin, Surat-394230



ગુજરાત પ્રદુષણ નિયંત્રણ બોર્ડ, સુરત

પ્રાદેશિક કચેરી, સુરત

Plot No. 11-12/2,3, G.I.D.C. Pandesara, Dist.: Surat 394221
Phone: (0261) 2891696.

E-mail ID (Regional Officer) : ro-gpcb-sura@gujarat.gov.in

E-mail ID (Unit Head) : uh-gpcb-sura@gujarat.gov.in

Website : http://gpcb.xn.gujarat.gov.in

આઈ.ડી નં: ૫૬૩૬૧ સ્થળ તપાસની નિરિદાણ નોંધ કેટેગરી/સ્કેલ: R / 1 / 1 Latitude/Longitude: - / -

શ્રીમાન,
આપશ્રીને જણાવવાનું કે, આજ તા. ૨૯/૧૧/૨૩ ના રોજ આપશ્રીના એકમની મુલાકાત લઈ સ્થળ તપાસ કરી ઇન્સ્પેક્શન કરેલ છે જે દરમ્યાન હવા/પાણી/જોખમી કચરા/... નમુના પૃથક્કરણ અર્થે એકત્રીત કરેલ છે.
આપશ્રીના એકમની મુલાકાત દરમ્યાન પર્યાવરણીય કાયદાઓ ના સંદર્ભે ગુટીઓ/ક્ષતિઓ જોવા/જાણવા મળેલ છે, જે આદારે પડતર અરજી સંદર્ભે નિર્ણય લેતા પહેલા અને/અથવા કાયદાકીય પગલા લેતા અને/અથવા પર્યાવરણ નુકશાન વળતર લેતા પહેલા કુદરતી ન્યાયના સિદ્ધાંત મુજબ આપશ્રીને સાંભળવાની તક પુરી પાડવાના હેતુથી અત્રે લેખિતમાં સ્થળસ્થિતિ/મુદ્દાઓ/સૂચનાઓ આપવામાં આવે છે.
આ પરત્વે આપશ્રી નીચે લેખિતમાં સ્વુચિત કરી શકો છો અથવા લેખિત ખુલાસો/સ્પષ્ટતા/પુર્તતા અહેવાલ કામકાજના દિન-૦૩ માં બોર્ડની વડી કચેરી, ગાંધીનગર તેમજ અત્રેની કચેરીને લેખિતમાં અથવા XGN પર અથવા Email થી સ્વુ કરવા નોટીસ આપવામાં આવે છે.

સ્થળ તપાસ દરમ્યાન જોવા મળેલ સ્થળ સ્થિતિ/ગુટીઓ/ક્ષતિઓ/ખામીઓ:

- ૧) સ્થાન ગોઠવણ સુવ્યવસ્થા: ભાગ્યે જ સ્વચ્છતા સુધારા માટે પ્રિન્ટાઉટ લાગુ પડેલ છે.
- ૨) સ્થાનની દરખાસ્ત સુધારા: સ્થાન સુવ્યવસ્થા/વૈ-રોગ પ્રમાણપત્ર પ્રિન્ટર સ્થળ સુવ્યવસ્થા પ્રિન્ટર થી ન સુધારા દર્શાવેલ પ્રિન્ટ આપવા.
- ૩) સ્થાન ગોઠવણ સુવ્યવસ્થા: ભાગ્યે જ સ્થાનની દરખાસ્ત સુધારા માટે પ્રિન્ટર સુધારા કરવા.
- ૪) સ્થાનની દરખાસ્ત સુધારા: સ્થાનની દરખાસ્ત સુધારા માટે પ્રિન્ટર સુધારા કરવા.
- ૫) સ્થાનની દરખાસ્ત સુધારા: સ્થાનની દરખાસ્ત સુધારા માટે પ્રિન્ટર સુધારા કરવા.
- ૬) સ્થાનની દરખાસ્ત સુધારા: સ્થાનની દરખાસ્ત સુધારા માટે પ્રિન્ટર સુધારા કરવા.

(Signature)
B. C. ...
(B.C.E.)

ગુ.પ્ર.નિ.બોર્ડના નામે અને વતી,
(અધિકારીઓના નામ,હોદ્દો,સહી):

મુલાકાત લેવામાં આવેલ હોય તેં એકમના પ્રતિનિધીની સ્વુચિત: (જે લાગુ પડે તેની સામે જ સહી કરવી)

(૧) આ સ્થળસ્થિતિ/સુચનાઓ સાથે હું, નીચે સહી કરનાર સંપૂર્ણ સહમત છું.	(૨)
(૨) જેમા દર્શાવેલ સ્થળસ્થિતિ/સુચનાઓમાંથી મુદ્દા નં.....સાથે હું નીચે સહી કરનાર અસહમત છું. જેના માટે મારી નીચે પ્રમાણેની સ્વુચિત છે.:	Ref: No. 16/ Plot No. 11/03 Sub: ...

એકમના પ્રતિનિધી / આ નોંધ મેળવનાર નામ, હોદ્દો અને સહી: *Mujan Joduv*

તા: ૨૯/૧૧/૨૩



Annexure - D
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GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

BY R.P.A.D.

CLOSURE DIRECTION UNDER SECTION 31(A) OF THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT - 1981 [HEREINAFTER REFERRED TO AS THE "AIR ACT"] AS AMENDED FROM TIME TO TIME

WHEREAS you are having an industrial plant namely M/s. Aether Industries Ltd. located at Plot No: 8203, Sachin GIDC, Sachin - 394230, Tal: Chorasi, Dist: Surat.

AND WHEREAS the Gujarat Pollution Control Board has granted Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWH-118971 & W-126157 which is valid up to 06/04/2028.

AND WHEREAS, during the inspection of your industrial plant on 30/11/2023 (10:45 AM) under Section-24 of the Air Act by the authorized officers of the Board with reference to Fire Incident occurred on dated: 29/11/2023 (@ 01:50 AM) following non-compliances was observed:

1. According to DISH authority report dated: 29/11/2023, Fire Incident occurred on 29/11/2023, @1:50 AM due to leakage of solvent (i.e. Tetra Hydro Furan, Toluene) & water mixer in solvent recovery tank located at ground floor of Plant No. 2, and 26 workers are injured.
2. Mr. Nayan Jadav (company representative) informed that, this incident happened around 1:30 AM & it might be due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.
3. THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm.
4. Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.
5. During rescue 07 dead bodies were found within the affected area.
6. During visit, VOC-398 PPM and NO₂-0.3 PPM is measured @50 meter away from incident site. Due to high VOC level other information could not be verified.
7. Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor.

AND WHEREAS Industry has submitted following representation/request on dated: 30/11/2023.

- a. To submit the compliance of DISH directions as suggested in DISH report and for the same required repairing / removing some equipment's, electric cable work in effected area, which required power.
- b. Unit having many solvent in storage tank and it need to be stored under Nitrogen which requires power in nitrogen generate plant.
- c. Unit having Ethylene Oxide in storage tank which has to be stored under chilled condition, required chilling plant, hence need Power to operate such plant.
- d. Certain dismantle work has to be carried out for safety purpose which required power.

UNDER THE CIRCUMSTANCES, I, **Dr. S. N. Agravat, Unit Head, Surat** of Gujarat Pollution Control Board, is directed to issue the directions under Section - 31A of The Air (Prevention and Control of Pollution) Act-1981 as under:

- I. This order shall be effective with **immediate effect**.

M/s. Aether Industries Ltd. (ID: 45359)

Page 1 of 2

Clean Gujarat Green Gujarat

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Page 26 of 27

- II. Unit shall comply with DISH direction and submit it's compliance report.
- III. To submit safety Audit report & HAZOP study report.
- IV. To collect & dispose generated wastewater, burned/partially burned material due to fire incident in a scientific manner and submit details.
- V. Unit shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT, as per the latest guideline of CPCB/Hon'ble NGT directions.
- VI. Unit shall not carry out any production activity without prior permission of the Board.

Pay **Rs. 50 Lakh** as Interim Environment Damage Compensation through your online XGN Portal.

Details regarding action taken in this regard shall be communicated on following mail especially with UTR No.

1) uh-gpcb-sura@gujarat.gov.in
2) nuh-gpcb-acc5@gujarat.gov.in
3) nuh-gpcb-sura@gujarat.gov.in

If the above directions are not complied, you are liable for prosecution under Section 37 of the Air (Prevention and Control of Pollution) Act-1981 which provides punishment with imprisonment for a term not less than one year and six months and may extend to six years and with fine.

If any person aggrieved by the aforesaid direction, you may file an appeal under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 before Appellate Authority (Forests & Environment Department, Government of Gujarat) within thirty days from the date of this order.

This order is issued after approval of competent authority.

For and on behalf of
Gujarat Pollution Control Board,


(Dr. S. N. Agravat)
Unit Head, Surat

NO: GPCB/CCA-SRT-2000(5)/ID_45359/

To:

M/s. Aether Industries Ltd,
Plot No: 8203, Sachin GIDC,
Sachin - 394230,
Tal: Chorasi, Dist: Surat.

Date:

Outward No: 759643, 30/11/2023

BEFORE THE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, AT PUNE

ORIGINAL APPLICATION NO. 220 OF 2023 (WZ)
EARLIER ORIGINAL APPLICATION NO. 718 OF 2023 (PB)

IN THE MATTER OF:

IN RE : NEWS ITEM APPEARING IN THE INDIAN EXPRESS
DT. 30-11-2023 TILED FIRE AT CHEMICAL PLANT
IN SURAT 24 WORKERS INJURED. ... APPLICANT

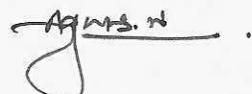
VERSUS

STATE OF GUJARAT THROUGH THE CHIEF SECRETARY & ORS...
... RESPONDENTS

AFFIDAVIT OF BEHALF OF RESPONDENT No. 2 -
GUJARAT POLLUTION CONTROL BOARD

I, Dr. S. N. Agravat, adult, having my office at Paryavaran Bhavan, Section 10-A, Gandhinagar, Gujarat do hereby solemnly affirm and state on oath as under:

1. I am presently working as Senior Environment Scientist with the Gujarat Pollution Control Board – respondent no. 2 in the present application. I have read the orders passed by this Hon'ble Tribunal on the suo-motu. I am conversant with the facts of the case having perused the record pertaining to the case available in my office. I am authorised to make the present affidavit on behalf of the State Pollution Control Board and am otherwise competent to swear the present affidavit.
2. This Hon'ble Tribunal has taken suo motu cognizance of an incident of fire which took place on 29.11.2023 in a chemical plant at Surat on the basis of reporting of such incident in the newspapers.



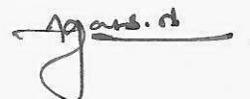
3. Initially a report had been filed by the Board concerning the incident. The Hon'ble Tribunal, after perusal of the report, has proceeded with the hearing of the case and ordered the Board to file an affidavit in reply, placing on record the relevant facts concerning the incident in so far as it relates to damage to the environment and enumerate the steps taken by the Board to mitigate the damage to the environment as also assess the compensation amount liable to be paid by the project proponent for the damage that has been or may have been caused to the local environment because of release of noxious chemicals.

INCIDENT OF FIRE

4. An incident of fire occurred in the production plant of the 4th respondent on 29.11.2023 at about 0145 hours. The 4th respondent is engaged *inter alia* engaged in the business of manufacturing synthetic chemicals [i.e. Active Pharmaceuticals Ingredients (API) & API Intermediate, Research and Development (R & D) Centre along with Pilot Plant].
5. The site where the fire started could not be immediately accessed so as to ascertain the cause of fire. However, the location of the fire suggested that it possibly was caused to due leakage of solvent - Tetra Hydro Furan.
6. The immediate reports, made available by the officials of the 4th respondent, indicated no casualty but confirmed sustaining of injury or sufferance of burn by about 26 workers.

IMMEDIATE ACTION FOLLOWING ACCIDENT

7. Officials from the Fire Department, Directorate of Industrial Safety and Health, Pollution Control Board and other statutory authorities reached the site of accident at different times. All authorities conjointly, together with the management of the 4th respondent, took necessary steps for



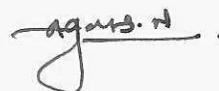
dousing the fire and controlling the damage caused by the accidental fire.

8. Instructions were given by the officials of the statutory authorities, including the Pollution Control Board, for safe and environment friendly disposal of the water used for dousing the fire and burnt waste generated during fire. Samples were collected of the contaminated water / waste water generated from fire fighting activity. Ambient air quality was also monitored by the officials of the Pollution Control Board.
9. Pending inquiry and investigation, a direction was issued by the Inspector under the Factories Act, 1948 on 29.11.2023 to close production activity in the entire industry. Similarly, a direction for closing the operations in the entire production area was issued by the Pollution Control Board on 30.11.2023 with certain additional directions:
 - (a) Unit shall comply with DISH direction and submit compliance report.
 - (b) To submit safety Audit report & HAZOP study report.
 - (c) To collect & dispose generated wastewater, burned/partially burned material due to fire incident in a scientific manner and submit details.
 - (d) Unit shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT, as per the latest guideline of CPCB/Hon'ble NGT directions.
 - (e) Unit shall not carry out any production activity without prior permission of the Board.

A copy of direction for closure of the unit issued by Pollution Control Board is annexed herewith and marked as **Annexure R-1**.

ACTION BY POLLUTION CONTROL BOARD

10. Pollution Control Board is concerned with impact of discharge of pollutions, even if such discharge is unintended and caused due to an accident, on the environment, including damage that may have been caused to the environment (air, water and soil).

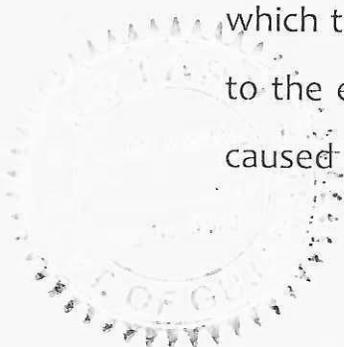


11. In the present case, the Pollution Control Board had issued instructions to the factory for disposal of the contaminated water / wastewater generated from fire-fighting activity and disposal of burnt waste. Same was complied by industry. Approximately 212.455 kilolitre of fire water from fire fighting water was collected and transferred to in house ETP for further treatment and was discharged into Common Effluent Treatment Plant (CETP) of M/s. Globe Enviro Care Limited (GECL) for further treatment and at Common Multi Effect Evaporator (MEE) of M/s. Detox India Pvt. Ltd., Ankleshwar through online manifest system for further treatment. The entire quantity of wastewater was disposed of in a safe and environment friendly manner by the factory. This was later confirmed during inspection on 26.12.2023.
12. Approximately 17.485 tonnes of burnt/partially burnt material was generated and sent to Common Treatment, Storage and Disposal Facility (TSDF) of M/s. Recycling Solution Pvt. Ltd. (RSPL) and to common Treatment, Storage and Disposal Facility (TSDF) of M/s. Bharuch Enviro Infrastructure Limited (BEIL), Ankleshwar.
13. During inspection on 29.11.2023 ambient air quality was monitored by the Pollution Control Board using wireless portable multi gas monitor (MultiRAE Lite) handy sampler for VOC and NO₂ parameters and presence of VOC was observed near production plant where fire occurred and 50 meters away from incident site as VOC – 398 ppm and NO_x – 0.3 ppm. At the time of inspection, the ambient air quality was reported to be ‘very poor’.

ENVIRONMENT DAMAGE & COMPENSATION

14. The material collected at the time of accident and thereafter, and now available on record, permitted a judicious conclusion that incident of fire which took place in the factory of the 4th respondent did cause damage to the environment. However, the exact nature and extent of damage caused by the fire could not be ascertained by the Board.

Agmt



15. Nevertheless, there is ample material available demonstrating that the air quality following the incident of blast and fire had deteriorated significantly in the area. I submit that compensation is a natural sequitur and necessary consequence to violation of environmental laws. Once it is prima facie established that a particular industrial unit has violated environmental norms or is responsible for causing damage to the environment, such unit stands liable, both in fact and in law, to paying compensation.
16. The amount of compensation is ordinarily calculated on the basis of formula prescribed by the Central Pollution Control Board. However, in the present case, as the extent of damage is unascertainable, the State Pollution Control Board has, relied upon one of the available parameter – ambient quality at the time of inspection and fire incident, and basis the results suggesting the air quality to be between ‘very poor’ and considering accident having causality, assessed Rs. 50 lacs as an interim environment damage compensation. The 4th respondent has deposited the entire amount of Rs. 50 lacs with the Board.

PRESENT STATUS

17. The Directorate of Industrial Safety and Health Department, Surat under the Factories Act, 1948 has lifted the prohibition on use of production area of Production Plant No. 4, 5 and 6 located in Building No. 3 and corresponding utility building, admin building, warehouse, DCS & MCC Panel building, ETP, ETP Tank Farm, EO Storage Tank Farm, IB Storage Tank Farm and all green coloured area shown in submitted site lay out plan vide letter no. DISH/ G-Akasmat/40(2)/file 127/2023/723, dated 22/12/2023 after satisfying itself about the structural stability and other safety issues. Basis the report of Directorate of Industrial Safety and Health which initially granted partial revocation of the shut down direction, the Board initially issued trial revocation order on 05.01.2024 with carry out 25% consented production quantity in area permitted by DISH authority. A copy of trial run revocation issued by Pollution Control Board is annexed herewith and marked as **Annexure R-2**.

Agencies of

18. Recently unit is visited on 29.02.2024 and found complying with the directions issued by Board. A copy of inspection report is annexed herewith and marked as **Annexure R-3**.

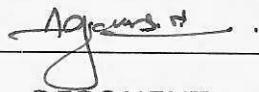
DETERMINATION OF FINAL COMPENSATION

19. The Hon'ble Tribunal has directed the Pollution Control Board to assess the final amount of damage compensation. Towards this end, the Board has instructed the 4th respondent to submit environment damage assessment report by getting a survey and study conducted by a reputed institute. In terms of the aforesaid instruction of the Board, the 4th respondent has engaged M/s. National Environmental Engineering Research Institute (NEERI) to conduct the damage caused to environment due to release of harmful pollutants into the environment as a result of the accident. The agency would collect the details of chemicals and solvents stored at the storage unit of the industry prior to the incident to assess both the nature and extent of chemicals and solvents that possibly got released in the air due to the accident and the accompanying fire. Basis the study, the expert agency would submit environmental damage cost assessment to the 4th respondent, who in turn would submit the report to the Board. The Board will thereafter determine the final amount of environmental damage compensation after according an opportunity of hearing to the project proponent and following the procedure as prescribed in law.

CONCLUSION

20. The Gujarat Pollution Control Board shall abide by any and all reasonable directions or orders that may be issued in this behalf by the Hon'ble Tribunal.



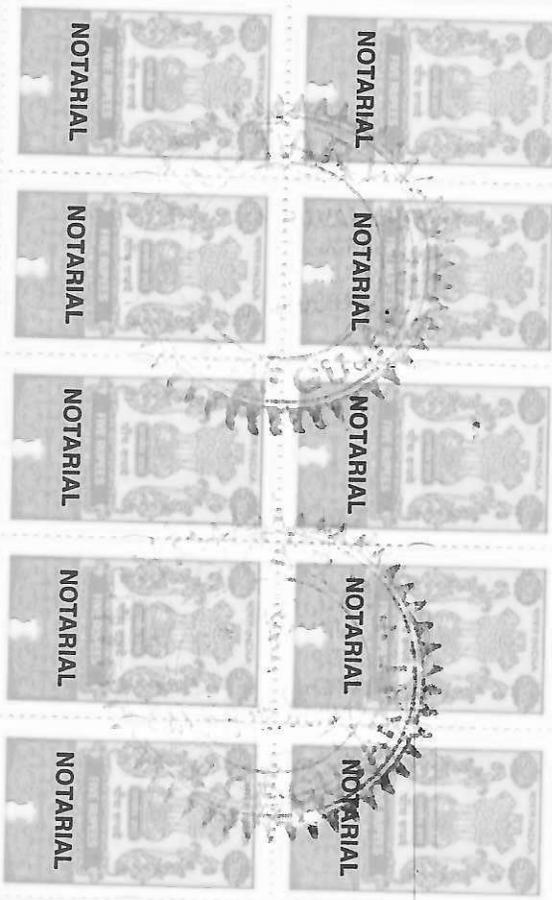

DEPONENT

VERIFICATION

Verified at Gandhinagar on this 14th day of March, 2024 that the contents of the above affidavit are true and correct, nothing stated therein is false and nothing material has been concealed therefrom.

Aggarwal
DEPONENT

Solemnly Affirmed
Before Me
[Signature]
(C. M. RAVAL)
NOTARY
Govt of Gujarat
14 MAR 2024



Entered in Notary Register at
Serial No. 144 Vol. No. I
[Signature]
C. M. RAVAL
NOTARY
Govt of Gujarat
14 MAR 2024





GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

BY R.P.A.D.

CLOSURE DIRECTION UNDER SECTION 31(A) OF THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT - 1981 [HEREINAFTER REFERRED TO AS THE "AIR ACT"] AS AMENDED FROM TIME TO TIME

WHEREAS you are having an industrial plant namely M/s. Aether Industries Ltd. located at Plot No: 8203, Sachin GIDC, Sachin - 394230, Tal: Chorasi, Dist: Surat.

AND WHEREAS the Gujarat Pollution Control Board has granted Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWH-118971 & W-126157 which is valid up to 06/04/2028.

AND WHEREAS, during the inspection of your industrial plant on 30/11/2023 (10:45 AM) under Section-24 of the Air Act by the authorized officers of the Board with reference to Fire Incident occurred on dated: 29/11/2023 (@ 01:50 AM) following non-compliances was observed:

1. According to DISH authority report dated: 29/11/2023, Fire Incident occurred on 29/11/2023, @1:50 AM due to leakage of solvent (i.e. Tetra Hydro Furan, Toluene) & water mixer in solvent recovery tank located at ground floor of Plant No. 2, and 26 workers are injured.
2. Mr. Nayan Jadav (company representative) informed that, this incident happened around 1:30 AM & it might be due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL. THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.
3. THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm.
4. Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.
5. During rescue 07 dead bodies were found within the affected area.
6. During visit, VOC-398 PPM and NO₂-0.3 PPM is measured @50 meter away from incident site. Due to high VOC level other information could not be verified.
7. Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor.

AND WHEREAS Industry has submitted following representation/request on dated: 30/11/2023.

- a. To submit the compliance of DISH directions as suggested in DISH report and for the same required repairing / removing some equipment's, electric cable work in effected area, which required power.
- b. Unit having many solvent in storage tank and it need to be stored under Nitrogen which requires power in nitrogen generate plant.
- c. Unit having Ethylene Oxide in storage tank which has to be stored under chilled condition, required chilling plant, hence need Power to operate such plant.
- d. Certain dismantle work has to be carried out for safety purpose which required power.

UNDER THE CIRCUMSTANCES, I, **Dr. S. N. Agravat, Unit Head, Surat** of Gujarat Pollution Control Board, is directed to issue the directions under Section – 31A of The Air (Prevention and Control of Pollution) Act-1981 as under:

- I. This order shall be effective with **immediate effect**.

M/s. Aether Industries Ltd. (ID: 45359)

Page 1 of 2

- II. Unit shall comply with DISH direction and submit it's compliance report.
- III. To submit safety Audit report & HAZOP study report.
- IV. To collect & dispose generated wastewater, burned/partially burned material due to fire incident in a scientific manner and submit details.
- V. Unit shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT, as per the latest guideline of CPCB/Hon'ble NGT directions.
- VI. Unit shall not carry out any production activity without prior permission of the Board.

Pay **Rs. 50 Lakh** as Interim Environment Damage Compensation through your online XGN Portal.

Details regarding action taken in this regard shall be communicated on following mail especially with UTR No.

1) uh-gpcb-sura@gujarat.gov.in
2) nuh-gpcb-acc5@gujarat.gov.in
3) nuh-gpcb-sura@gujarat.gov.in

If the above directions are not complied, you are liable for prosecution under Section 37 of the Air (Prevention and Control of Pollution) Act-1981 which provides punishment with imprisonment for a term not less than one year and six months and may extend to six years and with fine.

If any person aggrieved by the aforesaid direction, you may file an appeal under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 before Appellate Authority (Forests & Environment Department, Government of Gujarat) within thirty days from the date of this order.

This order is issued after approval of competent authority.

For and on behalf of
Gujarat Pollution Control Board,


(Dr. S. N. Agravat)
Unit Head, Surat

NO: GPCB/CCA-SRT-2000(5)/ID_45359/

To:

M/s. Aether Industries Ltd,
Plot No: 8203, Sachin GIDC,
Sachin - 394230,
Tal: Chorasi, Dist: Surat.

Date:

Outward No: 759643, 30/11/2023



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GUJARAT POLLUTION CONTROL BOARD

Annexure R-2

PARYAVARAN BHAVAN, SECTOR 10-A,

GANDHINAGAR - 382010,

(T) 079-23232152

BY RPAD

REVOCATION OF CLOSURE ORDER ISSUED UNDER SECTION 31-A OF THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT-1981. [HERE IN AFTER REFERRED TO AS THE "AIR ACT"] AS AMENDED FROM TIME TO TIME.

WHEREAS you are having an industrial plant namely M/s. Aether Industries Ltd. located at Plot No. 8203, GIDC Sachin - 394230, Tal: Chorasi, Dist: Surat.

AND WHEREAS the Gujarat Pollution Control Board has granted Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWHI- 118971& W-126157 which is valid up to 06/04/2028.

AND WHEREAS closure direction was issued under Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981, as amended from time to time vide letter No: GPCB/CCA-SRT-2000(5)/ID-45359/759643, dated 30/11/2023.

AND WHEREAS, during the inspection of your industrial plant on 26/12/2023 under Section-24 of the Air Act by the authorized officer of the Board, and observed that:

1. After fire incident unit has stopped entire production activity with immediate effect.
2. During inspection no any production activity is observed within the premises & visibly ambient air quality is found normal during visit.
3. Generated wastewater due to fire fighting is collected & finally wastewater (106.6 KI.) is discharged into the CETP of GECL & wastewater (105.855 KI.) is sent at Common MEE of Detox India Pvt. Ltd., Ankleshwar for the treatment through online manifest system.
4. Unit has obtained the revocation letter from the Director Industrial Safety And Health (DISH), Surat Region to restart the operation of the Plant No. 4, 5 & 6 which are placed in Building No. 3 and corresponding utility building, admin building, warehouse, DCS & MCC Panel building, ETP, ETP Tank Farm, EO Storage Tank Farm, IB Storage Tank Farm and all green coloured area shown in submitted site lay out plan vide letter no. DISH/ G-Akasmal/40(2)/file 127/2023/723, dated 22/12/2023.
5. As per the submitted details by industry, Total 10 Nos. of workers are died due to incident dated 29/11/2023 (During rescue 07 dead bodies were found within the affected area & 3 workers were died during the treatment in Hospital) & other 24 nos of workers are injured and admitted to hospital, As on today, out of them 17 Nos has been discharged from the hospital & remaining 7 Nos are receiving treatment at the hospital.
6. Unit has submitted details of paid compensation to all injured workers during the accident.
7. Unit has submitted the Safety Audit Report / HAZOP study report to the Department.

M/s. Aether Industries Ltd. (ID: 45359)

Page 1 of 2

Clean Gujarat Green Gujarat

Website : <https://gpcb.gujarat.gov.in>

Ag. Secy. of

AND WHEREAS you have submitted notarized undertaking for compliance assurance of closure direction on 25/12/2023 along with assurance to comply with the any directions given by the Hon'ble NGT in the matter of O.A. No. 718 of 2023.

AND WHEREAS you have submitted the Bank Guarantee (BG No: 0052NDLG0022524) of Rs. 2,50,000/- of ICICI Bank, valid up to 31/12/2024 for compliance assurance.

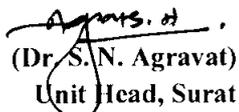
AND WHEREAS you have paid the 100% interim EDC amount of Rs. 50 Lakhs dated:01/12/2023 (Transaction ID-YICO2159087332) as imposed in closure direction.

Under the circumstances, I, **Dr. S. N. Agravat (Unit Head, Surat)**, Gujarat Pollution Control Board as directed **revoke the closure order** issued vide letter No. GPCB/CCA-SRT-2000(5)/ID-45359/759643 dated 30/11/2023 **for the three months** with following conditions:

- 1) You shall strictly comply with condition of CCA issued by Board.
- 2) You shall strictly comply with DISH Direction and submit it's compliance report.
- 3) You shall strictly comply with their undertaking dated: 25/12/2023.
- 4) You shall strictly comply with any direction passed by Hon'ble NGT in the matter of O.A. No. 718 of 2023.
- 5) You shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT.
- 6) **You shall carry out only 25% of consented production in the area/plant permitted by DISH authority in their direction dated: 22/12/2023.**

This order is issued after approval of competent authority.

For and on behalf of
Gujarat Pollution Control Board,


(Dr. S.N. Agravat)
Unit Head, Surat

NO: GPCB/CCA-SRT-2000(5)/ID: 45359/

Issued to:
M/s. Aether Industries Ltd.
Plot No. 8203, GIDC Sachin - 394230,
Tal: Chorasi, Dist: Surat.

Outward No: 780488, 05/01/2024

Inspection Report

Name & Address of Unit	Aether Industries Limited, (GPCB ID- 45359) Plot No. 8203, GIDC Sachin, Chorasi, Surat.
Reference:	Complaint letters received from different complainer through email, 1. Kamlesh Hindustani email dated 13/02/2024 (point no-1 to 13), 2. Amit Tiwari email dated 06/02/2024. (point no-14) (Copy of e-mails are attached herewith)
Date and Time of Visit:	29/02/2024 11:00 AM
Visited By:	B.C. Gosai, AEE, N.V. Dasandi, SO, Dr. J.D. Oza, RO.
Contacted Person:	Mr. Sonu Patel, EHS Head of Aether Industries Limited.

Detailed point wise compliance report are as under;

Sr.No	Complainer point	Status during visit
1	On 29/11/2023 at 2:00 AM in this Aether Industries Limited Company due to gross negligence of the company management there was a big blast in the chemical tank and thus a major fire accident and in this incident 40 employees were burnt and 7 of them died. Regarding this incident, we dated On 29/11/2023 the complaint was filed through email along with other issues as per IPC 304A in case of death against company directors.	-GPCB has issued closer direction u/s-31(A) of the Air Act-1981 dated-30/11/2023 for the reason stated therein. Subsequently unit has obtained trial run revocation after compliance and verification of closures points on dated-05/01/2024
2	It was reported through the news that the incident was due to the company management not heeding the GPCB's warning. Which suggests that the managers of this company may be habitually aware of chemical tank leakage, but the company managers have committed a serious criminal act of endangering the lives of workers and the environment by illegally using such tanks.	Contacted person inform that chemical storage tank bottom valve might have/had passed/ leakage, due to this stored chemical started flowing out of the storage tank, and lead to a vapour cloud, Due to some unknown ignition source it exploded and resulted in subsequent fire.
3	The complaint dated 29/11/23 also sought an inquiry into the following issues In this company, during the chemical process, the residue remaining in the reactor of the old bench production should be removed from the reactor before starting the charging for the purpose of distillation for the production of the new bench reactor. And due to the residue remaining in the reactor due to the work of distillation, it was necessary to pressurize the reactor more in the process of distillation? And the residues are not removed from the reactor.	The system in the place to start a new batch in reactor, and they are strictly following the system includes cleaning of reactor after every batch, time to time removal of residue after process. The DCS facility in the place to observe the all the parameter like batch size, temperature & pressure, also verified the parameters and batch size data from the DCS screen with the help of history to ensure that there were no deviations in reactor batch size, temperature and

	Batch size was increased? Also, due to some reason, the reactor overheated and burst into flames. And all the issues that this company had no system/method system to dispose of the residue left in the reactor during the process should be investigated in detail. That is what we demanded	pressure.
4	Where was the factory safety officer inspecting the chemical tank manufactured in this company and the inspection was done by him only on paper? That is gross negligence in his duty which should be departmental action against that factory safety officer and FIR should be filed against him also. We demanded.	This point is related to DISH department.
5	Here was no proper alarm system inside or outside the company or the alarm was not sounded. So, there was no system in the company where the employees inside the company or the people around outside the company could escape and save their lives after hearing the alarm. The lives of employees and people were deliberately put at risk. He demanded an investigation.	A large range of emergency siren systems is provided by the unit & check out it periodically.
6	A large quantity of raw materials and pods or other materials were illegally stored in the open space in the company in violation of the rules. It needs to be investigated.	The storage of raw materials and manufacturing materials in warehouses with approved valid factory licenses. (Factory License no-27926)
7	Environment clearance by the company is in open violation of EC provisions. Demanded a thorough investigation of each such issue.	Unit has complied EC conditions.
8	The factory inspector who last inspected the said company did not carry out any verification during his visit to the company. It is only a formality of the visit and the fact that the factory inspector along with the company management has endangered the lives of the workers and the people of the surrounding villages, should be humane, a departmental inquiry and necessary permission should be registered against the factory inspector.	This point is related to DISH department.
9	The incident of fire was caused due to gross negligence of the management of the company and it was caused by accident Due to the fire, the polluted smoke spread in the entire surrounding area and the entire surrounding environment became polluted	Unit has paid Environment Damage compensation (EDC) i.e. 50 Lakhs to GPCB. All the wastewater resulting from water used for fire-fighting contained foam is collected in the u/g RCC storage tank. The

	<p>with smoke and this polluted smoke entered the breath of the people in the surrounding area and the accident and injuries caused due to the negligence of the managers of this company. The polluting smoke spread by the fire caused serious permanent damage to the environment.</p> <p>Also, due to the negligence of the company managers, the water used for extinguishing the fire also became chemical in the company and without following the rules that the company managers had to follow for disposing of that chemical water, the chemical water was left directly in the rain water drainage line without any treatment. Information has been received.</p> <p>This chemical water released by the operators of this chemical company has seeped into the ground in the surrounding areas and caused serious damage to the environment by permanently polluting the soil and ground water.</p> <p>Also, due to the negligence of the managers of this chemical company, the accident and fire caused serious damage to the environment on the day of the incident</p>	<p>whole plant premises are PCC Paved so there is no soil contamination of premises. No wastewater was discharged outside of the unit premises.</p>
10	<p>On 29/11/2023 at 2.00 AM in the night of this company, the management of this company has completely violated the law and regulations and they have no regard for the law or law enforcement officers and were openly violating the environment</p> <p>The managers of this chemical company have caused serious damage to the environment and ecosystem by spreading serious pollution in the air, water, soil and ground water in the vicinity of the company and also causing serious damage to the health of the people in the surrounding area and compensation for all those losses.</p> <p>It is the full legal responsibility of the managers of this company to do so and their act is a criminal act.</p> <p>The government officials are bound by the</p>	<p>Unit has carried out ambient monitoring by authorized party and report submitted to Govt authority.</p> <p>All the wastewater resulting from water used for fire-fighting contained foam is collected in the u/g RCC storage tank. The whole plant premises are PCC Paved, so there is no soil contamination premises. No wastewater was discharged outside of the premises.</p> <p>Unit has paid Environment Damage compensation (EDC) i.e. 50 Lakhs to GPCB.</p>

	<p>legal duty to lodge a valid FIR against the management of this company.</p> <p>A legal FIR should be filed against the managers of this chemical company and a survey of the damage caused to the environment, ecology and people should be done and the recovery should be made from the company managers and compensation should be made to the people. It is good that we have filed against the company managers. Complained on 29/12/23.</p>	
11	<p>Since the construction of this chemical company is not in accordance with the legal rules, this incident deserves to be considered as fabricated and it is also necessary to prepare a report after legal investigation</p>	<p>This point is not related to GPCB.</p>
12	<p>As the process of production and storage and transportation in this chemical company is done illegally and in violation of the rules, this incident deserves to be believed to have been committed, it is also necessary to make a legal investigation and report</p>	<p>Stores all raw materials and manufacturing materials in warehouse and all production have valid license.</p>
13	<p>Investigation as per our complaint has not been done. Also, no inquiry report has been submitted by the appointed commission of inquiry and FIR under IPC section 304/A has not been filed against the company managers so that</p> <p>We present this legal complaint to the management of this chemical company and demand that :- Section 7.A(2)(a) and section- of the Factories Act 1948 against this 92 company and its managers and IPC sec 304A against all persons responsible including the Factory Safety Officer. 337,338, 285 286 287. to take legal action and file FIR 115 ,427</p>	<p>-GPCB has issued closer direction u/s- 31(A) of the Air Act-1981 dated- 30/11/2023 for the reason stated therein. Subsequently unit has obtained trial run revocation after compliance and verification of closures points on dated- 05/01/2024</p>
14	<p>For action against trading and selling of BIFENTHRIN ALCOHOL without permission of GPCB by Aether Industries LTD</p> <p>Aether industries LTD is doing Business of BIFENTHRIN ALCOHOL from surat since 2020</p> <p>Which cannot be traded without the permission of GPCB and MOEF</p> <p>And the business being exported by a big company of valsad, a big company of ankleshwar and bhiwandi, which is not allowed by this company</p>	<p>For the manufacturing of Bifenthrin Alcohol with approved CCA from GPCB. Product name : Bifenthrin alchol have CAS no - 76350-90-8</p> <p>Product Name in consent of GPCB : 2 methyl 3-phenylbenzyl alchol (synonyms name of Bifenthrin Alchol) have CAS No - 76350 -90-8.</p> <p>Unit has submitted letter regarding monopoly of their product name. Unit has requested that don't declare their product name (Copy attached herewith).</p>

Point wise compliances for issued closure order are as below:

1.	According to DISH authority report dated: 29/11/2023, fire incident occurred on 29/11/2023, @1:50 AM due to leakage of solvent (i.e. Tetra Hydro Furan, Toluene) & Water mixer in solvent recovery tank located at ground floor of plant no. 2 and 26 workers are injured. Mr. Nayan Jadav (company representative) informed that, this incident happened around 1:30 AM & it might be due to leakage of the gasket of THF (Tetra Hydro Furan) storage tank capacity 25 KL, THF leakage create vapour cloud after coming into contact with the air and took fire after that converted into blast.	After fire incident unit has stopped Entire Production activity with immediate effect. During visit unit is found in operation with 25 % capacity in Building No. 3 as per revocation conditions. Generated waste water due to firefighting is collected & finally waste water (106.6 KL) is discharged into the CETP of GECL & waste water (105.855 KL) is sent at Common MEE of Detox India Pvt. Ltd., Ankleshwar through online manifest system. Generated burnt /partially burnt material (8.310 MT) due to fire incident is sent to M/s. RSPL for suitable treatment. Unit has also disposed @9.175 MT burnt/partially burnt material at BEIL-Ankleshwar.
2.	THF (Tetra Hydro Furan) tank is located in tank farm area where might be this fire/blast affected plant number 02 machinery like recovery tank, pipeline and other machinery which is located opposite tank farm. Both plant i.e. tank farm and plant number 2 are affected hence source of fire/blast could not be verified.	Unit has obtained three months trial run revocation vide letter no. GPCB/CCA-SRT-2000(5)/ID-45359/780488,05/01/2024.
3.	During rescue 07 dead bodies were found within the affected area.	As per the submitted compensation details, Total 11 Nos of workers are died due to incident dated 29/11/2023 (During rescue 07 dead bodies were found within the affected area & 4 workers were died during the treatment in Hospital). Unit has submitted the interim Environment Damage Compensation (EDC) of Rs. 50,00,000/- to the Board Unit has uploaded details of paid Compensation to all injured workers.
4.	During visit, VOC-398 PPM and NO2 – 0.3 PPM is measured @50 meter away from incident site. Due to high VOC level other information could not be verified. Heavy dense smoke emission occurred at the time of fire incident and ambient air quality was very poor.	During visit ambient air quality found normal.
5.	You shall strictly comply with Condition of CCA issued by Board	Unit is complying the CCA conditions

6.	You shall strictly comply with DISH Direction and submit its compliance report	Unit is strictly complying DISH direction and not start production in block No 1 & 2.
7.	You shall strictly comply with their Undertaking dated 25/12/2023	Unit is manufacturing its product within 25 % of total granted permission, details of last three month production is attached herewith.
8.	You shall strictly comply with any direction passed by Hon'ble NGT in the matter of O.A. No-718 of 2023	Unit has submitted notarized undertaking to the board with assurance that they will comply with any direction passed by Hon'ble NGT in the matter of O.A. No-718 of 203.
9.	You shall carry out and submit the final Environmental damage Assessment report from reputed technical instate i.e. NEERI / IIT	Unit has appointed M/s. NEERI to conduct the study and calculate the EDC as per CPCB guidelines. Copy of the work order is enclosed.
10.	You shall carry out only 25% of consented production in the area / plant permitted by DISH authority in their direction dated 22/12/2023	Unit is manufacturing less than 25% production during last three month, month wise production details attached herewith.

Unit has valid CCA AWH-118971 up to 06/04/2028. During visit unit is found in operation with 25 % capacity in Building No. 3 as per revocation conditions. Waste water generation is A) Dilute stream w/w, is sent to CETP- GECL after primary treatment followed by SBT (B) Concentrated/High COD stream w/w, is sent to In house MEE & MVR with stripper and ATFD or sent to common MEE of Detxo India Pvt. Ltd or MEPPL, C) Low COD stream w/w, after treatment in the separate primary ETP & it is feed in to R.O. Plant. R.O. permeate is reused while RO reject w/w is sent to in house MEE and MVR or sent to common MEE of Detxo India Pvt. Ltd or MEPPL D). From Boiler/cooling blow down, is directly reused in washing & scrubber. Generated effluent is segregated as low COD (dilute) stream and high COD (concentrated) stream. Dilute stream wastewater is treated in primary treatment followed by SBT (Soil Bio Technology) treatment and treated effluent is sent to CETP of GECL, Sachin for further treatment through designated tanker. During visit provided ETP units are observed in operation. One treated waste water sample is collected from storage / holding tank (dilute stream), details are as per data sheet. Concentrated stream w/w is given primary treatment and fed into In house MEE & MVR with stripper and ATFD or sent to common MEE of Detxo India Pvt. Ltd or MEPPL. Unit has provided in house MEE (capacity 3 KL/hour – 3 calendria) and MVR with solvent stripper and ATFD. During inspection provided solvent stripper, MEE, MVR & ATFD are found in operation.

Unit has provided boilers 12 TPH and total five TFH (old two capacity 400 U, new two 600 U and one 1000 U). Natural gas is used as fuel. During visit all TFH-600 U (2 Nos) & 12 TPH boiler are found in operation & 4 TPH Boiler is removed and steam is acquired from common steam house located in the GIDC estate. Unit has provided two stage water scrubber followed by alkali scrubber as APCM, attached to Reactor (3-nos, separate set with each vessel as APCM). During visit one processes gas stack sample is collected (for HCL gas) from vent attached to MEP plant through water + alkali scrubber as an APCM, details are as per data sheet.

During visit Stock of hazardous waste details are as: ETP sludge-@ 20.49 MT, MEE salt @13.87 MT, Discarded drums - 56 Nos, distillation residue-@ 12.3 MT found stored at separate storage area.



Annexure - 7
GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

BY RPAD

REVOCATION OF CLOSURE ORDER ISSUED UNDER SECTION 31-A OF THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT-1981. [HERE IN AFTER REFERRED TO AS THE "AIR ACT"] AS AMENDED FROM TIME TO TIME.

WHEREAS you are having an industrial plant namely M/s. Aether Industries Ltd. located at Plot No. 8203, GIDC Sachin - 394230, Tal: Chorasi, Dist: Surat.

AND WHEREAS the Gujarat Pollution Control Board has granted Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWHI- 118971& W-126157 which is valid up to 06/04/2028.

AND WHEREAS closure direction was issued under Section 31-A of the Air (Prevention and Control of Pollution) Act, 1981, as amended from time to time vide letter No: GPCB/CCA-SRT-2000(5)/ID-45359/759643, dated 30/11/2023.

AND WHEREAS, during the inspection of your industrial plant on 26/12/2023 under Section-24 of the Air Act by the authorized officer of the Board, and observed that:

1. After fire incident unit has stopped entire production activity with immediate effect.
2. During inspection no any production activity is observed within the premises & visibly ambient air quality is found normal during visit.
3. Generated wastewater due to fire fighting is collected & finally wastewater (106.6 KI.) is discharged into the CETP of GECL & wastewater (105.855 KI.) is sent at Common MEE of Detox India Pvt. Ltd., Ankleshwar for the treatment through online manifest system.
4. Unit has obtained the revocation letter from the Director Industrial Safety And Health (DISH), Surat Region to restart the operation of the Plant No. 4, 5 & 6 which are placed in Building No. 3 and corresponding utility building, admin building, warehouse, DCS & MCC Panel building, ETP, ETP Tank Farm, EO Storage Tank Farm, IB Storage Tank Farm and all green coloured area shown in submitted site lay out plan vide letter no. DISH/ G-Akasmal/40(2)/file 127/2023/723, dated 22/12/2023.
5. As per the submitted details by industry, Total 10 Nos. of workers are died due to incident dated 29/11/2023 (During rescue 07 dead bodies were found within the affected area & 3 workers were died during the treatment in Hospital) & other 24 nos of workers are injured and admitted to hospital, As on today, out of them 17 Nos has been discharged from the hospital & remaining 7 Nos are receiving treatment at the hospital.
6. Unit has submitted details of paid compensation to all injured workers during the accident.
7. Unit has submitted the Safety Audit Report / HAZOP study report to the Department.

M/s. Aether Industries Ltd. (ID: 45359)

Page 1 of 2

Ag. Secy. of

AND WHEREAS you have submitted notarized undertaking for compliance assurance of closure direction on 25/12/2023 along with assurance to comply with the any directions given by the Hon'ble NGT in the matter of O.A. No. 718 of 2023.

AND WHEREAS you have submitted the Bank Guarantee (BG No: 0052NDLG0022524) of Rs. 2,50,000/- of ICICI Bank, valid up to 31/12/2024 for compliance assurance.

AND WHEREAS you have paid the 100% interim EDC amount of Rs. 50 Lakhs dated:01/12/2023 (Transaction ID-YICO2159087332) as imposed in closure direction.

Under the circumstances, I, **Dr. S. N. Agravat (Unit Head, Surat)**, Gujarat Pollution Control Board as directed **revoke the closure order** issued vide letter No. GPCB/CCA-SRT-2000(5)/ID-45359/759643 dated 30/11/2023 **for the three months** with following conditions:

- 1) You shall strictly comply with condition of CCA issued by Board.
- 2) You shall strictly comply with DISH Direction and submit it's compliance report.
- 3) You shall strictly comply with their undertaking dated: 25/12/2023.
- 4) You shall strictly comply with any direction passed by Hon'ble NGT in the matter of O.A. No. 718 of 2023.
- 5) You shall carry out and submit final environment damage assessment report from reputed technical institute i.e. NEERI/IIT.
- 6) **You shall carry out only 25% of consented production in the area/plant permitted by DISH authority in their direction dated: 22/12/2023.**

This order is issued after approval of competent authority.

For and on behalf of
Gujarat Pollution Control Board,


(Dr. S.N. Agravat)
Unit Head, Surat

NO: GPCB/CCA-SRT-2000(5)/ID: 45359/

Issued to:
M/s. Aether Industries Ltd.
Plot No. 8203, GIDC Sachin - 394230,
Tal: Chorasi, Dist: Surat.

Outward No: 780488, 05/01/2024

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Detailed visited report of M/s Aether Industries Ltd., (PCB ID: 45359).

Mon 13-05-2024 07:00 PM

To:Unit Head Surat (GoG-GPCB Dept.) <uh-gpcb-sura@gujarat.gov.in>; Next to Unit Head Surat (GoG-GPCB Dept.) <nuh-gpcb-sura@gujarat.gov.in>; gpcbuh22@gmail.com <gpcbuh22@gmail.com>;

📎 1 attachments (225 KB)

Aether Industries Limited, (GPCB ID- 45359).pdf;

Respected sir,

This unit is visited with reference H.O. reference. Detailed IR attached in PDF file.

Thanking You,

(Dr Jignasa Oza)
Regional Officer,
Gujarat Pollution Control Board
Plot No: 11 - 12/2, 3
GIDC PANDESARA,
SURAT-394221
Phone: (0261) 2891696,
E-mail : ro-gpcb-sura@gujarat.gov.in

M/s Aether Industries Ltd., (PCB ID: 45359)**Inspection Report**

Unit is visited along with B. A. Lad (APE) reference H.O. reference. Unit is engaged in manufacturing of products as per group nos A-M - 475MT/Month. (as per list uploaded in XGN). Unit has valid CCA AWH-118971 up to 06/04/2028. Unit has obtained 3-month trail revocation no: GPCB/CCA-SRT-2000(5)/ID:45359, 780488 dated: 05/01/2024. Unit has submitted request letter to the board for the starting of production activity as per Sr. No-2 and 3 Plant with 75% of total production activity. During visit unit is found in operation with 25 % capacity in Building No. 3 as per revocation conditions.

Source of water supply is Sachin Notified Area Authority. Waste water generation is 1. Dilute stream w/w is sent to CETP- GECL after primary treatment followed by SBT ,2. Concentrated/High COD stream w/w is treated in house MEE & MVR with stripper and ATFD or sent to common MEE of Detxo India Pvt. Ltd or MEPPL 3. Low COD stream w/w, after treatment in the separate primary ETP & it is feed in to R.O. Plant. R.O. permeate is reused while RO reject w/w is sent to in house MEE and MVR or sent to common MEE of Detxo India Pvt. Ltd or MEPPL, 4. From Boiler/cooling blow down, is directly reused in washing & scrubber. Generated effluent is segregated as low COD (dilute) stream and high COD (concentrated) stream. Dilute stream wastewater is treated in primary treatment followed by SBT (Soil Bio Technology) treatment and treated effluent is sent to CETP of GECL, Sachin for further treatment through designated tanker. During visit provided ETP units are observed in operation. One treated waste water sample is collected from storage / holding tank (dilute stream), details are as per data sheet. Concentrated stream w/w is given primary treatment and fed into In house MEE & MVR with stripper and ATFD or sent to common MEE of Detxo India Pvt. Ltd or MEPPL. Unit has provided in house MEE (capacity 3 KL/hour – 3 calendria) and MVR with solvent stripper and ATFD. During inspection provided solvent stripper, MEE, MVR & ATFD are found in operation.

Unit has provided boilers 12 TPH and total five TFH (old two capacity 400 U, new two 600 U and one 1000 U). Natural gas is used as fuel. During visit all TFH-600 U (2 Nos) & 12 TPH boiler are found in operation & 4 TPH Boiler is removed and steam is acquired from common steam house located in the GIDC estate. Unit has provided two stage water scrubber followed by alkali scrubber as APCM, attached to Reactor (3-nos, separate set with each vessel as APCM). During visit one processes gas stack sample is collected (for HCL gas) from vent attached to MEP plant through water + alkali scrubber as an APCM, details are as per data sheet.

During visit Stock of hazardous waste details are as: ETP sludge-@ 5.0 MT, MEE salt @6.5 MT, Discarded drums – 28 Nos, distillation residue-@ 5.0 MT found stored at separate storage area. Unit has disposed @ 14.925 MT MEE salt to BEIL Infrastructure Ltd. Dahej vide manifest no. 2526437 date: 09/05/2024. Unit has disposed @ 8.960 MT Distillation residue to RSPL, Ankleshwar vide manifest no. 2506504 date: 29/04/2024. A written instruction is given to the unit during visit which may please be referred.

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Unit has received following permission from the DISH:

Sr. No.	Revocation letter received from DISH		Revocation received with permission to restart operation of
	Letter No.	Date	
1	DISH Letter no. 7468/2023	22/12/2023	Plant No. 4, 5 & 6 which are placed in Building No. 3 and corresponding utility building, admin building' warehouse' DCS & MCC Panel building, ETP, ETP Tank Farm, EO Storage Tank Farm, IB Storage Tank Farm and all green-coloured area shown in submitted site lay out plan.
2	DISH Letter no. 2484/2024	08/04/2024	Plant No. 3 and Underground Tank Area.
3	DISH Letter no. 3119/2024	13/05/2024	Plant No. 1 and above ground storage tank area.

-Sd-

B. A. Lad
(APE)

-Sd-

C. C. Hadia
(SSA)

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Annexure - 9

**Environmental Damage Cost Assessment Due
to Pollution Caused on Account of Fire
incident on 29/11/2023 at M/s Aether Industries
Ltd., Sachin, Surat, Gujarat**

Sponsor

Aether Industries Ltd., Surat, Gujarat



Prepared by



**CSIR-National Environmental Engineering Research
Institute (CSIR-NEERI), Nagpur - 440 020 (INDIA)**

March 2024

FOREWORD

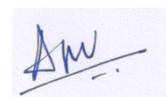
In order to restore the environment, protect ecosystems, and ensure the welfare of the receptor population, environmental damage by the industries or clusters of enterprises must be economically valued.

A fire accident occurred in the plant of Aether Industries Ltd., Sachin, Surat, Gujarat on November 29, 2023 at 1:50 AM. According to DISH authority report, the fire occurred due to leakages of solvents such as Tetra Hydro Furan (THF), Toluene and water mixer in solvent recovery tank located at ground floor of Plant No. 2. As per the directions from the regulatory agency, the industry officials approached CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) to carry out the task of environmental damage cost assessment due to the release of harmful pollutants into the environment as a result of fire accident.

The report details the methodology and work done on estimation of environmental damage cost. The cooperation rendered by all concerned is gratefully acknowledged.

March, 2024

Nagpur



DIRECTOR

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Contributors /Team

Principal Investigators

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CSIR-NEERI, Nagpur

Project Guide

Dr. Atul N. Vaidya
Director, CSIR-NEERI, Nagpur

Environmental Damage Cost Assessment Due to Pollution Caused on Account of Fire incident on 29/11/2023 at M/s Aether Industries Ltd., Sachin, Surat, Gujarat

1. Introduction

M/s Aether Industries Ltd., Sachin, Dist.-Surat, Gujarat has an industrial plant located at Plot No. 8203, Sachin - 394230, Taluka-Chorasi, Dist.-Surat, Gujarat. On November 29, 2023 at 1:50 AM, fire occurred in the plant of Aether Industries Ltd. According to DISH authority report, the fire occurred due to leakages of solvents such as Tetra Hydro Furan (THF), Toluene and water mixer in solvent recovery tank located at ground floor of Plant No. 2. As a result, 26 workers were injured and 7 persons were found dead. Out of 26 injured workers, 22 number of workers were discharged, 4 more workers however died during the treatment. Heavy dense smoke occurred during the time of the fire accident. The cause of fire and blast is mentioned as the creation of vapour cloud as a result of THF leakage that led to fire followed by the blast. THF tank is located in tank farm area, whereas Plant No. 2 where machinery like recovery tank, pipeline etc. is located opposite to tank farm.

GPCB officials made a visit to the plant after the fire accident on November 30, 2023 at 10.45 AM. The samples of the contaminated water /wastewater generated from fire-fighting activity were collected by GPCB. Ambient air quality was monitored and documented. During the visit, VOC level of 398 ppm and NO₂ of 0.3 ppm was observed at a location 50 meter away from the incident site. Closure directions under Section 31 (A) of the Air Prevention and Control of Pollution Act, 1981 were issued to the plants. An interim environmental damage compensation of Rs. 50,00,000/- (Rupees Fifty Lakhs) was imposed by Gujarat Pollution Control Board. The unit was asked not to carry out any production activity without prior permission of GPCB. However, the Aether Industry Ltd. represented/requested on November 30, 2023 on few issues, one of those is on carrying out the environmental damage cost assessment as per the guidelines of CPCB/ Hon'ble NGT.

Accordingly, the industry officials approached CSIR-NEERI to carry out the task of environmental damage cost assessment due to the release of harmful pollutants into the environment as a result of fire accident.

2. Methodology

An environmental damage cost assessment (EDCA) of the fire accident is proposed to be carried out considering the damage to the environment by the release of harmful chemicals in to the Air, Water and Soil media. CPCB Guideline document (Central Pollution Control Board - Ministry of Environment, Forest and Climate Change 2022) is followed for computing the EDCA. Stoichiometry analysis and box model are considered for taking into account the damages due to air pollution. For water pollution, the wastewater discharge along with the water quality in terms of physico-chemical characteristics is considered. The below section gives the details of pollution load estimation due to release of harmful pollutants owing to the accident.

3. Air Environment

The location map of the industry is given in **Fig. 1**. As informed, the following chemicals were involved during the accident (**Table 1**):

Table 1a. Quantity of chemicals involved during the accident.

S. No.	Equipment	Capacity (KL)	Chemical handled	Quantity before the incident	Leaked quantity in the accident
1	THF + Toluene + Water Mixture Tank	15	THF + Toluene+ Water	12000 Kg	10000 Kg
2	Pure THF Tank	25	THF	15599 Kg	12000 Kg
3	Distillation Reactor	10	THF + Toluene+ Product	7000 Kg	0 Kg

It was revealed by the industry authority that during the time of the accident, a mix of THF:Toluene:Water in Mixture Tank was in ratio of 65%:30%:5%. The total quantity leaked during the fire accident for THF and Toluene is therefore given as given in **Table 1b**.

Table 1b. Leaked quantity of chemicals during the accident.

S. No.	Equipment	Leaked quantity in the accident (Kg)
1	THF	18500
2	Toluene	3000

Ambient air quality (AAQ) monitoring was carried out by GPCB after the fire accident on November 30, 2023 at the following places:

Site 1 - Near Boiler House

Site 2 – Near Main Gate

The details of the AAQ results are provided via email and are reproduced here in **Table 2** for the sake of continuity.

Table 2. Ambient air quality on 30/11/2023 near Boiler house and Main gate.

S. No.	Parameter	Unit	Boiler house	Main gate	Limit*	Method of Measurement
1	Lead (Pb)	µg/m ³	0.68	0.38	1	CPCB guidelines for AAQM (Vol 1, NAAQMS/36/2012-13)
2	B(a)P	ng/m ³	ND	ND	1	Same as above
3	Arsenic (As)	ng/m ³	ND	ND	6	Same as above
4	Nickel (Ni)	ng/m ³	8.6	6.4	20	Same as above
5	Carbon monoxide (CO)	mg/m ³	1.8	1.4	4	Same as above
6	Benzene (C ₆ H ₆)	µg/m ³	ND	ND	5	IS 5182 (Part 11)
7	Ammonia (NH ₃)	µg/m ³	42.9	26.4	400	CPCB guidelines for AAQM (Vol 1, NAAQMS/36/2012-13)
8	Sulphur dioxide (SO ₂)	µg/m ³	46.2	38.4	80	IS 5182 (Part 2)
9	Nitrogen oxide (NO _x)	µg/m ³	49.2	52.6	80	IS 5182 (Part 6)
10	Ozone (O ₃)	µg/m ³	26.1	21.6	180	IS 5182 (Part 9)
11	Toluene	mg/m ³	1.08	0.594	377 [#]	SOP/INS/UN/161
12	Tetra Hydro Furan (THF)	mg/m ³	0.108	0.028	599 [#]	SOP/INS/UN/161

*As per National Ambient Air Quality Standards; [#] As per Factory Act rules, 1948
Sampling duration – 1 hr (as per the information provided by the industry), ND-Not detectable.

It can be seen that all the pollutants are below the respective CPCB standard. One argument may be that the lower pollutant concentrations the day after the event could be the result of dilution and dispersion. It is however to be noted that during the visit

of GPCB authorities on November 30, 2023, extremely high VOC levels of 398 ppm were observed at a distance of 50 meters. This shows that there were VOC leaks during the mishap, which must be taken into account while computing EDCA.

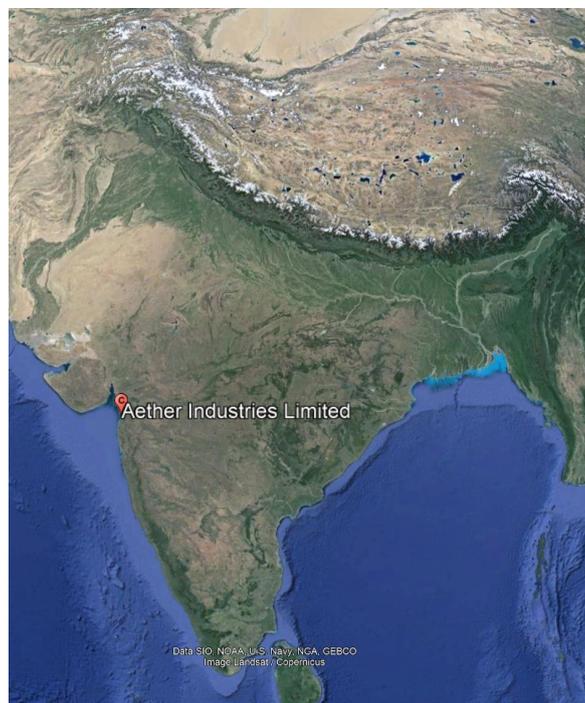


Fig. 1. Location map of Aether Industry Ltd.

EDCA is carried out considering the resultant emissions of above chemicals such as THF, Toluene, VOC and NO_x into the environment. EDCA for Air environment is carried out considering two approaches;

1. Stoichiometry analysis is carried out to understand the possible air pollutant's emissions from the combustion reaction.
2. Since VOC leakages are ascertained, a box model is assumed to estimate the VOC pollution load, which is further used for damage cost estimation. Further, since NO_x was also measured and observed to be substantially high, pollution load for NO_x is also considered for damage cost estimation. Next sections 2.1.1 and 2.1.2 shall describe both the approaches.

3.1. Air Environment: Part I - Stoichiometry Analysis

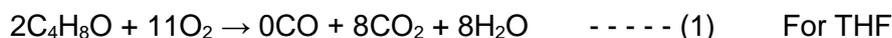
Stoichiometry analysis is carried out to estimate the nature and type of pollutants released from the combustion of chemicals used in the industry. The pollutants

considered in the stoichiometry analysis primarily are carbon monoxide (CO), carbon dioxide (CO₂). The secondary pollutants are not considered due to the complexity of involved chemical reactions. The details of pollutants released into the atmosphere after the chemical reaction of chemicals with oxygen is given in **Table 3**.

Table 3. Pollutants released into the atmosphere after chemical reaction with oxygen.

Chemicals	Chemical formula	Pollutants emitted after combustion	References
Tetra Hydro Furan (THF)	C ₄ H ₈ O	CO, CO ₂	• https://fscimage.fishersci.com/msds/23011.htm
Toluene	C ₇ H ₈ or C ₆ H ₅ CH ₃	CO, CO ₂	• https://www.pcs.com.sg/wp-content/uploads/2020/10/PCS95005_Toluene-SDS_Rev4.pdf • https://beta-static.fishersci.com/content/dam/fishersci/en_US/documents/programs/education/regulatory-documents/sds/chemicals/chemicals-t/S25611.pdf

The stoichiometry equation is given for both THF and Toluene in Equation (1) and (2).



The emission estimates of the pollutants are computed using the quantity released into the atmosphere. The estimated pollution load is given in **Table 4**.

Table 4. Air pollution load due to burning of chemicals.

No.	Chemical	Formula	Quantity (Kg)	CO ₂ (Kg)	CO (Kg)
1	THF	C ₄ H ₈ O	18500	45163.5	-
2	Toluene	C ₇ H ₈	1433	5474.3	2613.1
Total				50637.8	2613.1

As can be seen from **Table 4**, burning of THF results mainly into CO₂ whereas Toluene combustion releases CO and CO₂ emissions, which is taken into account while computing EDCA.

3.2. Air Environment: Part II - VOC Leakages

It is worth mentioning that consideration of stoichiometric combustion of chemicals involved considered only primary pollutants. As already mentioned above, GPCB officials during their visit on November 30, 2023 observed considerably high values of VOCs (398 ppm) and NO_x (0.3 ppm). The following details and presumptions are taken into account while estimating the VOC leakages:

- Since the GPCB officials observed high VOC level at a distance of 50m and could not visit inside the premises, it is assumed that the impact area is 50m x 50m. The influence, however, might be felt throughout a wider land region, which is not taken into account because there is no information or evidence.
- A box model is considered to compute the pollution load. Assuming the uniform distribution of pollutants in a box, an area of 2500 m² is considered as an impact area.
- The average mixing height is computed using NOAA HYSPLIT model (Draxler, 1998) for the study area on November 30, 2023 is given below:

Hrs	Mixing Height, m
0	49.7
3	226
6	1057
9	1452
12	159
15	118
18	163
24	119

- The model provides the estimation of mixing height at 3 hourly intervals. It is implausible to assume that the 398 ppm pollutant concentration level recorded during the measurement period occupied the entire mixing height. Consequently, it is assumed that this high VOC level is present at an average mixing height of 418 meters during the day.
- Volume of atmosphere, which occupies all the emissions can be considered as 50 m x 50 m x 418 m (1044906 m³). The total VOC load in this atmospheric volume is 1567.23 kg.

- Ideally excess load needs to be computed for environmental damage cost estimation of a pollutant, which is however not considered due to non-availability of VOC standards.
- The load of 1567.23 kg is therefore subtracted from Toluene load computed through Stoichiometry, which comes out to be 1433 Kg.
- Further, GPCB officials also observed high NO_x concentration as 0.3 ppm at a distance of 50m from the accident site. Considering the standard of 80 µg/m³, as specified by CPCB for 24-hour duration, the excess NO_x concentration is 484.54 µg/m³.
- The total NO_x load for an area of 2500 m² is 0.51 Kg.

3.3. Environmental Damages due to Release of Air Pollutants

To monetize the impacts due to release of harmful chemicals into the environment causing the emissions of pollutants, benefit transfer method or value transfer method is applied. The pollutants released in to the media are assigned the cost per pollutant damage. The method can be applied in the cases where the externalities are not available and conducting the separate study for its evaluation is time consuming and resource constraints also exist. The damage cost is available for European countries for the year 2015, published in 2017. The exchange rate of 1 Euro = Rs. 71.1956 for the year 2015 is considered (https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-inr.en.html). The cost is projected for 2023 using inflation rate for India (<https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=IN>) as given in **Table 5a**.

Table 5a. Inflation rates for India.

Year	Inflation rate
2016	4.95%
2017	3.33%
2018	3.94%
2019	3.73%
2020	6.62%
2021	5.13%
2022	6.70%
2023	5.46%*

Source: <https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=IN>

*<https://www.statista.com/statistics/271322/inflation-rate-in-india/>

For the Stoichiometry computations for pollution load estimation i.e. Part I of Air environment damage cost estimation, the environmental prices per pollutant damage are given in **Table 5b**.

The damage cost to take into account the VOC and NO_x emissions is computed using the box model. The details are given as below:

- The total VOC load in this atmospheric volume is 1567.23 kg.
- Ideally excess load needs to be computed for environmental damage cost estimation of a pollutant, which is however not considered due to non-availability of VOC standards.
- The load of 1567.23 kg is therefore subtracted from Toluene load computed through Stoichiometry, which comes out to be 1433 Kg.
- Further, GPCB officials also observed high NO_x concentration as 0.3 ppm at a distance of 50m from the accident site. Considering the standard of 80 µg/m³, as specified by CPCB for 24-hour duration, the excess NO_x concentration is 484.54 µg/m³.
- The total NO_x load for an area of 2500 m² is 0.51 Kg. The details are given in **Table 5c**.

Table 5b. Air Environment: Part I –Damage cost assessment using stoichiometry.

S. No.	Pollutants	Environmental Cost (Euro/kg)	Pollutant Load (Kg)	Total Damage (Rs.)
1	CO ₂	13.6	50637.8	691160
2	CO	8.6	2613.1	22359.9
Total Damage Cost				713519.9

Conversion rate 1 Euro = Rs. 71.1956 (in 2015)*

*Delft (2023); *https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-inr.en.html

Table 5c. Air Environment: Part II –Damage cost assessment using a box model.

S. No.	Parameter	Total load in excess (Kg)	Environment Price Euro/Kg*	Rs./Kg ⁺	Damage Cost (Rs.)
1	VOC	1567.23	2.73	286.6	449215.84
2	NO ₂	0.51	20.8	2183.9	1105.69
Total Damage Cost					450321.53

*in 2015, + in 2023 (computed using the method described in first para of section 2.1.3)

The total environmental damage cost due to air pollution caused by the fire explosion in the industry is **Rs. 1163850.9**.

4. Soil Environment

During the visit, it was observed that wastewater was not discharged into the soil. EDCA exercise is therefore not carried out for soil environment.

5. Water Environment

To determine the external costs of chemicals released into the water bodies as a result of a fire accident, the impacts can be evaluated by tracking the pollutant's discharge or contamination in the media (water) or the receptor where the damages are anticipated and economically evaluating the damages through the identified impacts. The major damage to water media occurs while using the water for firefighting. The details of the firefighting during the incident are given below:

- To control the fire, underground storage tank fire water was used. The water consumption from the fire water underground tank was 194 KL.
- Fire tender utilized their inbuilt storage tank to the extent of 20 KL. Any external water tanker for firefighting was not required.
- The total water consumption during firefighting was therefore 214 KL.
- The wastewater due to firefighting was disposed to CETP globe and detox CETP, the total quantity of which on December 1-2, 2023 was 106.6 KL and 105.855 KL, respectively.
- Generated wastewater during fire extinguishing was contained inside the premises of the plant.
- Samples of the wastewater were collected from the collection tank of ETP for water quality analysis.
- Physico-chemical analysis of water sample was carried out in terms of parameters such as Total dissolved Solids (TDS), Chemical Oxygen Demand (COD), Phenolic compounds and Ammonical Nitrogen as is given in **Table 6**.

Table 6. Water/Wastewater sample analysis.
(Collected on 29/11/2023 and 01/12/2023 from collection tank of ETP)

S.No	Parameter	Unit	Method	Range	Result	Std*
1	Temperature	⁰ C	IS: 3025 (Part 9) -1984, 2006	0-80 ⁰ C	29	-
2	pH	-	4500 H+B APHA Standard Methods 23 rd ed., 2017	1-14	7.25	-
3	Total Dissolved Solids	mg/l	Gravimetric Method (2540 C APHA Standard Method)	10-200000 mg/l	32452	2100
4	Ammonical Nitrogen	mg/l	Titrimetric Method (4500 NH ₃ B&C APHA Standard Method)	1-2000 mg/l	196	50
5	Chemical Oxygen Demand	mg/l	APHA (23 rd ed.) – 5220 B Open Reflux Method	5-50000 mg/l	4408	250
6	Phenolic Compounds	mg/l	4 Amino Antipyrine Method W/O Chloroform Extra	0.-50 mg/l	1.89	1
7	BOD	mg/l	3-Day BOD Test (IS : 3025 (Part 44), 1993	5-50000 mg/l	1470	30

* Surface water quality criteria for different uses (specified by CPCB, 1979 and the Bureau of Indian Standards, 1982. Red color indicates the pollutant concentration exceeds the respective standard.

It can be seen from **Table 6** that water quality at the ETP collection tank is highly polluted in terms of TDS, COD, BOD and other parameters. The chemicals lost during the accident are highly flammable and it was assumed that most of these chemicals would have been burnt during the fire. However, runoff of firefighting water sample collected at the tank reveals that the wastewater has significant concentration of organics in addition to various other monitored parameters. As evident, the exceedance of pollutants due to the fire extinguishing activity cannot be ruled out. The ETP although shall provide the water treatment for a significant quantity, the remaining untreated water pose a serious risk to the environment. Water may even percolate to the soil which may cause land degradation and may also contaminate groundwater. The industrial data sheet with reference to accidental release measures for THF (EC

No. 1907/2006 (REACH)), advocates to keep it away from drains, surface and ground water and retain contaminated washing water and dispose of it. Industry therefore should take appropriate steps so as not to cause damage to the nearby soil and water resources. The damage caused and the level of impact due to organic pollutant released is evaluated in monetary terms. The total compensation towards environmental damage due to the discharge of fire-fighting water contaminated with hazardous chemicals (approx. quantity 214 KL, COD 4408 mg/L and BOD 1470 mg/L) is calculated in **Table 7**.

5.1. Environmental Damages due to Contamination of Water Quality

The following points for the computation of environmental externality due to impact of fire accident on water quality were considered:

1. Only BOD and COD are considered for calculation purpose since metal concentrations are not available.
2. The excess concentration to CPCB threshold limit is subjected to computation.
3. For considering the total water discharge load, water consumption figures as provided by plant authorities are considered.
4. Fire water consumption from the fire water underground storage tank was 194KL.
5. Fire tender utilized their inbuilt storage tank to the extent of 20 KL. Any external water tanker for firefighting was not required. Total Water Consumption During Fire Fighting was therefore 214 KL.
6. Out of the above quantity, fire waste water disposal to CETP Globe was 106.6 KL and Fire waste water disposal to detox CETP was 105.855 KL.
7. The environmental prices are considered from Hernández-Sanch et al. (2010) for COD and BOD as 0.098 and 0.033 Euro/kg, which were estimated for 2004.
8. The environmental prices are inflated to 2023 and converted into Indian currency as Rs. 29.90 and Rs. 10.07/K for COD and BOD, respectively.
9. The damage cost due to water pollution is given in **Table 7**.
10. The damage cost for COD and BOD is computed as **Rs. 26608** and **Rs. 3103** respectively. The total damage cost for the water component is **Rs. 29711**.

Table 7. Damage cost due to water pollution.

S.No	Parameter	Conc. as X (mg/l)	Std* as X ₀	Excess Conc. X-X ₀ (mg/l)	Excess Conc. (Kg)	Environmental Price ⁺	Damage Cost (Rs.)
1	COD	4408	250	4158	889.8	0.098 ~ 29.90	26608
2	BOD	1470	30	1440	308.2	0.033 ~ 10.07	3103

⁺(Euro/Kg in 2004 ~ Rs./Kg in 2023)

6. Total Environmental Damage Cost Due to Air and Water Pollution

The total environmental damage cost due to air and water component is given in **Table**

8. The total damage cost is computed to be **Rs.1193561.7** i.e. **Rs. 11.94 lakhs.**

Table 8. Total environmental damage cost.

S. No.	Parameter	Damage Cost (Rs.)
1	Air (Part I)	713529.4
2	Air (Part II)	450321.5
3	Water	29710.8
Total		1193561.7

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