THE SKINNCURA

SERVICE CONTRACT

This Service Contract ("Contract") is entered into by and between **SKINNCURA** and **Swarrnim Startup and Innovation University**, Gandhinagar, Gujarat.

In consideration of the mutual promises and covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree to the following terms:

SERVICES

The Provider agrees to deliver the following services in a timely, efficient, and professional manner: ***"Formulation and evaluation of various herbal creams and Shampoos for our organization."***

TERMS AND CONDITIONS

This Contract shall commence on 9th **March 2023** and will remain in effect for five years. The contract may be extended for an additional period as mutually agreed by both parties. Should either party wish to terminate the contract, a written notice must be provided 90 days prior to the intended termination date.

PAYMENT

For each completed service, the Provider will submit an invoice as services are delivered. The Client agrees to make payment upon receipt of the invoice, after deducting any applicable TDS (Tax Deducted at Source).

For Skin Cura

For Swarrnim Startup and Innovation University

+91 87996 18966
www.theskinncura.com
206, Shivalik Shilp 2, Opp. ITC
Narmada, Keshavbaug, Ahmedbad

THE SKINNCURA

Date: 17.5.2023

To,

The Principal,

ArihantAyurvedic Medical College and Hospital

Swarrnim Startup and Innovation University

Gandhinagar Gujrat

Subject: Approval for Consultancy Project

Dear Sir/Madam

We are delighted to share the news with you that the consultancy project for which we were exchanging ideas in our earlier meetings has been permitted. The project will proceed as follows:

Project Title:

"Formulation and comparatively evaluation of herbal shampoo with marketed products"

Project Timeline:

The project is expected to be completed within the next 5 to 6months.

Payment:

A total amount payable after successful completion of Project will beRs. 12,00,000 plus GST will be made after raising invoice of the same after due TDS.

Should you require any further clarification regarding the project, please feel free to reach out to us. We are excited about this collaboration and look forward to a positive working experience with **Swarrnim Startup and Innovation University**.

Best Regards,

For Skin Cura

+91 87996 18966
www.theskinncura.com
206, Shivalik Shilp 2, Opp. ITC
Narmada, Keshavbaug, Ahmedbad

Ref.No.swarrnim/RO/SCR/2023/39 Date: 31.08.2023

To,

The Skinncura,

206, Shivalik Shilp 2, Narmada Keshavbaug,

Ahmedabad Gujarat.

Subject: - Submission of completion report regarding your shared problem.

Dear Sir/Madam

Please find enclosed herewith all data related to the problem shared by your prestigious company the details are as follows:

Project title: "**Formulation and comparatively evaluation of herbal shampoo with marketed products"**

Date of assigning problem: 17.05.2023

Date of completion: 29.08.2023

Name of person: Dr. Navin Banarse

We are thankful for providing the opportunity to support you and the profession. We will always ready to solve such problems with our best effort.

For any technical support please contact person who has completed the project, the name is Dr. Navin Banarse.

Thank you.

Patel

Registrar

Swarrnim Startup & Innovation University Bhoyan Rathod Gandhinagar

Research Project Report - Formulation and Comparative Evaluation of Herbal Shampoo with Marketed Products

Principal Investigator – Dr Navin Banarase

Designation- Professor, AAMC & RI

Title:

Formulation and Comparative Evaluation of Herbal Shampoo with Marketed Products

---

Introduction:

Shampoo was an essential cosmetic product used for cleansing the hair and scalp. It removed dirt, oil, and buildup from styling products, and depending on its formulation, it also conditioned and nourished the hair. Herbal shampoos, made from natural ingredients, had gained popularity due to their gentle nature and therapeutic properties. They were considered safer alternatives to synthetic shampoos, which might have contained harmful chemicals that could cause irritation or damage to the hair and scalp.

The purpose of this research was to formulate a herbal shampoo using natural ingredients such as sodium lauryl sulfate, oleic acid, triethanolamine, and other herbal extracts, and to compare its effectiveness with that of marketed products in terms of hair cleansing, moisturization, and overall user experience.

Aim:

- To formulate a herbal shampoo using natural ingredients.
- To compare the performance of the formulated herbal shampoo with commercially available shampoos in terms of cleaning efficiency, hair feel, moisturization, and user satisfaction.

Objectives:

1. To prepare an herbal shampoo formulation using the specified natural ingredients.
2. To evaluate the performance of the herbal shampoo in terms of cleaning ability, moisturizing effects, and sensory properties.
3. To compare the herbal shampoo with marketed shampoos through user feedback, hair texture, and cleansing efficiency.
4. To assess the safety and dermatological compatibility of the herbal shampoo.
5. To identify potential advantages and disadvantages of herbal shampoos over synthetic shampoos.

Methodology:

Ingredients for Herbal Shampoo:

- **Sodium Lauryl Sulphate (47.0 g):** A surfactant responsible for cleansing and foaming properties.
- **Oleic Acid (20.0 g):** A fatty acid that helped moisturize and soften the hair.
- **Triethanolamine (10.5 g):** Used to neutralize the acidity of the shampoo, balancing the pH.
- **Water (22.5 g):** Acted as a solvent.
- **Perfume (as per preference):** Added for fragrance.
- **Preservative (e.g., 0.1% Sodium Benzoate):** Prevented microbial growth and extended the shelf life.
- **Color (optional):** Added for aesthetic purposes.

Procedure for Herbal Shampoo Formulation:

1. **Preparation of the Mixture:**
    - Sodium Lauryl Sulphate (47.0 g) was weighed and placed in a clean, dry beaker.
    - Oleic Acid (20.0 g) and Water (22.5 g) were added into the beaker.
    - The mixture was gently heated in a water bath or on a heating mantle to 60°C while stirring continuously.
2. **Neutralization:**
    - Triethanolamine (10.5 g) was slowly added to the heated mixture with continuous stirring.

    - The temperature was maintained around 60°C during the addition to ensure proper emulsification.
3. **Cooling and Stabilization:**
    - The beaker was removed from heat once the mixture was well combined.
    - Stirring was continued until the shampoo cooled to approximately 35°C.
    - Perfume and preservative (e.g., Sodium Benzoate) were added to the cooled shampoo and stirred thoroughly to ensure uniform distribution.
    - A small amount of color, if desired, was added and mixed well.
4. **Observations:**
    - The consistency, appearance, and lathering properties of the prepared shampoo were assessed.
    - Ease of application, cleansing ability, and user satisfaction were noted.

Comparative Evaluation:

The prepared herbal shampoo was compared with two commercially available shampoos, chosen based on their market popularity and common usage. The following parameters were evaluated:

1. **Cleansing Ability:** Extent of dirt and oil removal from the hair.
2. **Moisturizing Effects:** Level of hydration provided post-wash.
3. **User Sensory Evaluation:** Fragrance, texture, ease of application, and overall feel during and after use.
4. **Lathering Properties:** Amount and quality of foam produced.
5. **Effect on Hair Texture:** Smoothness, softness, and shine of hair after use.
6. **Safety and Dermatological Compatibility:** Patch tests for potential irritation and allergic reactions.

Testing Methodology:

1. **Cleansing Test:** A small amount of the shampoo was applied to hair with natural oils, and the effectiveness in removing oils and dirt was assessed.
2. **Moisturization Test:** A moisture meter was used to measure moisture content of hair before and after washing.
3. **Lathering Test:** Foam produced by each shampoo was compared by noting volume and creaminess.
4. **Hair Texture Test:** Texture was rated on smoothness, softness, and shine post-use.

Discussion:

Role of Ingredients:

1. **Sodium Lauryl Sulphate:** Provided cleansing by breaking down oils and dirt. It was noted that excessive use might dry out the scalp.
2. **Oleic Acid:** Conditioned the hair, reducing dryness and maintaining moisture balance.
3. **Triethanolamine:** Adjusted the pH of the shampoo to ensure it was non-irritant.
4. **Water:** Served as a solvent and moisturized hair.
5. **Perfume:** Enhanced fragrance and user appeal.
6. **Preservative (Sodium Benzoate):** Prevented microbial contamination and maintained stability.

Lathering, Cleansing, and Conditioning Factors:

The shampoo's performance depended on surfactants, pH, and conditioning agents. Sodium Lauryl Sulphate offered effective cleansing, while Oleic Acid supported moisturization. The right balance between cleansing and conditioning determined overall effectiveness.

Comparison with Marketed Products:

Commercial shampoos often used aggressive surfactants and additives. The herbal shampoo, in contrast, used milder ingredients, resulting in a gentler but effective formulation. The comparison highlighted the ability of the herbal shampoo to meet standard cleaning criteria while offering additional moisturizing benefits.

Conclusion:

The herbal shampoo formulated using natural ingredients proved to be a viable alternative to synthetic shampoos. It provided effective cleansing while maintaining hair moisture, thereby offering enhanced nourishment and protection. The comparison with marketed shampoos allowed for assessment of trade-offs between natural and synthetic components in terms of satisfaction, effectiveness, and safety.

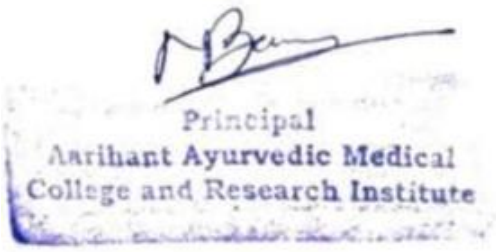
Results:

1. **Cleansing Ability:** The herbal shampoo performed comparably to marketed products in removing dirt and oil.
2. **Moisturizing Effect:** It left hair feeling softer and more hydrated than synthetic alternatives.
3. **Lathering Properties:** The herbal shampoo produced satisfactory foam, though slightly less than commercial products—typical of mild formulations.
4. **User Satisfaction:** Most users reported soft, smooth, and clean hair with a pleasant fragrance.
5. **Safety:** No adverse reactions were reported, and it was well-tolerated.

In conclusion, the herbal shampoo was a promising product for consumers seeking a natural and effective alternative to commercial shampoos. Further optimization and large-scale production could enhance its performance and market appeal.

Budget Utilization:

Heading	Details	Estimated Cost (INR)
Equipments	Blending & mixing equipment, viscosity meter, pH meter, stability chambers, spectrophotometer, tensile strength apparatus	420,000
Consumables	Herbal ingredients, chemicals, packaging materials, test kits, lab glassware	360,000
Travel	Field visits, market surveys, conferences/workshops	120,000
Miscellaneous	Lab & office supplies, data analysis software, communication costs, project documentation	300,000
Total		**1,200,000**



THE SKINNCURA

Date: 1.5.2023

To,

The Principal,

ArihantAyurvedic Medical College and Hospital

Swarrnim Startup and Innovation University

Gandhinagar Gujrat

Subject: Approval for Consultancy Project

Dear Sir/Madam

We are delighted to share the news with you that the consultancy project for which we were exchanging ideas in our earlier meetings has been permitted. The project will proceed as follows:

Project Title:

"Formulation and evaluation of herbal cream"

Project Timeline:

The project is expected to be completed within the next 4 to 5months.

Payment:

A total amount payable after successful completion of Project will beRs. 9,00,000 plus GST will be made after raising invoice of the same after due TDS.

Should you require any further clarification regarding the project, please feel free to reach out to us. We are excited about this collaboration and look forward to a positive working experience with **Swarrnim Startup and Innovation University**.

Best Regards,

For Skin Cura

+91 87996 18966
www.theskinncura.com
206, Shivalik Shilp 2, Opp. ITC
Narmada, Keshavbaug, Ahmedbad

Ref.No.swarrnim/RO/SCR/2023/40

Date: 05.08.2023

To,

The Skinncura.

206, Shivalik Shilp 2, Narmada Keshavbaug,

Ahmadabad Gujarat.

Subject: - Submission of completion report regarding your shared problem.

Dear Sir/Madam

Please find enclosed herewith all data related to the problem shared by your prestigious company the details are as follows:

Project title: **Formulation and evaluation of herbal cream**

Date of assigning problem: 01.05.2023

Date of completion: 02.08.2023

Name of person: Dr. Rakesh Salve

We are thankful for providing the opportunity to support you and the profession. We will always ready to solve such problems with our best effort.

For any technical support please contact person who has completed the project, the name is Dr. Rakesh Salve.

Thank you.

Registrar

Swarrnim Startup & Innovation University
Bhoyan Rathod Gandhinagar

Research Project Report - Formulation and Evaluation of Herbal Cream

Principal investigator - Dr Rakesh Salve

Designation- Professor , AAMC & RI

Title:

Formulation and Evaluation of Herbal Cream

Introduction:

Creams were among the most widely used topical formulations for skincare, primarily employed for moisturizing, protecting, and rejuvenating the skin. They were typically emulsions of oil and water, wherein active ingredients were dispersed in a semi-solid base, allowing for easy application and absorption. With the rising demand for natural, herbal, and skin-friendly cosmetic products, the development of creams incorporating herbal ingredients known for their beneficial effects on skin health became increasingly relevant.

This research focused on the formulation and evaluation of an herbal cream, prepared using natural ingredients. The cream was designed to nourish, hydrate, and protect the skin from environmental damage and aging. The formulation involved three phases: the water phase (Phase A), the oil phase (Phase B), and the cool-down phase (Phase C).

Aims:

- To formulate a herbal cream using natural ingredients that protected, moisturized, and rejuvenated the skin.
- To evaluate the effectiveness of the herbal cream in terms of hydration, texture, and safety for the skin.

Objectives:

1. To prepare the herbal cream.

2. To evaluate the cream's physical properties such as appearance, consistency, texture, and stability.
3. To assess the cream's hydrating, anti-aging, and skin-protective properties.
4. To ensure the formulation was non-toxic, non-irritant, and safe for skin application.
5. To analyze the sensory properties such as fragrance, color, and skin feel.

Methodology:

The formulation of the herbal cream was conducted in three phases as follows:

Phase A (Water Phase):

1. **Demineralized Water (72g):** Served as the base and primary solvent for other ingredients.
2. **Glycerin (4g):** Acted as a humectant that drew moisture into the skin.
3. **EDTA (0.5g):** Functioned as a preservative and stabilizer by chelating metal ions that could cause instability.

Phase B (Oil Phase):

1. **Butters (5g):** Natural butters such as shea, cocoa, or mango butter were used for nourishment and hydration.
2. **Oils (10g):** Natural oils like coconut, olive, or almond oil were included to moisturize and promote healing.
3. **Emulsifying Wax (6g):** Helped combine the water and oil phases into a stable emulsion.
4. **Stearic Acid (6g):** Used to thicken the cream and stabilize the emulsion.

Phase C (Cool Down Phase):

1. **Essential Oils (10 drops):** Oils such as lavender or tea tree were used for their soothing and anti-inflammatory properties.
2. **Fragrance (2–3 drops):** Added to impart a pleasant scent to the cream.
3. **Phenoxyethanol (2 drops):** Served as a preservative to prevent microbial growth.
4. **Color (2–3 drops):** Natural colorants like beet juice or turmeric were added for aesthetic purposes.

Preparation Procedure:

1. Ingredients of Phase A (demineralized water, glycerin, and EDTA) were heated in a double boiler to approximately 70°C.
2. Ingredients of Phase B (butters, oils, emulsifying wax, and stearic acid) were simultaneously heated in a separate double boiler to the same temperature.
3. Once both phases were melted, they were slowly combined in a sterile vessel.
4. The mixture was blended using an electric blender to ensure proper emulsification, with the consistency thickening during the process.
5. Once the temperature cooled to about 45°C, Phase C ingredients (essential oils, fragrance, preservative, and color) were added and mixed thoroughly.
6. The final cream was poured into sterilized containers for packaging.

Evaluation:

The formulated herbal cream underwent various tests to assess its properties and effectiveness:

1. Physical Evaluation:

- **Appearance:** The cream exhibited a smooth, homogeneous texture without separation.
- **Viscosity:** It had a moderate viscosity, allowing for easy application without being runny.
- **Color and Fragrance:** The cream possessed a natural, appealing color and fragrance.

2. Stability Testing:

- **Thermal Stability:** The cream was stored at different temperatures (room temperature, refrigerated, and elevated) over time to assess stability, with no phase separation observed.
- **Microbial Stability:** The cream was tested and showed no signs of microbial contamination after preservative incorporation.

3. Sensory Evaluation:

- **Skin Feel:** The cream was non-greasy and absorbed well into the skin.
- **Moisturization Effect:** Post-application, the skin felt hydrated and soft.
- **Irritation Testing:** Patch tests confirmed the cream was non-irritant and suitable for sensitive skin.

4. Effectiveness Evaluation:

- **Hydration:** Clinical tests measured a significant increase in skin moisture levels after application.
- **Anti-aging Benefits:** Continued use over time showed visible reduction in fine lines and wrinkles.
- **Skin Protection:** The cream improved skin barrier function and aided in protection against environmental stressors.

Discussion:

The formulation of the herbal cream involved the successful combination of water and oil phases into a stable emulsion. The inclusion of glycerin, oils, and butters contributed to its moisturizing and nourishing effects. Essential oils added therapeutic and aromatic value, while phenoxyethanol ensured long-term product safety.

Testing demonstrated that the herbal cream performed well in terms of physical attributes, stability, sensory appeal, and skin benefits. Its non-irritant nature and moisturizing effects made it a suitable product for regular skincare routines and potential commercial production.

Conclusion:

The formulated herbal cream showed great promise as a safe and effective skincare product. The natural ingredient base and optimized emulsification process resulted in a cream that provided hydration, improved skin texture, and offered protection from environmental damage. The product's positive results in physical evaluation, stability testing, and user trials indicated its potential for mass production and commercial application.

Results:

- **Physical Properties:** The cream had a smooth, homogeneous texture and excellent viscosity.
- **Stability:** The cream showed no separation and maintained effectiveness under various storage conditions.
- **Hydration:** Significant improvement in skin hydration was observed after two weeks of regular use.
- **Safety:** The cream was well-tolerated, non-irritant, and free from adverse effects during patch testing.

Based on these findings, the formulated herbal cream emerged as a promising solution for effective skin hydration and care.

Budget Breakdown:

Heading	Details	Estimated Cost (INR)
Equipments	Blending & mixing equipment, homogenizers, pH meters, stability chambers, viscosity devices	315,000
Consumables	Herbal ingredients, emulsifiers, preservatives, packaging materials, testing reagents	270,000
Travel	Field visits to suppliers, manufacturers, conferences, market surveys	90,000
Miscellaneous	Lab supplies, data analysis software, communication, documentation, printing costs	225,000
Total		**900,000**

HDFC BANK
We understand your world

M/S. SWARANIM STARTUP AND INNOVATION UNI
C/O SWARANIM STARTUP AND INNOVATION
35 WORLD BUSINESS HOUSE OPP PARIMAL
GARDEN ELLISBRIDGE
AHMEDABAD 380006
GUJARAT INDIA

JOINT HOLDERS :

Nomination : Not Registered

Account Branch : PALDI
Address : SHAIVAL COMPLEX,
OPP CHANDANBALA TOWERS
PALDI
City : AHMEDABAD 380 007
State : GUJARAT
Phone no. : 18002026161
OD Limit : 100,000.00
Currency : INR
Email : ANJALPATEL48@GMAIL.COM
Cust ID : 142383561
Account No : 50200050958071 Imperia
A/C Open Date : 12/08/2020
Account Status : Regular
RTGS/NEFT IFSC: HDFC0000299 MICR : 380240009
Branch Code : 299 Product Code : 1294

From : 01/06/2023 To : 30/06/2023

Statement of account

	TION PVT LTD -PALDI,AHMEDA-N160232495765 898					
09/06/23	NEFT DR-BARB0NOKHAB-SHARWAN RAM -PALDI,AHMEDA-N160232495759651	0000000000004013	09/06/23	54,700.00		3,321,949.65
09/06/23	NEFT DR-ICIC0000104-RELIANCE JIO INFOCOM M LTD-PALDI,AHMEDA-N160232495761980	0000000000003952	09/06/23	10,000.00		3,311,949.65
09/06/23	NEFT - ICIC0001826 - C72367090623132517 - - 282601000299 - SACHIN PANDYA	N160232496078994	09/06/23	30,000.00		3,281,949.65
09/06/23	NEFT RETURN-BENEFICIARY NAME DIFFERES-SACHIN PANDYA-ICICP23160026075	N160232496078994	09/06/23		30,000.00	3,311,949.65
09/06/23	NEFT CR-YESB0000001-EASEBUZZ PVT LTD NODAL A/C-SWARANIM STARTUP AND INNOVATION-YESB31605578548	0YESB31605578548	09/06/23		2,500.00	3,314,449.65
09/06/23	FT - HDFC000000X - C79048090623183326 - - 50100596191272 - LALARAM RATHOR	0000000388043445	09/06/23	100,000.00		3,214,449.65
09/06/23	NEFT - COSB0000056 - C74570090623183623 - - 056100106682 - PORWAL TRAVELS	N160232497110927	09/06/23	105,092.00		3,109,357.65
10/06/23	UPI-SACHIN GHOTI-SACHINLABANA89711@OKICICI-BARB0SAJJAN-316153690503-UPI	0000316153690503	10/06/23		650.00	3,110,007.65
12/06/23	CHQ PAID-MICR CTS-MU-DASHRATHBHAI A PATE	0000000000003572	12/06/23	18,200.00		3,091,807.65
12/06/23	EDC RENTAL JUN23 ANA197	000000000000000	12/06/23	767.00		3,091,040.65
12/06/23	50200003503360-TPT-PARAS MLT-KHEDUT SAHAY KENDRA	0000000150367838	12/06/23		500.00	3,091,540.65
12/06/23	IB FUNDS TRANSFER CR-50200050955507 -SWARRNIM SCHOOL OF BUSINESS	IB12141800283780	12/06/23		3,500,000.00	6,591,540.65
12/06/23	NEFT CR-HDFC0000299-THE SKIN CURA - SWARANIM STARTUP AND INNOVATION UNIVERSITY	0000000000000153	12/06/23		900,000.00	7,491,540.65
12/06/23	NEFT DR-AUBL0002147-NEVI AUTO PURE FUEL-PALDI,AHMEDA-N163232499173719	0000000000004018	12/06/23	30,000.00		7,461,540.65
12/06/23	FT - DR - 50100156655831 - KULDEEP SINGH	0000000000004019	12/06/23	40,000.00		7,421,540.65
12/06/23	NEFT DR-UTIB0000032-GAURAV SONI-PALDI,AHMEDA-N163232499157155	0000000000003844	12/06/23	10,000.00		7,411,540.65

HDFC BANK LIMITED

*Closing balance includes funds earmarked for hold and uncleared funds

Contents of this statement will be considered correct if no error is reported within 30 days of receipt of statement.The address on this statement is that on record with the Bank as at the day of requesting this statement.

State account branch GSTN:24AAACH2702H1Z6

HDFC Bank GSTIN number details are available at https://www.hdfcbank.com/personal/making-payments/online-tax-payment/goods-and-service-tax.

Registered Office Address: HDFC Bank House,Senapati Bapat Marg,Lower Parel,Mumbai 400013

HDFC BANK
We understand your world

M S SWARANIM STARTUP AND INNOVATION UNI
C O SWARANIM STARTUP AND INNOVATION
35 WORLD BUSINESS HOUSE OPP PARIMAL
GARDEN ELLISBRIDGE
AHMEDABAD 380006
GUJARAT INDIA

JOINT HOLDERS :

Nomination : Not Registered

Account Branch : PALDI
Address : SHAIVAL COMPLEX,
OPP CHANDANBALA TOWERS
PALDI
City : AHMEDABAD 380 007
State : GUJARAT
Phone no. : 18002026161
OD Limit : 100,000.00
Currency : INR
Email : ANJALPATEL48@GMAIL.COM
Cust ID : 142383561
Account No : 50200050958071 Imperia
A/C Open Date : 12/08/2020
Account Status : Regular
RTGS/NEFT IFSC: HDFC0000299 MICR : 380240009
Branch Code : 299 Product Code : 1294

From : 01/08/2023 To : 31/08/2023

Statement of account

28/08/23	NEFT DR-MSNU0000044-ANISH DINESHBHAI PAT EL-PALDI,AHMEDA-N240232612882864	0000000000004684	28/08/23	5,736.00		1,402,141.77
28/08/23	NEFT DR-SBIN0010940-S R CORPORATION-PAL DI,AHMEDA-N240232612866881	0000000000004679	28/08/23	16,000.00		1,386,141.77
28/08/23	NEFT DR-CBIN0280547-HEMAL JAY MODI-PALDI ,AHMEDA-N240232612875487	0000000000004689	28/08/23	55,172.00		1,330,969.77
28/08/23	NEFT DR-MSNU0000044-ANISH DINESHBHAI PAT EL-PALDI,AHMEDA-N240232612892828	0000000000004683	28/08/23	4,235.00		1,326,734.77
28/08/23	NEFT DR-BMCB0000037-M S PAREKH AND SONS-PALDI,AHMEDA-N240232612889442	0000000000004686	28/08/23	39,020.00		1,287,714.77
28/08/23	UPI-JAMALKHAN NIZAMKHAN -JAMALKHANLODIN@ OKSBI-SBIN0060092-324052433091-PROVISION AL DEGREE	0000324052433091	28/08/23		500.00	1,288,214.77
28/08/23	FT - DR - 50100547468458 - VIJAYANT KUMA R	0000000000004692	28/08/23	38,504.00		1,249,710.77
28/08/23	FT - DR - 50100648453139 - ARCHANA VIJAY VARGIYA	0000000000004343	28/08/23	37,715.00		1,211,995.77
28/08/23	FT - HDFC000000X - C74654280823174130 - - 18411000008343 – RAKESH SALVE	0000000433712177	28/08/23	300,000.00		911,995.77
28/08/23	NEFT - UBIN0549142 - C77394280823174302 - - 491402010022879 - PUNIT SOHANLAL SH ARMA	N240232613405115	28/08/23	50,000.00		861,995.77
28/08/23	NEFT DR-CNRB0002688-ANKITA MAZUMDAR-TRIM ANDIR AD-N240232613334408	0000000000004695	28/08/23	8,000.00		853,995.77
28/08/23	NEFT DR-CNRB0002688-ANKITA MAZUMDAR-TRIM ANDIR AD-N240232613331809	0000000000004696	28/08/23	8,000.00		845,995.77
28/08/23	NEFT DR-AUBL0002147-NEVI AUTO PURE FUEL-TRIMANDIR AD-N240232613343787	0000000000004693	28/08/23	25,000.00		820,995.77
28/08/23	NEFT CR-YESB0000001-EASEBUZZ PVT LTD NOD AL A/C-SWARANIM STARTUP AND INNOVATION-Y	0YESB32406913259	28/08/23		1,000.00	821,995.77

HDFC BANK LIMITED

*Closing balance includes funds earmarked for hold and uncleared funds

Contents of this statement will be considered correct if no error is reported within 30 days of receipt of statement.The address on this statement is that on record with the Bank as at the day of requesting this statement.

State account branch GSTN:24AAACH2702H1Z6

HDFC Bank GSTIN number details are available at https://www.hdfcbank.com/personal/making-payments/online-tax-payment/goods-and-service-tax.

Registered Office Address: HDFC Bank House,Senapati Bapat Marg,Lower Parel,Mumbai 400013

HDFC BANK
We understand your world

M S SWARANIM STARTUP AND INNOVATION UNI
C/O SWARANIM STARTUP AND INNOVATION
35 WORLD BUSINESS HOUSE OPP PARIMAL
GARDEN ELLISBRIDGE
AHMEDABAD 380006
GUJARAT INDIA

JOINT HOLDERS :

Nomination : Not Registered

Account Branch : PALDI
Address : SHAIVAL COMPLEX,
OPP CHANDANBALA TOWERS
PALDI
City : AHMEDABAD 380 007
State : GUJARAT
Phone no. : 18002026161
OD Limit : 100,000.00
Currency : INR
Email : ANJALPATEL48@GMAIL.COM
Cust ID : 142383561
Account No : 50200050958071 Imperia
A/C Open Date : 12/08/2020
Account Status : Regular
RTGS/NEFT IFSC: HDFC0000299 MICR : 380240009
Branch Code : 299 Product Code : 1294

From : 01/09/2023 To : 30/09/2023

Statement of account

08/09/23	NEFT RETURN-ANY OTHER REASONS-4914020100 22879-UBINJ23251244563	N251232633839519	08/09/23		50,000.00	609,899.77
09/09/23	NEFT - UBIN0549142 - C74098090923114212 - - 491402010022879 - PUNIT SOHANLAL SH ARMA	N252232634884784	09/09/23	50,000.00		559,899.77
09/09/23	UPI-SUMITRABEN CHAUHAN-CHAUHAN30SUMITRA@ OKAXIS-KARB0000021-325283928923-UPI	0000325283928923	09/09/23		10,000.00	569,899.77
09/09/23	NEFT - AMCB0660002 - C72872090923161000 - - 066002311000048 - ASHOK ENTERPRISE	N252232635134166	09/09/23	38,700.00		531,199.77
10/09/23	EDC RENTAL SEP23 ANA197	000000000000000	10/09/23	767.00		530,432.77
11/09/23	CHQ PAID-MICR CTS-MU-GP STEEL TRADE	0000000000004712	11/09/23	332,359.00		198,073.77
11/09/23	CHQ PAID-MICR CTS-MU-CHAMPALAL LADHAJI G	0000000000004713	11/09/23	25,007.00		173,066.77
11/09/23	SURESH - CHQ PAID - CHANDLODIYA	0000000000004707	11/09/23	1,050.00		172,016.77
11/09/23	IB FUNDS TRANSFER CR-50200050973965 -SW ARRNIM INSTITUTE OF TECHNOLOGY	IB11114442858119	11/09/23		600,000.00	772,016.77
11/09/23	NEFT - UBIN0549142 - C78409080923172437 - - 491402010066845 – RAKESH SAL VE	N251232633866845	11/09/23	309,365.00		462,651.77
11/09/23	SALARY FROM SWARANIM STARTUP AND INNOVAT DR - 02992990000043 - PALDI SALARY TRAN SITORY A C	0000000000004585	11/09/23	125,982.00		336,669.77
11/09/23	UPI-SATISHKUMAR AMBALAL -SATISHPATEL1547 7@OKAXIS-BARB0DBSPIP-325477706646-UPI	0000325477706646	11/09/23		300.00	336,969.77
11/09/23	NEFT CR-YESB0000001-EASEBUZZ PVT LTD NOD AL A/C-SWARANIM STARTUP AND INNOVATION-Y ESB32544595816	0YESB32544595816	11/09/23		500.00	337,469.77
11/09/23	NEFT - ICIC0000067 - C79064110923173757 - - 006705004696 - BHUMI ELECTRICALS	N254232637377232	11/09/23	2,650.00		334,819.77
11/09/23	NEFT RETURN-ACCOUNT DOES NOT EXIST-PINTU BHAI ASHOKBHAI MAKWANA-BARBJ23254701396	N254232637773238	11/09/23		6,972.00	341,791.77
11/09/23	NEFT RETURN-ACCOUNT DOES NOT EXIST-PANCH	N254232637773077	11/09/23		19,620.00	361,411.77

HDFC BANK LIMITED
*Closing balance includes funds earmarked for hold and uncleared funds
Contents of this statement will be considered correct if no error is reported within 30 days of receipt of statement.The address on this statement is that on record with the Bank as at the day of requesting this statement.
State account branch GSTN:24AAACH2702H1Z6
HDFC Bank GSTIN number details are available at https://www.hdfcbank.com/personal/making-payments/online-tax-payment/goods-and-service-tax.
Registered Office Address: HDFC Bank House,Senapati Bapat Marg,Lower Parel,Mumbai 400013

To, **Gpcb Id**: 10653
Industry Name: Bavla Eco Project Ltd

Plot No.: 1440 / P,C/O : BHARAT RICE MILL,OPP: TRIMURTI HOSPITAL,N.H.NO 8,Town:BAVLA,Pincode:382220

Tal: Bavla Dist:ABD(R-Sanand)
Phone: 9426068047

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Bavla Eco Project Ltd** (**10653**) situated at **1440 / P,C/O : BHARAT RICE MILL,OPP: TRIMURTI HOSPITAL,N.H.NO 8,Town:BAVLA,Pincode:382220** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 11536
Industry Name: Gujarat Vepari Maha Mandal Sahakari Audogic Vasahat Ltd - Cetp

Plot No.: Plot No: Phase No: ,ODHAV,,Town:AHMEDABAD,Pincode:382415

Tal: Daskroi Dist:Ahmedabad-Vatva
Phone: 9427614921

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Gujarat Vepari Maha Mandal Sahakari Audogic Vasahat Ltd - Cetp** (**11536**) situated at **Plot No: Phase No: ,ODHAV,,Town:AHMEDABAD,Pincode:382415** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 14438
Industry Name: The Green Environment Services Co.Op.Society Ltd (Cetp)

Plot No.: Plot No: 244 - 251 ,Phase No: II,-,Town:AHMEDABAD,Pincode:382445

Tal: Ahmedabad-Vatva Dist:Ahmedabad-Vatva

Phone: 8141907069

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **The Green Environment Services Co.Op.Society Ltd (Cetp)** (**14438**) situated at **Plot No: 244 - 251 ,Phase No: II,-,Town:AHMEDABAD,Pincode:382445** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 16770
Industry Name: Gujarat Ambuja Exports Ltd (S.K.)

Plot No.: 1,,BIO CHEMICAL DIVISION,VRINDAVAN ROAD,Town:PO-DALPUR,Pincode:383120

Tal: Prantij Dist:SabarKantha
Phone: 9825300989

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Gujarat Ambuja Exports Ltd (S.K.)** (**16770**) situated at **1,,BIO CHEMICAL DIVISION,VRINDAVAN ROAD,Town:PO-DALPUR,Pincode:383120** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 24521
Industry Name: Srf Limited

Plot No.: D-II/I ,Dahej ,Dahej ,Town:Dahej,Pincode:392130

Tal: Vagra Dist:Bharuch

Phone: 7069116447

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Srf Limited** (**24521**) situated at **D-II/I ,Dahej ,Dahej ,Town:Dahej,Pincode:392130** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 32515
Industry Name: Samvedna Bmw Incinerator

Plot No.: 217/1,CHANDRAPURA INDUSTRIAL ESTATE,tal: halol, dist: panchmahal,Town:CHANDRAPURA,Pincode:389350

Tal: Halol Dist:Panchmahals

Phone: 9227125467

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Samvedna Bmw Incinerator** (**32515**) situated at **217/1,CHANDRAPURA INDUSTRIAL ESTATE,tal: halol, dist: panchmahal,Town:CHANDRAPURA,Pincode:389350** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 32966
Industry Name: Rallis India Limited

Plot No.: Z-110,DAHEJ SEZ,-,Town:DAHEJ SEZ2,Pincode:392130

Tal: Vagra Dist:Bharuch

Phone: 8128552977

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Rallis India Limited** (**32966**) situated at **Z-110,DAHEJ SEZ,-,Town:DAHEJ SEZ2,Pincode:392130** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

To, **Gpcb Id**: 37670
Industry Name: Detox India Private Ltd (old name:Ankleshwar Cleaner Process Tech Centre P. Ltd)

Plot No.: D-2/CH-135 , GIDC , DAHEJ II ,,GIDC , DAHEJ II ,,GIDC , DAHEJ II ,,Town:vagra,Pincode:392140

Tal: Vagra Dist:Bharuch
Phone: 9879512581

To, **Aud Id**: 2331
Auditor Name: Swarrnim Startup and Innovation University

At Post-Bhoyan Rathod, Opp. IFFCO (ONGC WSS), Adalaj-Kalol Highway, Gandhinagar-382420

Phone : 9016931688

Subject: Allotment Of Auditor Vice versa Industry under Environment Audit Scheme for the year **2023-24**

The Hon'ble High Court of Gujarat introduced the Environment Audit Scheme in its order dt 20 / 12 / 1996 in (Misc. Civil Application No. 1863 of 1995 with Misc. Civil Application No. 1967 of 1995 with Misc. Civil Application No. 93 of 1995 and in its order dated 13/3/1997) Special Civil Application No. 770 of 1995.

The Environment Audit Scheme modified vide Office Order No. GPCB / EAS - C- 28 / 301928 Dated: 23-01-2015.

Without prejudice to the power of this Board under the Environment Acts, this is to inform you that **Swarrnim Startup and Innovation University** (**2331**) shall carry out Environment audit work of M /s **Detox India Private Ltd (old name:Ankleshwar Cleaner Process Tech Centre P. Ltd)** (**37670**) situated at **D-2/CH-135 , GIDC , DAHEJ II ,,GIDC , DAHEJ II ,,GIDC , DAHEJ II ,,Town:vagra,Pincode:392140** for the financial year **2023-24** with the following terms and conditions:

1. The Industry shall allow environment auditor to carry out environment audit work and shall provide relevant data and documents required for environment audit work as per Environment Audit Scheme.(Which Is Available on www.gpcb,gov.in)

2. The Industry shall pay environment audit fee to the assigned environment auditor as per the provision of Office Order No. GPCB / EAS -C-28 / 301928 dated: 23-01-2015.

3. Any non - payment towards environment audit work to the auditor by the industry , shall be liable for legal actions under prevailing rules and regulations.

4. In case of excess charges to the industry by the auditor, under the Environment Audit Scheme, the auditor shall be liable for legal actions under prevailing rules and regulations , which may lead to de-recognition as Environment Auditor.

5.The environment auditor shall Upload Report in XGN as per formate of audit report prescribed in environment audit Scheme.within 15 day from date of monitoring carried out in industry.Non compliance in this regards will attract legal actions under prevailing rule and regulation,which may lead to de-recognition as Environment Auditor.

6.The auditor shall prepare environment audit report on the environment management system as per Environment audit scheme

7. The Environment audit report shall be submitted by 30th June, 2024.

For and on behalf of
Gujarat Pollution Control Board

Place: Gandhinagar

D. M. Thaker.

(Member Secretary)

Quotation

Ref: SIT/Env/Quotation/2023-24/004 Date: 01/8/2023

Subject: Quotation for Environment Audit work Year 2023-2024

To,
M/s. Gujarat Ambuja Export Ltd.,
Plot No: 1, Bio Chemical Division,
Dalpur-383120,
Tal- Prantij, Dist:- Sabarkatha

(A)	Sr.No	Particular	Parameter	Parameter charges	Location	No.of Visit	Total (Rs.)
	1	Ambient Air	Sampling	3500	3	3	31500
			PM_{10}	1050	3	3	9450
			$PM_{2.5}$	1800	3	3	16200
			SO_2	1050	3	3	9450
			NO_X	1050	3	3	9450
			Total Charges				**76050**
	2	Flue Gas Stack Monitoring	Stack Sampling	9600	2	3	57600
			Sampling for Nox/Sox	3500	2	3	21000
			Particulate Matter	1050	2	3	6300
			Mercury	1400	1	3	4200
			SO2	1050	2	3	6300
			NOX	1050	2	3	6300
			Total Charges				**101700**
	3	Stack Monitoring	Stack Sampling	9600	6	3	172800
			Sampling for Nox/Sox	3500	6	3	63000
			Particulate Matter	1050	6	3	18900
			SO2	1050	6	3	18900
			NOX	1050	6	3	18900
			Total Charges				**292500**
	4	Wastewater (CETP Inlet & PST Outlet)	Sampling	960	2	3	5760
			Additional Sampling (COD, BOD, Oil&Grease)	1320	2	3	7920
			pH	110	2	3	660
			color	175	2	3	1050
			Temperature	110	2	3	660
			TSS	270	2	3	1620
			Oil & Grease	350	2	3	2100
			Flouride	350	2	3	2100
			Sulpheids	350	2	3	2100
			Ammonical Nitrogen	1050	2	3	6300
			BOD	1050	2	3	6300
			COD	620	2	3	3720
			Chloride	180	2	3	1080
			Sulphete	270	2	3	1620
			TDS	180	2	3	1080
			Sodium	1050	2	3	6300
			Total Charges				**50370**
	5	ETP sludge	Sampling Charges	1800	1	3	5400
			pH	175	1	3	525
			Moisture Contant	175	1	3	525
			Total Alkalinity	180	1	3	540
			Chloride	270	1	3	810
			Leachate preparation	1750	1	3	5250
			Total Charges				**13050**
	6	Noise Level Monitoring	**Day time**	**7000**	**1**	**2**	14000
			Total Charges				**14000**
(B)	7	Environment Audit report	Preparation fees	25000	1	2	**50000**
	8	Pre-Audit visit	Travelling cost	0			0
		Pre-Audit visit	DA	520	1	4	**2080**
	9	Audit visit	Travelling cost	0			0
		Audit visit	DA	520	1	4	**2080**
Total							**601830.00**
GST (18%)							**108329.40**
GRAND TOTAL							**710159.40**

SCOPE OF WORK & GENERAL CONDITIONS:

** This is a tentative quotation, actual bill is based on field and analysis data

1. During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.
2. It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.
3. The sample and data collections will be made by our college Four times in a year.
4. Site plan, ETP layout and stack layout to be provided by you to include in the reports.
5. Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.
6. We shall prepare final environmental audit reports twise in a year and submit to you in five presentable copies
7. Traveling cost not included in Quotation of 2023-24, So, Traveling facility will arrange by Industry.

Payment Terms

1. The Environment Audit payment shall be chargedafter as per visit to visit

1
i) Pre Audit
ii) 1st Audit monitoring visit charges
iii) 2nd Audit monitoring visit charges
iv) 3rd Audit monitoring visit charges
v) 4th Audit monitoring visit charges
vi) Environment Audit reports Charges
(Env. Audit fees Rs. 40,000/-(20000 per Report) will be charged before submission of Env. Audit Report)

2 The above payments are requested by DD/ Cheque drawn in favour of "Swarrnim Institute of Technology" payable at Ahmedabad

4 We, Swarrnim Institute of Technology (Schedule-1 auditor) is a constituent institute with the Swarnim Start up and Innovation University managed by the G.P. Jain Charitable Trust. The trust is established under Mumbai Public Trust Act 1950. Our GST number is 24AABTG1259L1ZO AND PAN Number is AABTG1259L.

Quotation

Ref: SIT/Env/Quotation/2023-24/002 Date: 25/07/2023

Subject: Quotation for Environment Audit work Year 2023-2024

To,
M/s. The Green Environment Services Co. Op. Society Ltd (CETP),
Plot no. 242/1, 242/3, 242/A, 244-251, Phase II
GIDC - Vatva , Ahmedabad -382445

(A)	Sr.No	Particular	Parameter	Parameter charges	Location	No.of Visit	Total (Rs.)
	1	Flue Gas Emission	Sampling Charge	9600	4	1	38400
			Sampling of Nox/Sox	3500	4	1	14000
			PM	1050	4	1	4200
			SOx	1050	4	1	4200
			NOx	1050	4	1	4200
			Total Ananysis				**65000**
	2	Wastewater (CETP Inlet)	**Sampling**	960	3	4	11520
		Secondery Outlate, Sprey Dryer inlate	Additional sampling (BOD, COD)	1320	3	4	15840
			pH	110	3	4	1320
			color	175	3	4	2100
			Temperature	110	3	4	1320
			TSS	180	3	4	2160
			Ammonical Nitrogen	1050	3	4	12600
			BOD	1050	3	4	12600
			COD	620	3	4	7440
			Fixed Dissolved Solid	270	3	4	3240
			Total Ananysis				**70140**
	3	Wastewater (CETP outlet)	Sampling	960	1	4	3840
			Additional sampling (Oil & Grease, BOD, COD)	1320	1	4	5280
			pH	110	1	4	440
			Temperature	110	1	4	440
			Colour	175	1	1	175
			Suspended Solid	180	1	4	720
			Fixed dissolved solids	180	1	1	180
			Oil & Grease	350	1	1	350
			Phenolic Compound	350	1	1	350
			Sulphides	350	1	1	350
			Ammonical Nirogen	1050	1	1	1050
			Total Chromium	530	1	1	530
			Hexavalent Chromium	350	1	1	350
			BOD	1050	1	4	4200
			COD	620	1	4	2480
			Cynide	620	1	1	620
			Flouride	350	1	1	350
			Chloride	180	1	1	180
			Sulphate	270	1	1	270
			Total Kjendhal Nitrogen	620	1	4	2480
			Mercury	1400	1	1	1400
			Lead	530	1	1	530
			Cadmium	530	1	1	530
			Copper	530	1	1	530
			Nickel	530	1	1	530
			Zinc	530	1	1	530
			Arsenic	530	1	1	530
			Selenium	530	1	1	530
			Boron	530	1	1	530
			Total Ananysis				**30275**
	4	ETP sludge	Sampling Charges	1800	1	4	7200
			pH	175	1	4	700
			Moisture Contant	175	1	4	700
			Total Alkalinity	180	1	4	720
			Chloride	270	1	4	1080
			Leachate preparation	1750	1	4	7000
			Total Ananysis				**17400**
	5	Dry Sludge Sampling	Sampling Charges	1800	1	4	7200
			pH	175	1	4	700
			Moisture Contant	175	1	4	700
			Total Alkalinity	180	1	4	720
			Chloride	270	1	4	1080
			Leachate preparation	1750	1	4	7000
			Total Ananysis				**17400**
	6	Iron Sludge sampling	pH	175	1	1	175
			Moisture Contant	175	1	1	175
			Total Alkalinity	180	1	1	180
			Chloride	270	1	1	270
			Leachate preparation	1750	1	1	1750
			Total Ananysis				**2550**
	7	Noise Level	Day Time	7000	2	2	**28000**
		Environment Audit report	Preparation fees	25000	1	2	**50000**
		Pre-Audit visit	Travelling cost				
(B)		Pre-Audit visit	DA (4 Person)	520	1	4	2080
		Audit visit	Travelling cost				
		Audit visit	DA (4 Person)	520	4	3	6240
		Total					**289085**
		GST (18%)					**52035.30**
		Total					**341120.30**

SCOPE OF WORK & GENERAL CONDITIONS:

** This is the Budget Quotation (First Half) not for Actual cost, The Actual bill as per Audit Base

1. During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.
2. It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.
3. The sample and data collections will be made by our college Four times in a year.
4. Site plan, ETP layout and stack layout to be provided by you to include in the reports.
5. Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.
6. We shall prepare final environmental audit reports twise in a year and submit to you in five presentable copies

Quotation

Ref: SIT/Env/Quotation/2023-24/006 Date: 09/09/2023

Subject: Quotation for Environment Audit work Year 2023-2024

To,
M/s. Bavla Eco Project,
Plot No. 14440/P, C/O Bharat Rice mill, Opp Trimurti Hospital NH No 8,
Ta. Bavla, Ahmedabad

(A)	Sr.No	Particular	Parameter	Parameter charges	Location	No.of Visit	Total (Rs.)
	1	Ambient Air	Sampling	3500	1	3	10500
			PM_{10}	1050	1	3	3150
			$PM_{2.5}$	1800	1	3	5400
			SO_2	1050	1	3	3150
			NO_X	1050	1	3	3150
				3			**25350**
	2	Wastewater (CETP Inlet)	**Sampling**	960	1	3	2880
			Addition Sampling (Oil & Grease, COD)	880	2	3	5280
			pH	110	1	3	330
			color	175	1	3	525
			Temperature	110	1	3	330
			TSS	180	1	3	540
			Oil & Grease	350	1	3	1050
			COD	620	1	3	1860
			BOD	1050	1	3	3150
				3			**15945**
	3	Wastewater (CETP outlet)	Sampling	550	1	3	1650
			Addition Sampling (Oil & Grease, COD)	880	1	3	2640
			pH	110	**1**	3	330
			Temperature	110	**1**	3	330
			Colour	175	**1**	3	525
			Suspended Solid	180	**1**	3	540
			Oil & Grease	350	**1**	3	1050
			BOD	1050	**1**	3	3150
			COD	620	**1**	3	1860
			Chloride	180	**1**	3	540
			Sulphate	270	**1**	3	810
			Sulphades	350	**1**	3	1050
			Ammonical Nirogen	350	**1**	3	1050
				3			**15525**
	4	Sound level monitoring	Day time	**7000**	**1**	**1**	7000
		Only Two Time					**7000**
(B)	6	Environment Audit report	Preparation fees	20000	1	1	**20000**
	7	Pre-Audit visit	Travelling cost	0			
		Pre-Audit visit	DA	520	1	1	**520**
	8	Audit visit	Travelling cost	0			
	9	Audit visit	DA	520	3	1	**1560**
Total							**85900.00**
GST (18%)							**15462.00**
Grand Total							**101362.00**

SCOPE OF WORK & GENERAL CONDITIONS:

1. This Quotation is tentative, actual bill based on Field visit and data
2. During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.
3. It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.
4. The sample and data collections will be made by our college Four times in a year.
5. Site plan, ETP layout and stack layout to be provided by you to include in the reports.
6. Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.
7. We shall prepare final environmental audit reports twise in a year and submit to you in five presentable copies
8. Traveling cost not included in Quotation of 2023-24, So, Traveling facility will arrange by Industry, OR Encase on same day

Payment Terms

1. 1. The Environment Audit payment shall be chargedafter as per visit to visit
   i) Pre Audit
   ii) 1st Audit monitoring visit charges
   iii) 2nd Audit monitoring visit charges
   iv) 3rd Audit monitoring visit charges
   v) 4th Audit monitoring visit charges
   vi) Environment Audit reports Charges
   (Env. Audit fees Rs. 50,000/-(25000 per Report) will be charged before submission of Env. Audit Report)
2. The above payments are requested by DD/ Cheque drawn in favour of "Swarmim Institute of Technology" payable at Ahmedabad
3. Acount Details:
4. We, Swarrnim Institute of Technology (Schedule-1 auditor) is a constituent institute with the Swarnim Start up and Innovation University managed by the G.P. Jain Charitable Trust. The trust is established under Mumbai Public Trust Act 1950. Our GST number is 24AABTG1259L1ZO AND PAN Number is AABTG1259L.

Quotation

Ref: SIT/Env/Quotation/2023-24/003 01-08-2023

Subject: Quotation for Environment Audit work Year 2023-2024

To,

M/s. Detox India Pvt Ltd,

Plot No. D-2/CH135, GIDC Dahej II, Ta. Vagra Dist.

Bharuch

(A)	Sr.No	Particular	Parameter	Location	Parameter charges	Per Vist	Total
	1	Wastewater (STP Inlet)	**Sampling**	1	960	4	3840
			Aditional Charges (BOD)	1	440	4	1760
			pH	1	110	4	440
			BOD	1	1050	4	4200
			TSS	1	180	4	720
				Total Charges			**10960**
	2	Wastewater (CETP outlet)	Sampling	1	960	4	3840
			Aditional Chaarges (COD,BOD and Oil & Grease)	1	1320	4	5280
			pH	1	110	4	440
			Temperature	1	110	4	440
			Colour	1	175	4	700
			Suspended Solid	1	180	4	720
			Oil & Grease	1	350	4	1400
			BOD	1	1050	4	4200
			COD	1	620	4	2480
			Chloride	1	180	4	720
			Sulphate	1	270	4	1080
			Total Dissolved Solid	1	180	4	720
			Sulphades	1	350	4	1400
			Sodium Absorption ratio	1	1050	4	4200
			Ammonical Nirogen	1	350	4	1400
			Perscent Sodium	1	350	4	1400
				Total Charges			**30420**
		Biological Sampling (STP)	Biological Smpling	**1**	1400	4	5600
			Fecal Coliform	1	620	4	2480
				Total Charges			**8080**
		Sound level monitoring	Day time	1	7000	2	14000
			Night Time		-		
				Total Charges			**14000**
		Stack Monitoring	Sampling Charges	2	9600	1	19200
		1, Hot Air Generator, 2, DG Set Monitoring Onec in Audit period	Sampling Sox/Nox	2	3500	1	7000
			SO2	2	1050	1	2100
			NOx	2	1050	1	2100
			Total Particulate Matter	2	1050	1	2100
				Total Charges			**32500**
		Stack Monitoring	Sampling Charges	1	9600	4	38400
		Incinarator 1&2	Sampling Sox/Nox	1	3500	4	14000
			SO2	1	1050	4	4200
			NOx	1	1050	4	4200
			Total Particulate Matter	1	1050	4	4200
			HCL	1	620	4	2480
			CO	1	1050	4	4200
			Total Organic Carbon	1	880	4	3520
				Total Charges			**75200**
	5	Vaporation	Acetic Acid Vapours	1		4	0
			Carbon Monoxide	1	1050	4	4200
			Hydrogen Sulphide	1	1050	4	4200
			Sulpher Dioxide	1	1050	4	4200
				Total Charges			**12600**
(B)	6	Environment Audit report	Preparation fees		**25000**	**2**	**50000**
	7	Pre-Audit visit	Travelling cost				
		Pre-Audit visit	DA	1	520	4	2080
	7	Audit visit	Travelling cost				
	8	Audit visit	DA	3	520	4	6240
Total							**242080**
GST (18%)							**43574.4**
Grand Total							**285654**

SCOPE OF WORK & GENERAL CONDITIONS:

** This is the Tentative quotation, Actual bill on the based on Field and Analysis

1. During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.
2. It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.
3. The sample and data collections will be made by our college Three times in a year.
4. Site plan, ETP layout and stack layout to be provided by you to include in the reports.
5. Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.
6. We shall prepare final environmental audit reports onece in a year and submit to you in five presentable copies

		Traveling cost not included in Quotation of 2023-24, So, Traveling facility will arrange by Industry, OR Encase in the same day
Payment Terms		
	1	i) Pre Audit ii) 1st Audit monitoring visit charges iii) 2nd Audit monitoring visit charges iv) 3rd Audit monitoring visit charges v) 4th Audit monitoring visit charges vi) Environment Audit reports Charges (Env. Audit fees Rs. 50,000/-(25000 per Report) will be charged before submission of Env. Audit Report)

Quotation

Ref: SIT/Env/Quotation/2023-24/001 Date: 25/07/2023

Subject: Quotation for Environment Audit work Year 2023-2024

To,
M/s. Gujarat Vepari Maha Mandal Sahakari Audhyogic Vasahat ltd (CETP),
GIDC - Odhav , Ahmedabad -382415

(A)	Sr.No	Particular	Parameter	Parameter charges	Location	No.of Visit	Total (Rs.)
	1	Wastewater (CETP Inlet)	**Sampling**	960	1	4	3840
			Additional sampling (Oil & Grease, BOD, COD)	1320	1	4	5280
			pH	110	1	4	440
			Temperature	110	1	4	440
			color	175	1	1	175
			TSS	180	1	4	720
			Oil & Grease	350	1	1	350
			Sulphides	350	1	1	350
			Ammonical Nitrogen	1050	1	4	4200
			BOD	1050	1	4	4200
			COD	620	1	4	2480
			Fixed Dissolved Solid	270	1	4	1080
				Total Ananysis			**23555**
	4	Wastewater (CETP outlet)	Sampling	960	1	4	3840
			Additional sampling (Oil & Grease, BOD, COD)	1320	1	4	5280
			pH	110	1	4	440
			Temperature	110	1	4	440
			Colour	175	1	1	175
			Suspended Solid	180	1	4	720
			Oil & Grease	350	1	1	350
			Fixed dissolved solids	180	1	4	720
			Flouride	350	1	1	350
			Sulphides	350	1	1	350
			Ammonical Nirogen	1050	1	4	4200
			Total Kjendhal Nitrogen	620	1	1	620
			BOD	1050	1	4	4200
			COD	620	1	4	2480
			Total Residual Chlorine	180	1	1	180
			Sodium Absorption Ratio	1050	1	1	1050
			Chloride	180	1	1	180
			Sulphate	270	1	1	270
							25845
	7	Noise Level	Day Time	7000	1	1	**7000**
(B)	8	Environment Audit report	Preparation fees	15000		2	**30000**
		Pre-Audit visit	Travelling cost				
		Pre-Audit visit	DA (3 Person)	520	**1**	4	2080
		Audit visit	Travelling cost				
		Audit visit	DA (3 Person)	520	**3**	4	6240
Total							**94720.00**
GST (18%)							**17049.60**
Grand Total							**111769.60**

SCOPE OF WORK & GENERAL CONDITIONS:

** This is the Budget Quotation (First Half) not for Actual cost, The Actual bill as per Audit Base

1. During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.
2. It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.
3. The sample and data collections will be made by our college Four times in a year.
4. Site plan, ETP layout and stack layout to be provided by you to include in the reports.
5. Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.
6. We shall prepare final environmental audit reports twise in a year and submit to you in five presentable copies

Payment Terms

1. 1. The Environment Audit payment shall be chargedafter as per visit to visit
   i) Pre Audit
   ii) 1st Audit monitoring visit charges
   iii) 2nd Audit monitoring visit charges
   iv) 3rd Audit monitoring visit charges
   v) 4th Audit monitoring visit charges
   vi) Environment Audit reports Charges
   (Env. Audit fees Rs. 40,000/-(20000 per Report) will be charged before submission of Env. Audit Report)

2. We, Swarrnim Institute of Technology (Schedule-1 auditor) is a constituent institute with the Swarnim Start up and Innovation University managed by the G.P. Jain Charitable Trust. The trust is established under Mumbai Public Trust Act 1950. Our GST number is 24AABTG1259L1ZO AND PAN Number is AABTG1259L.

Quotation

Ref: SIT/Env/Quotation/2023-24/007 Date: 02/02/2024

Subject: Quotation for Environment Audit work Year 2023-2024

To,
M/s. Samvedna BMW Incinerator,
Plot No. 217/1, Chandrapur Industrial Estate, Chandrapura
Ta. Halol, Panchmahal -389350

(A)	Sr.No	Particular	Parameter	Samples per Visit	Charges	Visit	Charges
	1	Ambient Air	Sampling	1	10500	3	31500
			PM_{10}	1	1050	3	3150
			SO_2	1	1050	3	3150
			NO_X	1	1050	3	3150
			Total Charges				**40950**
	2	Waste Water/Effluent	**Grab Sampling(Etp inlet, Outlet.)**	2	960	3	5760
			Additional Grab Sampling (COD,BOD, Oil & Grease)	2	1320	3	7920
			pH	2	110	3	660
			Temperature	2	110	3	660
			TSS	2	180	3	1080
			Oil & Grease	2	350	3	2100
			BOD	2	1050	3	6300
			COD	2	620	3	3720
			Total Charges				**28200**
		Sewage Sampling	Sample Collection (STP inlet, STP outlet)	2	960	3	5760
			Additional Grab Sampling (BOD)	2	440	3	2640
			BOD	2	1050	3	6300
			Suspended Solid	2	180	3	1080
			Resisdual chlorine	2	180	3	1080
			Total Charges				**16860**
	3	Stack Monitoring	Sampling Charges	1	9600	3	28800
			Sampling Charges for Nox	1	3500	3	10500
			Analysis Charges for Particulate Mateer	1	1050	3	3150
			Analysis Charges for Nox	1	1050	3	3150
			HCL	1	1050	3	3150
			Total Charges				**48750**
	4	Noise Monitoring	Noise Monitoring	1	**7000**	1	**7000**
(B)	5	Environment Audit report	Report Preparation fees				**30000**
	6	Pre-Audit visit	Travelling cost				
		Pre-Audit visit	DA				**0**
	7	Audit visit	Travelling cost				
	8	Audit visit	DA				
							0
		TOTAL					**171760**
		18% GST					**30916.8**
		GRAND TOTAL					**202676.80**

Quotation

Ref: SIT/Env/Quotation/2023-24/005 Date: 08/07/2023

Subject: Quotation for Environment Audit work Year 2023-2024

To,
M/s. SRF Limited,
Plot No. D-II/I, GIDC Dahej
Ta. Vagda, Bharuch

(A)	Sr.No	Particular	Parameter	Samples per Visit	Charges	Per Visit	Total
	1	Waste Water/Effluent	**Grab Sampling**	1	960	3	2880
			Additional Grab Sampling (COD,Oil & Grease)	1	880	3	2640
			pH	1	110	3	330
			Temperature	1	110	3	330
			TSS	1	180	3	540
			Oil & Grease	1	350	3	1050
			BOD	1	1050	3	3150
			COD	1	1240	3	3720
			Total charges				**14640**
	2	Stack Monitoring (Flue Gas)	Sampling Charges (Boiler Common stack)	1	9600	3	28800
		Boiler 35, 35,60 TPH	Sampling Charges for Sox/Nox	1	3500	3	10500
		Common Stack	Analysis Charges for Particulate Mateer	1	1050	3	3150
			Analysis Charges for Sox	1	1050	3	3150
			Analysis Charges for Nox	1	1050	3	3150
			HG	1	1400	3	4200
			Total charges				**52950**
	3	Stack Monitoring (Flue Gas)	Sampling Charges (Boiler 2 stack)	2	9600	3	57600
		Boiler 30 TPH	Sampling Charges for Sox/Nox	2	3500	3	21000
			Analysis Charges for Particulate Mateer	2	1050	3	6300
			Analysis Charges for Sox	2	1050	3	6300
			Analysis Charges for Nox	2	1050	3	6300
			Total charges				**97500**
	4	DG Set	Sampling charge for DG Set (500 to 1000 KW) 4 stack	4	1050	1	4200
		One Season monitoring	Sampling Charges for Sox/Nox	4	3500	1	14000
			Analysis Charges for Particulate Mateer	4	1050	1	4200
			Analysis Charges for Sox	4	1050	1	4200
			Analysis Charges for Nox	4	1050	1	4200
			Total charges				**30800**
	5	DG Set	Sampling charge for DG Set (>1000 KW) 3 stack	3	1050	3	9450
		Two Season monitoring	Sampling Charges for Sox/Nox	3	3500	3	31500
			Analysis Charges for Particulate Mateer	3	1050	3	9450
			Analysis Charges for Sox	3	1050	3	9450
			Analysis Charges for Nox	3	1050	3	9450
			Total charges				**69300**
	6	Flue Gas	Sampling charge 8 stack	8	9600	3	230400
		TCE/PCE/Plant thermic/ Fire Heater no 1&2, HFC 134a, Plant thermic fluid/Fire heaters, AHF plant heater no.1, AHF plant Drying system-1, AHF plant system Heater no.2, AHF plant drying system no-2, Difluoromethan (HFC-32)plant hot oil furnece	Sampling Charges for Sox/Nox	3	3500	3	31500
			Analysis Charges for Particulate Mateer	3	1050	3	9450
			Analysis Charges for Sox	3	1050	3	9450
			Analysis Charges for Nox	3	1050	3	9450
			Total charges				**290250**
	7	Flue Gas (Dust Collector)	Sampling charge 1 stack	3	9600	3	86400
			Analysis Charges for Particulate Mateer	3	1050	3	9450
			Total charges				**95850**
	8	Process Stack (HF Plant Stack)	Sampling charge	1	9600	3	28800
			HF	1	**1050**	3	3150
			Total charges				**31950**
	9	Process Stack (TCF/PCE Plant Stack)	Sampling charge	2	9600	3	57600
			HCL	1	1050	3	3150
			Cl2	1	1050	3	3150
			Total Charges				**63900**
	10	Process Stack (HFC Plant Stack)	Sampling charge	34	9600	3	979200
		R134a Reactor/Vessel	Sampling Charges for Sox/Nox	1	3500	3	10500
		R134a Reactor/Vessel	Analysis Charges for Particulate Mateer	1	1050	3	3150
		R134a Reactor/Vessel	Analysis Charges for Sox	1	1050	3	3150
		R134a Reactor/Vessel	Analysis Charges for Nox	1	1050	3	3150
		R134a Reactor/Vessel	HF	13	1050	3	40950
		Triflouro acitic acid	HCl	27	1050	3	85050
		Ethyldifluoroacetate	Cl2	5	1050	3	15750
		Ethyldifluoroacetate	Br2	5	5300	3	79500
		Ethyldifluoroacetate	CO2	1	**180**	3	540
		Pentafluorobenlzoic acid					
			Total Charges				**1220940**
	11	Wastewater (Inlate)	Sampling Charges	1	**960**	3	2880
			Aditional Sampling (BOD)	1	440	3	1320
			pH	1	110	3	330
			TSS	1	180	3	540
			BOD	1	1050	3	3150
			Total Charges				**8220**
	12	Biological Analysis	Sampling Charges	1	1400	3	4200
			Fical Coliform	1	620	3	1860
			Total Charges				**6060**

	13	Wastewater (Inlate)	Sampling Charges	1	960	3	2880
			Aditional Charges (Oil&Grease, BOD, COD,)	3	440	3	3960
			pH	1	110	3	330
			Temperature	1	110	3	330
			TSS	1	180	3	540
			Oil & Grease	1	350	3	1050
			Fluoride	1	350	3	1050
			Sulphide	1	350	3	1050
			Total Residual Chlorine	1	180	3	540
			Ammonical Nitrogen	1	1050	3	3150
			Total Kjendhal Nitrogen	1	620	3	1860
			Nitrate Nitrogen	1	350	3	1050
			BOD	1	1050	3	3150
			COD	1	620	3	1860
			Total Charges				**22800**
	14	Sludge	Sampling Charges	30	1800	3	162000
			pH	30	175	3	15750
			Moisture Contant	30	175	3	15750
			Total Alkalinity	30	180	3	16200
			Chloride	30	270	3	24300
			Total Charges				**234000**
	15	Noise Level sample	Day Time	1	7000	3	21000
			Night Time				
			Total Charges				**21000**
	16	Sewage Treatment Plant (Inlate and Outlate)	Sampling Charge	2	1800	3	10800
			Aditional Charges (BOD)	2	880	3	5280
			pH	2	175	3	1050
			TSS	2	180	3	1080
			Fecal Coliform	2	620	3	3720
			BOD	2	1050	3	6300
			Total Charges				**28230**
	17	Environment Audit report	Preparation fees	2	25000	1	50000
		Pre-Audit visit	Travelling cost				
		Pre-Audit visit	DA (4 Person)	1	520	4	2080
		Audit visit	Travelling cost				
		Audit visit	DA (4 Person)	3	520	4	6240
	Total						2346710
	GST 18%						422407.8
	GRAND TOTAL						**2769117.8**

This Budget is Tentetive cost, Actual bill based on field and Analysis costs

1 During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.

2 It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.

3 The sample and data collections will be made by our college Four times in a year.

4 Site plan, ETP layout and stack layout to be provided by you to include in the reports.

5 Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.

6 We shall prepare final environmental audit reports twise in a year and submit to you in five presentable copies

7 Traveling cost not included in Quotation of 2023-24, So, Traveling facility will arrange by Industry, OR Encase in the same day

1 1. The Environment Audit payment shall be chargedafter as per visit to visit

2 The above payments are requested by DD/ Cheque drawn in favour of “Swarrnim Institute of Technology” payable at Ahmedabad

4 We, Swarrnim Institute of Technology (Schedule-1 auditor) is a constituent institute with the Swarnim Start up and Innovation University managed by the G.P. Jain Charitable Trust. The trust is established under Mumbai Public Trust Act 1950. Our GST number is 24AABTG1259L1ZO AND PAN Number is AABTG1259L.

Quotation

Ref: SIT/Env/Quotation/2023-24/005
Subject: Quotation for Environment Audit work Year 2023-2024
To,
M/s. Rallis India Ltd.,
Plot No: Z-110, Dahez SEZ-II
Tal- Vagra, Dist:- Bharuch-392130

(A)	Sr.No	Particular	Parameter	Parameter charges	Location	Visit	Total
	1	Ambient Air Monitorir	Sampling	10500	3	3	94500
			PM_{10}	1050	3	3	9450
			$PM_{2.5}$	1800	3	3	16200
			SO_2	1050	3	3	9450
			NO_X	1050	3	3	9450
			Total Charges				**139050**
	2	Stack Monitoring (Flue Gas Emission)	Sampling Stack	9600	3	3	86400
			Sampling SO2/NO2	3500	3	3	31500
		Analysis Charges	Particulate Matter	1050	3	3	9450
			SO2	1050	3	3	9450
			NOX	1050	3	3	9450
			Total Charges				**59850**
	3	Process Gas Emision	Sampling SO2	3500	8	3	84000
			Sampling Stack	9600	8	3	230400
			H2S	1050	2	3	6300
			HCl	1050	5	3	15750
			Cl2	1050	2	3	6300
			NH3	1050	1	3	3150
			SO2	1050	4	3	12600
			Total Charges				**358500**
	4	Wastewater (CETP Inlet & PST Outlet)	**Sampling**	960	1	3	2880
			Additional charges (Oil & Grease, COD)	880	1	3	2640
			pH	110	1	3	330
			Temperature	110	1	3	330
			TSS	180	1	3	540
			Oil & Grease	350	1	3	1050
			Phenolic Compound	350	1	3	1050
			Cyanide (as CN)	620	1	3	1860
			Fluoride (As F)	350	1	3	1050
			Sulphides	350	1	3	1050
			Total Residual Chlorine	180	1	3	540
			Ammonical Nitrogen	350	1	3	1050
			Total Kjendahl Nitrogen (TKN)	620	1	3	1860
			Nitrate Nitrogen	350	1	3	1050
			Biological Oxygen Demand (3 day)	1050	1	3	3150
			COD	620	1	3	1860
			Arsenic	530	1	3	1590
			Mercury	1400	1	3	4200
			Lead	530	1	3	1590
			Cadmium	530	1	3	1590
			Trivalant Chromium (Chromium Total)	530	1	3	1590
			Haxavalant Chromium	350	1	3	1050
			Copper	530	1	3	1590
			Zinc	530	1	3	1590
			Selenium	530	1	3	1590
			Nickel	530	1	3	1590
			Manganese	530	1	3	1590
			Iorn	530	1	3	1590
			Vanadium	530	1	3	1590
			Total Charges				**45030**
	5	**Wastewater (Outlate)**	**Sampling**	960	1	3	2880
			Additional charges (Oil & Grease, COD)	880	1	3	2640
			pH	110	1	3	330
			Temperature	110	1	3	330
			TSS	180	1	3	540
			Oil & Grease	350	1	3	1050
			Phenolic Compound	350	1	3	1050
			Cyanide (as CN)	620	1	3	1860
			Fluoride (As F)	350	1	3	1050
			Sulphides	350	1	3	1050
			Total Residual Chlorine	180	1	3	540
			Ammonical Nitrogen	350	1	3	1050

			Total Kjendahl Nitrogen (TKN)	620	1	3	1860
			Nitrate Nitrogen	350	1	3	1050
			Biological Oxygen Demand (3 day)	1050	1	3	3150
			COD	620	1	3	1860
			Arsenic	530	1	3	1590
			Mercury	1400	1	3	4200
			Lead	530	1	3	1590
			Cadmium	530	1	3	1590
			Trivalant Chromium (Chromium Total)	530	1	3	1590
			Haxavalant Chromium	350	1	3	1050
			Copper	530	1	3	1590
			Zinc	530	1	3	1590
			Selenium	530	1	3	1590
			Nickel	530	1	3	1590
			Manganese	530	1	3	1590
			Iorn	530	1	3	1590
			Vanadium	530	1	3	1590
			Total Charges				**45030**
		Sludge	Sampling Charges	1800	1	3	5400
			pH	175	1	3	525
			Moisture Contant	175	1	3	525
			Total Alkalinity	180	1	3	540
			Chloride	270	1	3	810
			Total Charges				**7800**
		Noise Level sample	Day Time	7000	1	2	14000
			Night Time				
			Total Charges				**14000**
(B)	7	Environment Audit report	Preparation fees	25000		2	**50000**
	8	Pre-Audit visit	Travelling cost				
	9	Pre-Audit visit	DA (4 Person)	520	4	3	**6240**
	10	Audit visit	Travelling cost				
	11	Audit visit	DA (4 Person)	520	4	3	**6240**
Total							**745740**
GST (18%)							**134233.2**
GRAND TOTAL							**879973.2**

SCOPE OF WORK & GENERAL CONDITIONS:

**This is a tentative quotation, actual bill based on Field and analysis

1. During our visit to your site/industry, if required our vehicle shall be allowed in your premised and if required one to two skilled male labor to be provided by you for our assistance.
2. It shall contain all the technical data i.e. general data, production details, water consumption and disposal, Water pollutants/ Air pollution control & measurement, Hazardous/ Solid Waste generation and disposal, noise level measurement, Probable Health hazards and remedies, fire and safety measures, disaster control and its management systems etc.
3. The sample and data collections will be made by our college Four times in a year.
4. Site plan, ETP layout and stack layout to be provided by you to include in the reports.
5. Environmental Audit Reports shall be submitted to you as per the format of the Gujarat Pollution Control Board before 31st December 2023 and 30th June 2024.
6. We shall prepare final environmental audit reports twise in a year and submit to you in five presentable copies
7. Traveling cost not included in Quotation of 2023-24, So, Traveling facility will arrange by Industry, OR Encase on same day

Payment Terms

1. 1. The Environment Audit payment shall be chargedafter as per visit to visit
   i) Pre Audit
   ii) 1st Audit monitoring visit charges
   iii) 2nd Audit monitoring visit charges
   iv) 3rd Audit monitoring visit charges
   v) 4th Audit monitoring visit charges
   vi)Environment Audit reports Charges
   (Env. Audit fees Rs. 40,000/-(20000 per Report) will be charged before submission of Env. Audit Report)
2. The above payments are requested by DD/ Cheque drawn in favour of "Swarrnim Institute of Technology" payable at Ahmedabad
3. We, Swarrnim Institute of Technology (Schedule-1 auditor) is a constituent institute with the Swarnim Start up and Innovation University managed by the G.P. Jain Charitable Trust. The trust is established under Mumbai Public Trust Act 1950. Our GST number is 24AABTG1259L1ZO AND PAN Number is AABTG1259L.

SRF

We always find a better way

OUR VALUES: RESPECT | INTEGRITY | NON-DISCRIMINATION | EXCELLENCE | WELL-BEING

PURCHASE ORDER

Supplier Detail

GYAPRASAD JAIN CHERITABLE TRUST
35, WORLD BUSINESS HOUSE OPP. PARIMAL GARDEN, ELLISBRIDGE
GJ
AHMEDABAD - 380006
Gujarat, India
() 9978955814
GSTN/ISDN : 24AABTG1259L1ZO
Gujarat (GJ)
VENDOR CODE: 39957

Purchase Order Detail

PO No	71482
Revision No	0
Revised Date	
Created On	22-JAN-2024
Printed On	
Ref Quote No	
Quote Date	
Buyer	PARMAR, Ms. MONALI
PO Creator	
Effective Start Date	2023-12-01T00:00:00.000+05:30
Effective End Date	2024-04-30T23:59:59.000+05:30
Amount Limit	498575

Bill To :

SRF LIMITED
Plot No.D-2/1 GIDC, Phase II, PCPIR, Village-Dahej, Tal Vagra
Bharuch - 392130
DAHEJ, Gujarat-GJ,
Ph : 02641- 289201, 289202
GSTN/ISDN : 24AAACS0206P1ZJ
Gujarat (GJ)

Ship To:

SRF LIMITED
Plot No.D-2/1 GIDC, Phase II, PCPIR, Village-Dahej, Tal Vagra
Bharuch - 392130
DAHEJ, Gujarat -GJ,
Ph : 02641- 289201, 289202
GSTN/ISDN : 24AAACS0206P1ZJ
Gujarat (GJ)

Line No	Item Name	Part Description	HSN/SAC Code	Project & Task	Delivery Date	Quantity Agreed	UOM	Unit Price INR	Amount Agreed INR	CGST	SGST	IGST
1	S000700020895	MISCELLANEOUS SERVICES ,ENVIRONMENTAL AUDIT	998346	--			NOS	25,000.00		9	9	0
2	S010300000002	LAB TESTING ,SAMPLE ANALYSIS SERVICE	998346	--			NOS	1.00		9	9	0
					Total	NaN	Currency	INR	498,575.00			
Discount:	0		Freight:	0			Currency	INR	Grand Total		0.00	

Amount in Words (INR): Zero

Terms & Conditions:

Special Terms:	
Price Basis:	FOB
Terms of Payment:	MSME 100% ON 30 DAYS CREDIT ON RECEIPT
Freight Terms:	NONE
Mode of Dispatch:	
Late Delivery Terms:	As per Annexure

Please address your ORDER ACCEPTANCE to Ms. Monali Parmar and all correspondence pertaining to this Order to MONALI.PARMAR@SRF.COM.

Material should be booked to the Ship to address specified above, until advised otherwise.

Original & duplicate tax Invoice should be sent along with the material.

Order Acknowledgement by Supplier | **For and on behalf of**

RALLIS INDIA LIMITED
A TATA ENTERPRISE

DSEZ-DAHEJ SEZ PLANT
RALLIS INDIA LIMITED
Plot No: Z-110, SEZ,Part II
Lakhigam, DAHEJ,
392130 DAHEJ

PURCHASE ORDER

GSTIN Nos. Mentioned Overleaf

P.O . No : 4300143167
Date : 14.02.2024
Your Ref. :
Date :
Purchase Org : RPPE - Pesticides Purchases
Purchase Group : DJ2 - DAHEJ ENGG/SERV

Vendor : 120778
GSTIN NO : 24AABTG1259L1ZO
Gyaprasad Jain Cheritable Trust,
C/O Swaminarayan startup & innovati
At Post Bhoyan Rathod, Opp IFFCO
Gandhinagar, 380006, India.

Delivery Address :
GSTIN NO : 24AABCR2657N2Z3
DSEZ-DAHEJ SEZ PLANT
Plot No: Z-110, SEZ,Part II
Lakhigam, DAHEJ,
392130 DAHEJ
(Please send your Supplies / Invoice here)

Billing Address :
GSTIN NO : 24AABCR2657N2Z3
DSEZ-DAHEJ SEZ PLANT
RALLIS INDIA LIMITED
Plot No: Z-110, SEZ,Part II
Lakhigam, DAHEJ,
392130 DAHEJ
(Please send your Commercial Invoice here)

Dear Sirs ,
Kindly arrange to supply the following material , as per Specifications attached in annexure and terms & Conditions indicated herein & on the reverse, to the address specified above . Please ensure the P.O. No. is mentioned on your bills/challans.

No.	Material Code / Material Description	Unit	Quantity	Currency / Price/Unit	GST Rate (%) / GST Val (Rs)	Value (Rs.)
1	Environment Audit for Apr-23 to Mar-24 / PR No.: 0010216119 The item covers the following services Item Line 10 - Environment Audit for Apr-23 to Mar-24 1 EA 745,740.00 INR Environment Audit for April-2023 to March-2024. As per Guidance by GPCB. (Specification as attached)	EA	1.00	INR 745,740.00 PER 1 EA	CGST/SGST 0.00 / 0.00 % 0.00 Rs	745,740.00

Value In Words :
Rupees Seven Lakh Forty Five Thousand Seven Hundred Forty Only

Total Rs. 745,740.00

Delivery Schedule:
00010 31/03/2024 - 1.000

Payment Terms : FULL PAYMENT WITHIN 7 DAYS OF SUPPLY

Delivery Terms : FREE DELIVERY TO OUR FACTORY

For RALLIS INDIA LIMITED **Document is system generated signatures not required**

Authorised Signatory

If the Party(ies) transacting with Rallis India Limited is not a related party,then it Confirms that the purpose and effect of this transaction is not to benefit (Directly or Indirectly) to any of the related party(ies) of Rallis India Limited.This is required to ensure compliance with the new requirements under the SEBI Listing Obligations and Disclosure Requirements Regulations.List of Related Parties of Rallis India Limited are available at www.rallisrplist.com

WORK ORDER

DETOX INDIA
operated by VEOLIA

Environment Audit and report charges

Supplier Code	: 40000990	**WO No.**	**: 4900004933**
Supplier Name	: Gyaprasad Jain Cheritable Trust	Date	: Feb 23, 2024
Address	: C/O Swarrinm Institute of Technology 35,,World Business House,	Currency	: INR
		Purchasing Group	: P02
City	: Ahmedabad	Plant / Project Name & No.	: 3004 / DIPL - Dahej
Pin Code	: 380006	PR Number	PR Date
GST Number	: 24AABTG1259L1ZO	1500005389	31.01.2024
PAN Number	: AABTG1259L		
Contact Person	: Dr. Savan		
Contact No.	: 9016931688		
Email ID	: drsavan.env@swarrnim.edu.in		

Invoice Address	**: Detox India Pvt. Ltd.**	**Delivery Address**	**: Detox India Pvt. Ltd.**
Address	: Plot No. D-2/CH/135 GIDC Dahej II Industrial Est. Tal. Vagra	Address	: Plot No. D-2/CH/135 GIDC Dahej II Industrial Est. Tal. Vagra
City	: Dist. Bharuch	City	: Dist. Bharuch
Pin Code	: 392130	Pin Code	: 392130
GST Number	: 24AAICA8402F1Z0	Contact Person	: Dr. Savan
PAN Number	: AAICA8402F	Contact No.	: 9016931688
Quotation Number	: EMAIL	Quotation Date	: 29.01.2024

For GPCB Audit

S.No	Material/Service No.	Description	HSN/SAC	UOM	Qty	Unit Rate	Total Amount	Tax Type	Tax Rate	Tax Value
1		Env. Audit report charges	998346	AU	1.000	25,000.00	25,000.00	CGST SGST	9.00% 9.00%	2250.00 2250.00
1.1	1200000	Consultancy Charges	998346	EA	1.000	25,000.00	25,000.00			
2		Sampling and Analysis charges	998346	AU	1.000	96,170.00	96,170.00	CGST SGST	9.00% 9.00%	8655.30 8655.30
2.1	1200098	Ambient Air Quality Monitoring	998346	ONE	6.000	8,450.00	50,700.00			
2.2	1200104	Noise Monitoring	998346	ONE	1.000	7,000.00	7,000.00			
2.3	1600071	Analysis Of Stack-Dg Stack	998346	EA	2.000	16,250.00	32,500.00			
2.4	1200105	Waste water Quality Monitoring (ETP)	998346	ONE	2.000	2,985.00	5,970.00			

Note:- Travel, stay and food extra charges to be borne by Detox India as per actual bill.

Sub Total	1,21,170.00
Less Discount	0.00
Packing & Forwarding	0.00
Freight	0.00
Compensation cess	0.00
Net Amount	1,21,170.00
Total CGST	10,905.30
Total SGST	10,905.30
Total IGST	0.00
Total TCS value	0.00

WORK ORDER

DETOX INDIA
operated by VEOLIA

Environment Audit and report charges

Total value in Words : One Lakh Forty Two Thousand Nine Hundred Eighty Rupees Sixty Paise Only		**Total PO value**	**1,42,980.60**
GENERAL CONDITIONS OF CONTRACT (GCC) - AS ATTACHED			
SPECIAL CONDITIONS OF CONTRACT (SCC)			
Price Basis	NA		
Packing / Freight / Insurance	NA		
Payment Terms	100% advance against Proforma Invoice Before report submission and after Audit completion		
Completion Period	26.02.2024		
Bank Guarantee	NA		
Warranty / Guarantee	NA		
Validity of Work Order	NA		
Erection & Commissioning	NA		
Important Note	Tax Invoice / Challan raised by Contractor must contain WO No. and GST No. Invoice will not be processed in absence of these details. Original Invoice must be sent at site.		
C r Conditions	All disputes shall be settled under the jurisdiction of Surat.		
PR Requested By : EHS DAHEJ	WO Prepared By : REVATHI NARAYANAN	Approved By : Anil Gahlyan	
		Detox India Pvt. Ltd. Director / Authorized signatory	

Detox India Pvt. Ltd.

Corporate Office Address

Detox House,Opp. Gujarat Samachar Press

Udhna Dharwaja Ring road,

SURAT - 395002 GUJ. INDIA

CIN:-U90000GJ2010PTC060122

Tel.: +91 261 - 2351248/2346181

Email : procurement@detoxindia.com

The Green Environment Services Co-op. Society Ltd.

(Common Effluent Treatment Plant, MEE, Spray Dryer & FCR)

WORK ORDER

Ref: GESCSL/PUR/GJCT/WO/2023-24/1151

Date: 28/08/2023

M/s. Gyaprasad Jain Cheritable Trust
Office no. 35, World business house,
3rd floor, opp. Parimal garden,
Ellisbridge, Ahmedabad 380006.
Phone : 079 40021021 / 40327662
Email: gpjaintrust@gmail.com
GST no. : 24AABTG1259L1ZO

SUB :- Quotation of "Environmental Audit" Work for the year 2023-24.
REF. No. PROPOSAL/2023-24/SIT/06, Dated 16th August 2023 (by mail).

Dear Sir/Madam,

In connection to the above mentioned sub. & ref., we accept your proposal as per below cost bifurcation.

Sr. No.	Description	Amount Rs.
01.	Charges for Environmental Audit Work (4 Visit)	297265.00
02.	Charges for Environmental Audit Report Preparation	50000.00
	Environment Audit charges Total (no. of visit = 04)	347265.00
	GST 18% (May vary as per regulations of GOI)	62507.70
	Environment Audit Total charges (For period April-23 to March-24)	409772.70

1. SCOPE OF WORK

To carry out Environment Audit as per the guidelines of GPCB.

2. Monitoring (Sample Collection and Analysis)

This includes sample Collection of effluent samples, hazardous waste analysis. Bore well water. (as per offer no. SIT/ENV. Audit/06 - dt. 16-08-23)

Regd. Office & CETP Site : Plot No. 244-251, Phase II-GIDC Estate, Vatva, Ahmedabad - 382 445
Tele : (079) 25892283, 25832449, Mob. : 98250 18947, 75730 17676, 75730 27676
E-mail : greenpurchase@hotmail.com, info@gescsl.com Web Site : www.gescsl.com
SLF Site : Survey No. 89 - 90 - 91, Village : Vinzol, Ahmedabad. Phone : 92278 18213

3. Payment Terms for Professional Charges:-

- 20 % advance after first Monitoring, Payment made by actual Sampling & Visits.
- GST Taxes as applicable
- Environment Audit Fees will be charged twice at the time of submission of Environment Audit reports.
- Annexure no. III by mail Reimbursements will be as per your quotation offer no. SIT/ENV. Audit/06 dt. 16-08-23.

4. Submission of Audit Report:-

- Half yearly (April-2023 to Sept 2023, & Oct-2023 to March-2024) Environment Audit Report to Submitted as early as possible as per GPCB guidelines.

Thanking You,
Yours Faithfully

For and on behalf of
G. E. S. C. S. L.

Authorized Signatory

For and on behalf of
Gyaprasad Jain Cheritable Trust

Team coordinator,
Environment Audit Cell.
Authorized Signatory

Regd. Office & CETP Site : Plot No. 244-251, Phase II-GIDC Estate, Vatva, Ahmedabad - 382 445
Tele : (079) 25892283, 25832449, Mob. : 98250 18947, 75730 17676, 75730 27676
E-mail : greenpurchase@hotmail.com, info@gescsl.com Web Site : www.gescsl.com
SLF Site : Survey No. 89 - 90 - 91, Village : Vinzol, Ahmedabad. Phone : 92278 18213

M/S Gujarat Ambuja Exports Ltd.
Plot No. 1, (Bio Chemical Division)
Vrindavan Road, Dalpur – 383120.
Taluka: Prantij, Dist: Sabarkantha.

ENVIRONMENTAL AUDIT REPORT
FOR THE PERIOD
April 2023 to March 2024
Prepared by:

Environmental Scheduler I, Audit Cell
Environmental and Chemical Engineering Department
Swarrnim Institute of Technology
Swarrnim Startup and Innovation University,
Gandhinagar.

PREFACE

Consciousness at National Level is increasing day by day in the industrial sector with the focus on **Environment** and **Sustainable Development.** A successful Environment Management Policy requires a constant and round the clock effort to analyze and monitor the various operations and processes within the industry premises so that it does not pollute the air, water, land, soil or environment further and at the same time transmit this information to the inspecting authority**.** Such an exercise to generate necessary information about analysis of various industrial emissions including air, water, noise, solid waste etc., treatment methods, abatement techniques, up gradations done to improve the system from time to time and the compilation of annual estimates is termed as Environmental Audit.

Environmental Audit on the other hand refers to verification and assessment of environmental measures in an organization.

In a broader sense, Environmental Audit is defined as a managerial tool which includes the activity of systematic periodic and documented objective evaluation of how the organization, management and equipments perform their environmental activities so that it facilitates the management control our environment practice and assessing compliance with company policies which would include meeting regulatory requirements.

In accordance with the directives given in Special Civil Application 163 / 95 in SCA 770 / 95 by the honorable high Court on 20 /12 /96 and MCA 326 of 1997 in SCA 770 /95 0n 13/03/97 the scheme of Environmental Audit has been introduced.

Keeping in view this enforcement compliance and directives of the honorable high court a sincere attempt is made by us to carry out the Environmental Audit of C**.** A fair and unbiased report is hereby presented to the Gujarat Pollution Control Board. Any error or lacuna in the same may be due to oversight and is unintentional. All efforts shall be made to cover up the shortcomings and remove the errors in subsequent reports.

Thus, the information collected by the Environmental Audit team of Swarrnim Startup and Innovation University regarding the industry and analysis of its various samples has proved to be useful in judging the adequacy and efficacy of the Environmental Control Measures and we hope this report shall enable our client to fulfill their commitment for continuous improvement of Environment.

Contents

Sr. No.	Topic
❖	Project Team
❖	Objectives of Environment audit and Operational Briefing
❖	Executive Summary
A.	General
B.	Product Details
C.	Water
D.	Air
E.	Hazardous (Solid) Waste
F.	Site Plan
G.	Resource Recovery
H.	Health
I.	Accidents
J.	Safety Measures
K.	Remedial Measures
L.	Water Cess
M.	Consultant's Detail
❖	Annexures
❖	Certificate for Sampling and Analysis
❖	Adequacy Certificate of Environmental Management System

List of Annexure

Sr. No.	Details
A 1	Introduction to Industry
A 2	Details of Electric Consumption
A 3	List of Directors
B 1	Product Details
B 2	By-product Details
B 3	Date of commencement of production
B 4	Details of Raw Materials
B 5	Types of Manufacturing Process
B 6	Manufacturing Process with Flow Diagram
C 1	Quantity of water consume
C 2	Quantity of waste water generated
C 3	Particulars of Effluent Treatment Plant
C 4	Quality of Trade Effluent
C 5	Details About operators/Chemist Associated with ETP
C 6	Details Regarding Water Consent
D 1	Details of Flue Gas Stack
D 2	Details of Fuel Consumption
D 3	Details of Process Stack
D 4	Details of Flue Gas & Process Stack Analysis Report
D 5	Details of Ambient Air Monitoring
D 6	Details Regarding Air Consent
D 7	Details of air pollution measures
E 1	Details of Solid / Hazardous Waste
E 2	Details Regarding Monthly Generation of Hazardous / Solid Waste
E 3	Analysis of Hazardous / Solid Waste
E 4	Details Regarding Hazardous Waste Authorization
F 1	Site Plan
G 1	Resource Recovery
H 1	Periodical medical examination & Health Records
I 1	Accidents
J 1	Disaster Management Plan
J 2	On site / off site emergency plan
K 1	Noise Monitoring
K 2	Details related to Odor
K 3	Details in respect of cases / complaints under water act 1974, Air act 1981, & the EPA 1986
K 4	Compliance Report

K 5	Details regarding incidents of spillages, leakages etc. and remedial measures thereof
K 6	Insurance policy details under PLI policy
L 1	Details related to water cess
❖	Certificate for sampling and Analysis
❖	Adequacy Certificate of Environmental Management System

Objectives of Environment audit and Operational Briefing

Aim of the Audit scheme:

It is well known fact that environmental audit scheme is a management tool involving a systematic, objective, documental and periodic evaluation of environmental management systems with specific aim of

1. Waste reduction/prevention
2. Assessing compliance with regulatory requirements
3. Facilitating control of environmental practices by a company's management
4. Placing environmental information in the public domain.

Objectives of environmental auditing:

(1) To check the adequacy and efficacy of the Effluent treatment plant, gaseous emissions, solid waste, ambient air, noise, health and safety systems of the factory.
(2) To check whether the industry meets with all the regulatory norms set by the state regulatory authority that is GPCB regarding environmental pollution control.
(3) To check various records of ETP.
(4) To check various records of Environmental Management System.

Operational Briefings:

- The team of experts from Swarrnim Stratup and Innovation University did the Environmental Audit work of the Unit by making several visits to the unit.
- In their three visits during the audit period they carried out brief survey, inspection ambient air quality, Process stacks to dryer and solid waste management system monitoring.
- Visual observations of the units and machinery were also checked out periodically.
- Most representative grab samples of the effluent, ambient air, process and process stack, noise and solid waste were taken, analyzed and cited in this report.
- Technical information regarding the ETP and other Environmental Management Systems was sought from the industry.
- The findings in this report are entirely based on the data furnished by the industry and data collected by the audit team during the audit visits conducted in the client's unit presuming that all the EMS and manufacturing operations were at normal conditions at the time of visits.
- Thus the information collected by the Environmental Audit team of Swarrnim University regarding the industry and analysis of its various samples has proved to be useful in judging the adequacy and efficacy of the Environmental Control Measures

EXECUTIVE SUMMARY

Honorable High Court of Gujarat's order for the Environmental Audit Scheme dated 20th December 1996 and modified vide it's order dated 13th march 1997, **Swarrnim University** is nominated to carry out **Environmental Audit** work for the industries falling under Schedule-I industries.

Introduction:

Introduction:

1.1 Description for Industry The Company has its registered and Head Office at Gujarat Ambuja Exports Limted Opp. Sindhubavan, Sindhubhavan Road, Bodakdev, Ahmedabad-380059. The works of the company is located at Plot No. 1, (Bio Chemical Division), Vrindavan Road, Dalpur – 383120. Taluka: Prantij, Dist: Sabarkantha. The company is engaged in the manufacturing of ……...

The installed capacities of products are as follows:

MONTH	STARCH	GLUCOSE	DEXTROSE	DAH	MALTO	SORBITOL 70 %	TOTAL
	MT.	MT.	MT.		MT.	MT.	MT.
Apr-23	4919.500	1524.820	630.200	230.000	359.050	1580.000	9243.570
May-23	4515.000	1447.540	519.850	173.500	339.600	1520.000	8515.490
Jun-23	4767.500	1431.390	451.750	214.000	314.075	1540.000	8718.715
Jul-23	4820.000	1688.150	506.450	244.500	355.100	1950.000	9564.200
Aug-23	4858.250	1577.930	543.300	228.000	350.325	1910.000	9467.805
Sep-23	4741.500	1332.900	538.450	224.500	310.400	1390.000	8537.750
Oct-23	5225.500	1830.810	577.750	232.000	363.700	1025.000	9254.760
Nov-23	4901.500	1568.790	588.775	223.000	338.075	1590.000	9210.140
Dec-23	5044.000	1654.100	692.975	231.500	309.000	785.000	8716.575
Jan-24	5002.500	1691.410	751.550	251.000	331.325	1685.000	9712.785
Feb-24	3732.500	1279.470	611.200	214.500	312.375	1060.000	7210.045
Mar-24	4296.250	1543.170	538.650	222.000	282.800	1080.000	7962.870
TOTAL :	**43792.750**	**14056.43**	**5049.50**	**2001.00**	**3039.32**	**13290.00**	**81229.00**

1.2 The products of the company are enlisted under Schedule - I of the "Scheme for Environmental Audit of Industries Manufacturing Specified Products" in accordance with the judgment of the Honorable High Court of Gujarat dated 13/03/97 in sp. Civil Application 163/95 in SCA 770/95.

1.3 The company has assigned the work of preparing the annual environmental audit report for the period from Jan'2013 to Dec'2013 to Swarrnim University a Schedule – I environmental auditor recognized by Gujarat Pollution Control Board (GPCB), under the said scheme.

1.4 The report highlights the adequacy and efficacy of environmental management system in light of various statutory requirements under water act, air act, environmental protection act and inspection, monitoring carried out by the audit team.

1.5 The audit report is being submitted in accordance with the format prescribed by GPCB along with the requisite processing fees to Gujarat Pollution Control Board.

Observations and Recommendations

- CETP must reduce the solid waste generated from ETP and meet the guideline given by GPCB.
- The company is maintaining data related to environment management system.
- Adequate facility like ladder, platform etc is provided to ensure safety while sampling at different places.
- Green belt around the company is also desirable.
- Various personal protective equipments to ensure the safety are provided to employees and workers. Awareness programmed to ensure regular use of such equipments is highly desirable.
- Labor safety must be desirable while Labor on work platform.
- Row material and Packaging area must be protecting for the Dust particle.
- Maintain the ETP datasheet hard and soft copy.

Gujarat Pollution Control Board
Paryavaran Bhavan, Sector - 10 A,
Gandhinagar - 382 043.
Phone: 22756, 22096, 22096
Fax: (02712) 22784

Environmental Audit
(Period from April 2022 to December 2023)

(A) GENERAL

(1)	Name of the Industry	:	M/S Gujarat Ambuja Exports Limited
(2)	Location	:	Plot No. 1, (Bio Chemical Division) Vrindavan Road, Dalpur – 383120. Taluka: Prantij, Dist: Sabarkantha.
(3)	Registered Office Address	:	Gujarat Ambuja Exports Limted Opp. Sindhubavan, Sindhubhavan Road, Bodakdev, Ahmedabad-380059
(4)	Month & Year of establishment	:	As per **Annexure A 1**
(5)	(a) No. of workers employed	:	476
	(b) Male / Female.	:	Male: 474 / Female : 02
(6)	(a) No. of electrical connection with service numbers	:	As per **Annexure – A 2**
	(b) Total connected load	:	As per **Annexure – A 2**
	(c) Electric/Fuel consumption per Tone of product manufactured.	:	As per **Annexure – A 2**
	(d) Percentage enhancement in energy	:	As per **Annexure – A 2**
	(e) Savings as compared to previous year	:	As per **Annexure – A 2**
(7)	No. of DG Sets & their capacity	:	As per **Annexure – A 2**
(8)	Name & residential address of all directors or partners.	:	As per **Annexure – A 3**
(9)	Telephone Nos.; (Residential & Industrial)	:	As per **Annexure – A 3**
	Fax No.:	:	As per **Annexure – A 3**
	E-Mail of Industry:	:	bhupesh@ambujagroup.com

	E-Mail of Partners or directors:	:	As per **Annexure – A 3**
(10)	No. of the Shifts & Timings	:	As per **Annexure – A 1**
(11)	Name and address of the in-charge of Environment / Safety Division / Cell / Unit.	:	Mr. Bhupesh Bhai Address: M/s. Gujarat Ambuja Exports Ltd. Plot No:1 Biochemical Division ,Vrindavan road, Dalpur Ta: Prantij, Dist: Sabarkantha. Gujarat Pin Code:383120
(12)	No. of days during which production activities were in operation during the period covered	:	As per **Annexure – A 1**
(13)	Has the industry obtained ISO 9000/ISO 14000/OSHAS 18000 / Any other EM accreditation/Certificate or recognition?	:	Yes, As per **Annexure – A 1**
(14)	Whether the industry has adopted cleaner production/cleaner technology/CDM?	:	No
(B)	**PRODUCT DETAILS**		
(1)	Name of products & capacity with yield / purity per day.	:	As per **Annexure – B 1**
(2)	Name of all by products and its quantity per day.	:	As per **Annexure – B 2**
(3)	Date of commencement of production for each product. Whether production is as per consented quantity:	:	As per **Annexure – B 3**
(4)	All raw materials required per kg of the products.	:	As per **Annexure – B 4**
(5)	Whether the manufacturing process is continuous or batch	:	Continuous As per **Annexure – B 5**

	wise.		
	Indicate the batch capacity	:	NA
	If the process is batch wise operation, no. of batches / month along with the duration of the completion of each batch	:	NA
(6)	Detailed manufacturing process with schematic flow diagram	:	As per **Annexure – B 6**
	List of unit operations & processes & with all chemical reactions, along with the time required (in hrs.) for completion of each unit operation / process and the total time for completion the entire batch	:	As per **Annexure – B 6**
	Mass balance in respect of the quantity of water, input of raw materials and waste water generation.	:	As per **Annexure – B 6**
(C)	**WATER**		
(1)	The quantity of water consumed per day as well as per tone of product manufactured	:	As per **Annexure – C 1**
		:	
(2)	The quantity of wastewater (trade waste) generated per tone of each product per day, as well as per batch over last three years	:	As per **Annexure – C 2**
(3)	The particulars of effluent treatment i.e.:		
	(i) Name & size of the unit	:	As per **Annexure – C 3**
	(ii) The Capacity of the ETP	:	As per **Annexure – C 3**

	(iii) Flow diagram & Hydraulic Diagram of ETP	:	As per **Annexure – C 3**
	(iv) Whether lighting arrangement around ETP is provided.	:	As per **Annexure – C 3**
	(v) Whether the separate energy meter for effluent treatment plant area is installed. If yes, reading of the meter for consumption every month	:	As per **Annexure – C 3**
	(vi) Whether flow meter is provided at the inlet & outlet of ETP. Please indicate the type of the flow meter.	:	As per **Annexure – C 3**
(4)	The method of disposal of final treated effluent & the final point of disposal of effluent (please attach sketch)	:	As per **Annexure – C 3**
(5)	The quality of trade effluent at the inlet and outlet of ETP and at various stages of treatment.	:	As per **Annexure – C 4**
(6)	The quantity and quality of sewage & its method of treatment and disposal. (Attach separate sheets) a) As per norms b) Total Pollution load*	:	
(7)	The open area available for disposal of the effluent.	:	**237730.77 m^2**
(8)	Whether the quality of treated effluent meets the specified norms. If no; the extent of deviation and reasons thereof.	:	As per **Annexure X A**

(9)	Improvement in effluent quality and quantity since previous environmental audit based on performance evaluation of effluent management systems. If yes, provide details (Attach separate sheets)	:	No significant change as compared to last year.
(10)	Retrofitting undertaken to improve performance of ETP. If yes, provide details.	:	None
(11)	Major problems encountered during operation of effluent treatment facilities, if any and reasons thereof.	:	No problems were encountered during the operation of ETP
(12)	The details about the operators / chemist responsible for operation & maintenance of effluent treatment plant:	:	As per **Annexure – C 5**
	(i) Name of the operators / employees.	:	As per **Annexure – C 5**
	(ii) Qualification and experience of each operator / employee whether trained in such operation or not	:	As per **Annexure – C 5**
	(iii) Salary of operators / employee.	:	As per **Annexure – C 5**
(13)	The current status of consent under the Water Act -1974.	:	As per **Annexure – C 6**
(D)	**AIR**		
(1)	No. of the flue gas stacks, their height (from ground level), nature & consumption of fuel.	:	As per **Annexure – D 1, D 2**
(2)	The details pertaining to the Stack Monitoring facilities.	:	As per **Annexure – D 1, D 2**

(3)	Number of process stacks, their height (from ground level), source, expected pollutants & the details pertaining to the provision of Stack Monitoring Facilities.	:	As per **Annexure – D 3**
(4)	The quality of emission from each flue gas stack & the process stack & the extent of deviation from them.	:	As per **Annexure – D 4**
(5)	The ambient air quality within the factory premises, along with the number of ambient air quality - monitoring stations outside the industry.	:	As per **Annexure – D 5**
(6)	The status of consent under the Air Act -1981.	:	As per **Annexure – D 6**
(7)	The details of air pollution control measures for all process & flue gas stacks.	:	As per **Annexure – D 7**
(8)	Improvement in emission quality since previous environmental audit based on performance evaluation of air pollution management system. If yes, provide details. (Attach separate sheets)		NA
(9)	Retrofitting undertaken to improve emission quality. If yes, provide details.		NA
(10)	Major problems encountered during operation of control device, If any and reasons thereof.		NA

	* Whether production is as per consented quantity. NOTE: Total pollution load each for air, water and hazardous waste should have mentioned along with the quality of effluent, emission or solid waste as the case may be. Whether measures taken for reduction of pollution load		
(E)	**HAZARDOUS (SOLID) WASTE**		
(1)	The quantity, sources & composition of hazardous waste / solid waste from each process / sources over the last three years (The total generation of the sludge per tone of product manufactured).	:	As per **Annexure – E 1, E 3**
	Whether it is as per the consented quantity		As per **Annexure – E 1**
(2)	(a) The method of storage, treatment & disposal of hazardous / solid waste. The details should include area of storage and disposal and whether storage and disposal system is covered made impervious (pucca).	:	As per **Annexure – E 2**
	The quantity of Hazardous waste sent to TSDF.		As per **Annexure – E 2**
	Please also indicate how the quantity of hazardous/solid shall be reduced in next three months		NA
	b) The data/information about leachate generation, quantity & characteristics and treatment facility.		As per **Annexure – E 2**
(3)	The status of authorization under the EPA 86 for solid waste.	:	As per **Annexure – E 4**
(4)	Plan, if any to reduce hazardous waste generation or its recycling.		-

(F)	**Site plan**		
(1)	The **site plan** showing the location of Effluent Treatment Plant, final point of disposal of effluent, sampling point, drainage line, stacks, solid waste storage, disposal area & green belt (its width)	:	As per **Annexure – F 1**
(G)	**Resource Recovery**		
(1)	(i) The details regarding **resource recovery** including treated effluent for recycle/reuse from environmental pollution control system including effluent treatment plant.	:	As per **Annexure – G 1**
	(ii) The details regarding resource recovery / by product recovery from manufacturing process by using cleaner production technology.	:	As per **Annexure – G 1**
(H)	**HEALTH**		
(1)	Whether any hazard is involved in the manufacturing or from the work environment. If Yes; the details thereof	:	As per **Annexure – H 1**
(2)	Whether industry has pre employment & periodical medical examination facilities. If Yes; the details thereof	:	As per **Annexure – H 1**
(3)	Whether health records are maintained regarding adverse effect on the health of workers. If Yes; details thereof.	:	As per **Annexure – H 1**

<table>
<tr><td>(4)</td><td>Whether industry has appointed a factory medical officer.
IF Yes; full time or part time.
Include the details about the name, address and qualification of the factory medical officer.</td><td>:</td><td>Yes, health records were maintained regarding adverse effects on the health of workers.
Name : Dr. Hasmukh Soni
Address: 1, sugam park, nava road, mahavir nagar, himatnagar.</td></tr>
<tr><td>(5)</td><td>Details of medical facilities available. Please tick (√) correct column:</td><td>:</td><td><table><tr><td>Dispensary</td><td></td></tr><tr><td>Ambulance</td><td></td></tr><tr><td>Hospital</td><td></td></tr><tr><td>First Aid Box</td><td></td></tr></table></td></tr>
<tr><td>(6)</td><td>Whether sanitary facilities like water closets, urinals, bathroom are provided and are satisfactory.</td><td></td><td>Yes</td></tr>
<tr><td>(I)</td><td>Accidents</td><td></td><td></td></tr>
<tr><td>(1)</td><td>The details of accidents in the factory & remedial measure taken.</td><td>:</td><td>As per Annexure – I 1</td></tr>
<tr><td>(J)</td><td>SAFETY MEASURES</td><td></td><td></td></tr>
<tr><td>(1)</td><td>General Environmental of the factory: Please tick (√) the appropriate column.</td><td></td><td></td></tr>
<tr><td></td><td colspan="3"><table><tr><th>Particulars</th><th>Good</th><th>Fair</th><th>Poor</th></tr><tr><td>(a) House keeping</td><td></td><td>√</td><td></td></tr><tr><td>(b) Dustiness</td><td></td><td>√</td><td></td></tr><tr><td>(c) Lighting</td><td>√</td><td></td><td></td></tr><tr><td>(d) Ventilation</td><td></td><td>√</td><td></td></tr></table></td></tr>
<tr><td>(2)</td><td>Whether the following protective appliances are provided to all the persons. IF YES; HOW MANY?</td><td>:</td><td>Yes</td></tr>
</table>

	<table><tr><th>Sr No.</th><th>Particulars</th><th>Yes / No</th><th>Numbers</th></tr><tr><td>a.</td><td>Googles</td><td>Yes</td><td>50</td></tr><tr><td>b.</td><td>Gloves</td><td>Yes</td><td>50</td></tr><tr><td>c.</td><td>Gumboot</td><td>Yes</td><td>50</td></tr><tr><td>d.</td><td>Helmet</td><td>Yes</td><td>50</td></tr><tr><td>e.</td><td>Skin cream</td><td>Yes</td><td>50</td></tr><tr><td>f.</td><td>Soap</td><td>Yes</td><td>50</td></tr><tr><td>g.</td><td>Ear plug</td><td>Yes</td><td>50</td></tr><tr><td>h.</td><td>Face masks</td><td>Yes</td><td>50</td></tr><tr><td>i.</td><td>Clothing</td><td>Yes</td><td>50</td></tr></table>		
(3)	The details of facilities for disaster management / Gas leakage	:	As per **Annexure – J 1**
(4)	Whether on site / off site emergency plans are prepared and are being implemented / upgraded regularly; Please give details.	:	As per **Annexure – J 2**
(5)	Whether records of occupational hazards are maintained?		NA
(6)	Preventive measures adopted to minimize occupational hazard.		NA
(K)	**REMEDIAL MEASURES**		
(1)	The details of sources; monitoring & measures taken for control of **noise pollution** in & around the industrial premises.	:	As per **Annexure – K 1**
(2)	The measures taken for prevention treatment & control of **odor nuisance** in & around the industrial premises.	:	As per **Annexure – K 2**

(3)	The details in respect of cases / **complaints** under the Water Act 74, the Air Act 81 & the EPA 86.	:	As per **Annexure – K 3**
(4)	The **compliance report** with respect to all the conditions of NOC/ Consent (Under all the Acts).	:	As per **Annexure – K 4**
(5)	Incidents of spillages, leakages etc. And remedial measures thereof.	:	As per **Annexure – K 5**
(6)	(a) Whether Insurance Policy obtained under **PLI Act**?	:	As per **Annexure – K 6**
	(b) If Yes; give details.	:	
(L)	WATER CESS		
(1)	The details regarding payment of the **Water Cess** for the previous & current year.	:	As per **Annexure – L 1**
(M)	The name and address of the **consultant engaged** by the company / industry.	:	As per **Annexure – M 1**

It is declared that all the information submitted in & with respect to this format is correct and we will be responsible for any lapse regarding incorrect or incomplete information.

	(A)		(B)
	Name & Signature of the recognized person of the Industry / Organization Institute with stamp		**Name & signature of all the member of the audit team.**
	Name **Signature**		**Name** **Signature**
	Mr. Bhupesh Rahevar		Dr. Savan Tank
			Dr. Parwathi Pillai
			Ms. Brinda Govani
			Ms. Apeksha Brahmbhatt

Swarnim Startup & Innovation University Gandhinagar

Annexure – A 1

Introduction to Industry

Annexure – A 1

Introduction to Industry

(1)	Name of the Industry	:	**M/s. Gujarat Ambuja Exports Limited**
(2)	Location	:	**Plot No. 1 Biochemical Division, Vrindavan Road, Dalpur Ta-Prantij Dist- Sabarkantha Gujarat. Pin code : 383120**
(3)	Registered Office Address	:	**Gujarat Ambuja Exports Ltd. Opp. Sindhubhavan, Sindhubhavan road, Bodakdev Ahmedabad-380059**
(4)	Month & Year of establishment	:	July,1995
(5)	(a) No. of workers employed	:	476
	(b) Male / Female.	:	Male : 474 Female: 02
(6)	No. of Shifts and timings		

Sr. No.	Shift	Timings
1	First	07 To 15 HRS
2	Second	15 To 23 HRS
3	Third	23 To 07 HRS
4	**	**

(7)	Details of accreditation / certification or any other recognition			
	Certificates	**Issued by**	**Issued on**	**Valid up to**
1	ISO 9001:2015 ISO 22000:2018	Alcumous ISOQAR Alcumous ISOQAR	28/09/2021 22/09/2021	15/10/2024 15/10/2024
2	ISO 14000	**	**	**
3	ISO 18000	**	**	**

Details of Plant working days

Month	Working Days
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31
January	31
February	28
March	31
Total	365

Annexure – A 2

Details of Electric Consumption

Annexure – A 2

Details of Electric connections

Sr. No.	Service provider with service no.	Connected load
1.	33222	2634 KVA

Details of Electric consumption per ton of product manufactured

MONTH	CPP (4.2)	BIOGAS ENGINE	TOTAL	ETP	APCM
	(BCD)				
	KWH		KWH	KWH	KWH
Apr-23	2881400	716545	3597945	64360	5470
May-23	2618300	650359	3268659	58220	6130
Jun-23	2775000	563879	3338879	57430	8700
Jul-23	3036300	385048	3421348	70180	10620
Aug-23	2894900	0	2894900	63480	11890
Sep-23	2923300	255799	3179099	63210	5750
Oct-23	2882300	447244	3329544	71810	5920
Nov-23	2763700	485230	3248930	58690	5970
Dec-23	2875400	237185	3112585	66857	6020
Jan-24	3012200	613860	3626060	73180	6900
Feb-24	2247988	448301	2696289	59710	6100
Mar-24	2332029	425176	2757205	56320	6500
TOTAL :	**33242817**	**5228626**	**38471443**	**763447**	**85970**

* Standard consumption of per ton of the product:

Comparison of Electricity consumption per ton of Product

	April 2022 – March 2023	April 2023 – March 2024	% Enhancement	Savings
Product manufactured (Ton)	141011.340		158.51	-
Electric Consumption (KWH)	36711447		4846.33	-
Energy consumed per ton of product	3131.023		36835.56	-

D.G Sets with their capacity

Sr. No.	D.G Set Detail	Capacity, KWH
S.R.No:03110799/2526320	Make : Cummins	750 KVA

Annexure – A 3

List of Directors

Annexure – A 3

List of Directors

Sr. No	Name of The Director	Designation	Residential Address & Telephone No.
1	Mr. Manish Vijaykumar Gupta	Chairman & MD	23,24,25 kalhar Exotica Ashwamegh Co-operative So. Ltd. Sola, Ahmedabad-380060
2	Mrs. Sulochna V Gupta	Director	8, Pratima Society nr, Dada Sahib na pagla, Navrangpura, A'Bad-380009
3.	Mr. Sandeep N Agrawal	Whole time Director	B-302 Sankalp grace, B\H Rajput club, Bodakdev, A'Bad-380059
4.	Mr. Vishwavir Saran Das	Director	C-101, Kasturi-3 Thaltej Shilaj Road, Thaltej, Ahmedabad-380059
5.	Mr. Sandeep Singhi	Director	B-1102, Sundervan Epitome ,Opp. Star India Bazar, Satelite, Ahmedabad-280054
6	Mr. Maitri M Mehta	Director	Shriyaj, Sterling Park, Near Sterling Hospital, Memnagar, Ahmedabad.

Industry Telephone No.: 02772-226252
Industry Fax No.: 02772-226256
Industry E mail ID.: corn@ambujagroup.com

Annexure – B 1

Product Details

Annexure – B 1

NAME OF PRODUCTS AND CAPACITY WITH YIELD & PURITY PER DAY

Sr. No.	Name of Product	Installed Capacity (MT/Month)	Yield / Purity per day
1	Starch	736.91	-
2	Glucose		-
3	Dextrose		-
4	Malto		-
5	Sorbitol (70%)		-
6	Dextrose Anhydrous		-
7	Gluten (By product)	39.56	-
8	Maize Husk Dry (Germ) (By Product)	61.12	-
9	Husk (By Product)	145.94	-
10	Power (C.P.P. – DG Set)	2.2 MW	-
11	Power (C.P.P. – Steam Based	1.5 – 2.0 MW	-

Month Wise Production Details

MONTH	STARCH	GLUCOSE	DEXTROSE	DAH	MALTO	SORBITOL 70 %	TOTAL
	MT.	MT.	MT.		MT.	MT.	MT.
Apr-23	4919.5	1524.8	630.2	230.0	359.1	1580.0	9243.6
May-23	4515.0	1447.5	519.9	173.5	339.6	1520.0	8515.5
Jun-23	4767.5	1431.4	451.8	214.0	314.1	1540.0	8718.7
Jul-23	4820.0	1688.2	506.5	244.5	355.1	1950.0	9564.2
Aug-23	4858.3	1577.9	543.3	228.0	350.3	1910.0	9467.8
Sep-23	4741.5	1332.9	538.5	224.5	310.4	1390.0	8537.8
Oct-23	5225.5	1830.8	577.8	232.0	363.7	1025.0	9254.8
Nov-23	4901.5	1568.8	588.8	223.0	338.1	1590.0	9210.1
Dec-23	5044.0	1654.1	693.0	231.5	309.0	785.0	8716.6
Jan-24	5002.5	1691.4	751.6	251.0	331.3	1685.0	9712.8
Feb-24	3732.5	1279.5	611.2	214.5	312.4	1060.0	7210.0
Mar-24	4296.3	1543.2	538.7	222.0	282.8	1080.0	7962.9
TOTAL :	**43792.8**	**14056.4**	**5049.5**	**2001.0**	**3039.3**	**13290.0**	**81229.0**

Annexure – B 2

By-product Details

Annexure – B 2

Details of By-products

MONTH	GLUTEN	MAIZE HUSK DRY (GERM)	TOTAL HUSK (DRY)	TOTAL
	MT.	MT.	MT.	MT.
Apr-23	545.7	752.0	1715.4	3013.1
May-23	486.0	678.6	1526.2	2690.8
Jun-23	467.7	733.4	1669.2	2870.3
Jul-23	516.3	814.0	1980.7	3311.0
Aug-23	485.4	790.8	2012.5	3288.7
Sep-23	434.7	720.6	1723.2	2878.5
Oct-23	512.4	753.6	1759.4	3025.4
Nov-23	514.8	733.6	1820.4	3068.8
Dec-23	493.5	755.6	1695.9	2945.0
Jan-24	550.5	826.4	1920.9	3297.8
Feb-24	327.3	566.8	1531.8	2425.9
Mar-24	360.6	677.0	1659.9	2697.5
TOTAL :	**4456.5**	**6732.2**	**15902.8**	**27091.5**

Annexure – B 3

Date of commencement of production

Annexure - B 3

Production details

Name of Product	Date of Commencement	Consented Quantity (MT/Month)	Actual production during audit current period (MT/Month)	Complied or not
Starch	01/07/1995	9750	5225.5	Complied
Glucose	01/07/1995		1830.8	
Dextrose	01/07/1995		577.8	
Malto	01/07/1995		232	
Sorbitol (70%)	14/02/2005		363.7	
Dextrose Anhydrous	14/02/2005		1025	
	Total	**9750**	**9254.8**	

Annexure – B 4

Details of Raw Materials

Annexure – B 4

Details of raw materials required per kg of product

Sr. NO.	Name of Product	Name of Raw Materials	Kg/kg
1	MAIZE	MAIZE SEED	
2			
3			
4			

Annexure – B 4

Details of Raw Materials Consumption Per MT of Production

MONTH	RM (MT)
Apr-23	13837.18
May-23	12707.06
Jun-23	13150.02
Jul-23	14325.00
Aug-23	14230.00
Sep-23	12982.00
Oct-23	14176.69
Nov-23	13824.45
Dec-23	13433.00
Jan-24	14989.00
Feb-24	11185.61
Mar-24	12481.83
TOTAL :	**161321.83**

Annexure – B 5

Type of Manufacturing Process

Annexure – B 5

Details of type of manufacturing process

Name of Product	Batch / Continuous	Batch capacity	No. of batch / Month	Duration of the completion of each batch
Starch	Batch	45 MT.	106 NOS.	6.76
Glucose	Batch	120 MT.	12 NOS.	59.80
Dextrose	Batch	30 MT.	19 NOS.	36.102
Malto	Batch	30 MT.	9 NOS.	72.828
Sorbitol (70%)	Batch	120 MT.	12 NOS.	58.842
Dextrose Anhydrous	Batch	10 MT.	22 NOS.	32.610
Power (C.P.P. – DG Set)	Continuous			
Power (C.P.P. – Steam Based	Continuous			

Annexure – B 6

Manufacturing Process with Flow diagram

Annexure – B 6

Details of Manufacturing Process

Annexure – C 1

Quantity of water consumed

Annexure – C 1

Quantity of Water Consumed

WATER CONSUMPTION FOR THE YEAR 2023-24

MONTH	Industrial Cooling boiler	Domestic	Processing Bio-degradable	TOTAL
Apr-23	15492	598	24946	41036
May-23	14140	605	22771	37516
Jun-23	14809	614	23846	39269
Jul-23	16191	609	26073	42873
Aug-23	16079	505	25903	42487
Sep-23	14624	493	23552	38669
Oct-23	15971	444	25717	42132
Nov-23	15577	372	25088	41037
Dec-23	15070	336	24270	39676
Jan-24	16794	305	27048	44147
Feb-24	12390	212	19949	32551
Mar-24	13685	204	22042	35931
TOTAL :	**180822**	**5297**	**291205**	**477324**

Annexure – C 2

Quantity of wastewater generated

Annexure – C 2

Quantity of Wastewater Generated

Sr. No.	Month	Wastewater generated per day	Wastewater generated ton of product
1	April	22213	2.33
2	May	27200	2.24
3	June	26263	2.20
4	July	23454	2.19
5	August	24784	2.25
6	September	24635	2.05
7	October	26757	2.19
8	November	26499	2.07
9	December	26395	2.07
10	January	25396	2.03
11	February	23202	2.14
12	March	26507	2.11

Standard waste water generated per ton of product

		April 2021 - March 2022	April 2022 - March 2023	April 2023 - March 2024
A.	Wastewater generated, Kl / Day	299212	303305	303305
B.	Wastewater generated, Per ton of product	2.51	2.15	--

Annexure – C 2

Quantity of Water Consumed and Wastewater Generated

Sr. No.	Month (Year 2023 – 24)	Ind. Boiler/cooling Water KL	Domestic Water KL	Process Water KL	Total KL
1	April	15492	598	24946	41036
2	May	14140	605	22771	37516
3	June	14809	614	23846	39269
4	July	16191	609	26073	42873
5	August	16079	505	25903	42487
6	September	14624	493	23552	38669
7	October	15971	444	25717	42132
8	November	15577	372	25088	41037
9	December	15070	336	24270	39676
10	January	16794	305	27048	44147
11	February	12390	212	19949	32551
12	March	15492	598	24946	41036
	Total	**180822**	**5297**	**291205**	**477324**

Annexure – C 2					
Quantity of Water Consumed And Wastewater Generated Product wise					
Sr. No.	**Product**	**Water Consumed**		**Waste Water Generated**	
		KL/Day	**KL/MT**	**KL/day**	**KL/MT**
1)	Starch	740	1.48	328.0	0.65
2)	Glucose	16.5	0.3	137.5	2.5
3)	Dextrose	6.6	0.3	88.0	4.0
4)	Malto	3.6	0.3	12.0	1.0
5)	Sorbitol (70%)	200	3.33	180	3.0
6)	Dextrose Anhydrous	13.84	1.62	25	2.94
7)	Power (C.P.P. – DG Set)				-
8)	Power (C.P.P. – Steam Based				

Annexure – C 3

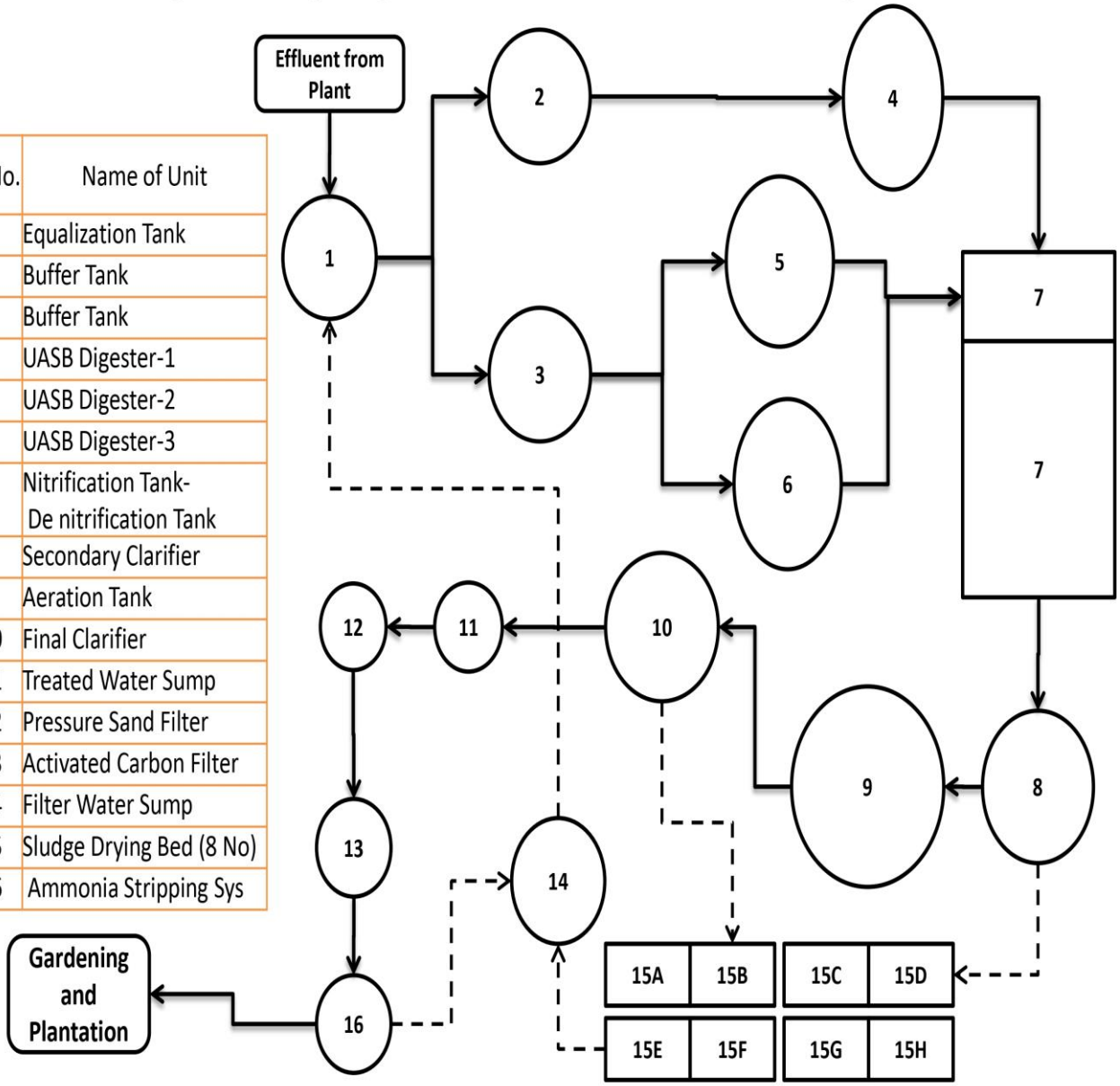
Particulars of Effluent Treatment Plant

Annexure C 3

Flow diagram of ETP

Gujarat Ambuja Exports Limited Effluent treatment diagram

Sr. No.	Name of Unit
1	Equalization Tank
2	Buffer Tank
3	Buffer Tank
4	UASB Digester-1
5	UASB Digester-2
6	UASB Digester-3
7	Nitrification Tank- De nitrification Tank
8	Secondary Clarifier
9	Aeration Tank
10	Final Clarifier
11	Treated Water Sump
12	Pressure Sand Filter
13	Activated Carbon Filter
14	Filter Water Sump
15	Sludge Drying Bed (8 No)
16	Ammonia Stripping Sys



Name and size of each unit

Sr. No.	Name of ETP Unit	Size	Hydraulic capacity
1	Equalization Tank	9.0 Ø ×7.3 H	464.0
2	Buffer Tank	9.0 Ø ×4.3 H	273.4
3	Buffer Tank	9.0 Ø ×2.4 H	152.6
4	UASB Digester-1	24.0 Ø ×9.0 H	4069.4
5	UASB Digester-2	19.5 Ø ×11.0 H	3283.0
6	UASB Digester-3	19.5 Ø ×11.0 H	3283.0
7	Nitrification-Dentrification Tank	10.0×30.0×3.0	900.0
8	Secondary Clarifier	9.0 Ø ×4.0 H	254.3
9	Aeration Tank	27.0 Ø ×4.0 H	2289.0
10	Final Clarifier	11.0 Ø ×3.0 H	285.0
11	Treated Water Sump	4.6 Ø ×2.8 H	46.5
12	Pressure Sand Filter	2.5 Ø ×2.0 H	**
13	Activated Carbon Filter	2.5 Ø ×2.0 H	**
14	Filter Water Sump	3.6 Ø ×3.85 H	39.0
15	Sludge Drying Bed(No:8)	10.0 Ø ×8.0 H	**
16	Ammonia Stripping System(set)	3.0 Ø ×5.5 H	**

Details of Electric Consumption at ETP

	ETP	APCM
	KWH	KWH
April	64360	5470
May	58220	6130
June	57430	8700
July	70180	10620
August	63480	11890
September	63210	5750
October	71810	5920
November	58690	5970
December	66857	6020
January	73180	6900
February	59710	6100
March	56320	6500
	763447	**85970**

Details of Chemical Consumption at ETP

Sr. No.	Month & Year (2023-24)	Name of Chemical consumed (Kg) Columns may be added
1	April	N.A
2	May	N.A
3	June	N.A
4	July	N.A
5	August	N.A
6	September	N.A
7	October	N.A
8	November	N.A
9	December	N.A
10	January	N.A
11	February	N.A
12	March	N.A

Details of flowmeters

	Inlet of ETP	Outlet of ETP
Type of Flowmeter	N.A	Magnetic Flow Meter

Annexure – C 4

Quality of Trade effluent (Effluent Analysis Report)

ANNEXURE – C 4

EFFLUENT ANALYSIS REPORT

1ST MONITORING

Sr. No.	Parameter	Units					Permissible Limit as per GPCB norms	
			1	2	3	4		
1.	pH	-	5.94	8.1	7.5	7.9	6.5-8.5	- ve
2.	TDS	mg/L	9051	2021	2564	2105	2100	- ve
3.	Suspended Solids	mg/L	2156	68	101	99.5	100	- ve
4.	COD	mg/L	894	86	156	98.5	100	- ve
5.	BOD	mg/L	265	23	24	29	30	- ve
6.	Oil & Grease	mg/L	8.6	1.6	0.04	0.03	10	- ve
7.	Ammonical Nitrogen	mg/L	11.6	1.6	1.2	1.9	50	- ve
8.	Phenolic Compound	mg/L	-	-	-	-	-	- ve
9.	Chloride	mg/L	506	584	551	452	600	- ve
10.	Sulphate	mg/L	236	123	159	153	1000	- ve
11.	Sulfide	mg/L	3.9	2.6	2.4	1.2	2	- ve
12.	Temperature	^{0}C	29	35	26	29	40	- ve
13.	Copper	mg/L	BDL	BDL	BDL	BDL	-	- ve
14.	Lead	mg/L	BDL	BDL	BDL	BDL	-	- ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

Sr. No.	Description of WW sample
1	ETP Inlet
2	Final Outlet
3	Digester Outlet
4	Buffer

ANNEXURE – C 4

EFFLUENT ANALYSIS REPORT

2nd MONITORING

S. N.	Parameter	Units				Permissible Limit as per GPCB norms	*% Deviation
			1	2	3		
1.	pH	-	6.10	7.6	7.4	6.5-8.5	- ve
2.	TDS	mg/L	8648	1658	2056	2100	- ve
3.	Suspended Solids	mg/L	1253	56	41	100	- ve
4.	COD	mg/L	694	81	94	100	- ve
5.	BOD	mg/L	154	29	28	30	- ve
6.	Ammonical Nitrogen	mg/L	8.1	BDL	BDL	50	- ve
7.	Temperature	^{0}C	30	31	30	40	- ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

Sr. No.	Description of WW sample
1	ETP Inlet
2	Final Outlet
3	Buffer

ANNEXURE – C 4

EFFLUENT ANALYSIS REPORT

3rd MONITORING

Sr. No.	Parameter	Units				Permissible Limit as per GPCB norms	*% Deviation
			1	2	3		
1.	pH	-	6.1	7.1	7.2	6.5-8.5	- ve
2.	TDS	mg/L	6489	1705	1985	2100	- ve
3.	Suspended Solids	mg/L	998	54	88	100	- ve
4.	COD	mg/L	795	56	91	100	- ve
5.	BOD	mg/L	214	56	29	30	- ve
6.	Ammonical Nitrogen	mg/L	3.2	BDL	0.3	50	- ve
7.	Temperature	^{0}C	32	33	36	40	- ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

Sr. No.	Description of WW sample
1	ETP Inlet
2	Final Outlet
3	Buffer

Annexure – C 4

Quality of Raw Water

Sr. No.	Parameter	Raw Water
1	pH	7.1
2	Total dissolved Solids	846
3	Chlorides	156
4	Total Alkalinity	59
5	Phosphate	04
6	Total Hardness	435
9	Sulphate	1.2

NOTE: ALL PARAMETERS ARE EXPRESSED IN mg/l: EXCEPT pH

Annexure – C 5

Details About operators/Chemist Associated with ETP

ANNEXURE – C 5

Details about Operators / Chemists Responsible for Operation and Maintenance of ETP

SR. NO.	NAME	QUALIFICATION	EXPERIENCE (YEARS)	SALARY (Rs./MONTH)
1	Bharat Goswami	Bsc. Chemisrty	20 Year	30000/-
2	JashvantJ Chauhan	OPERATOR	25 year	18000/-
3	Govardhan M Makwana	OPERATOR	24 year	18000/-
4	Jayanti PMakwana	OPERATOR	24 year	18000/-
5	Kuvarji Parmar	OPERATOR	8 year	18000/-
6	Nitinkumar VNinama	Ass.Operator	3 year	14000/-
7	MukeshJ Chauhan	Ass.Operator	10 year	14000/-
8	Alpesh Makwana	Ass.Operator	7 year	14000/-
9	Alpesh C Parmar	Ass.Operator	7 year	14000/-
10	Chetanpuri Goswami	Ass.Operator	7 year	14000/-
11	Sanjay H Parmar	Ass.Operator	7 year	14000/-
12	Rathod Ajaykumar	Ass.Operator	2 year	14000/-
13	Chauhan Anilkumar	Ass.Operator	2 year	14000/-
14	Kiritsinh K Chauhan	Ass.Operator	2 year	14000/-
15	Kachrusinh K Makwana	Helper	25 year	12000/-
16	Karan N Makwana	Helper	24 year	12000/-
17	Ratanbhai G Bhabhor	Helper	10 year	12000/-

Annexure – C 6

Details Regarding Water Consent

Annexure – D 1

Details of Flue Gas Stack

ANNEXURE – D 1

DETAILS OF FLUE GAS STACKS

Sr. No.	Stack Attached to	APCM unit	Stack height (mt)	Parameter	Status of Stack monitoring facility (adequate or not)
1	FBCCVL Type Boiler (WATERTUBE) CAP-20 TPH	Multi cyclone separator + Scrubber	41 m	Particulate Matter, SO2, NOx	Adequate
2	CPP(Steam Base) Cap-22TPH	ESP + Water Scrubber	70 m	Particulate Matter, SO2, NOx, Mercury	Adequate
3	BioGas Engine-1	-	15 m	Particulate Matter, SO2, NOx	Adequate
4	BioGas Engine-2	-	15 m		Adequate

Annexure – D 2

Details of Fuel Consumption

ANNEXURE – D 2
Details of Fuel Consumption

MONTH	COAL	LIGNITE	BIOGAS
	MT.	MT.	M3
Apr-23	4100.619	0.000	318374
May-23	4251.809	0.000	282252
Jun-23	4123.868	0.000	240319
Jul-23	4250.955	0.000	159184
Aug-23	4250.131	0.000	0
Sep-23	4109.131	0.000	113747
Oct-23	4051.131	188.750	192626
Nov-23	3430.611	672.000	225625
Dec-23	3170.554	1059.954	237185
Jan-24	3560.700	690.550	259292
Feb-24	3614.459	0	203595
Mar-24	4114.948	0	186313
TOTAL :	**47028.916**	**2611.254**	**2418512**

Annexure – D 3

Details of Process Stack

ANNEXURE – D 3

DETAILS OF PROCESS GAS STACKS

Sr. No.	Stack Attached to	APCM unit	Stack height (mt)	Parameter	Status of Stack monitoring facility (adequate or not)
1	Old Dryer of starch Plant	Water Scrubber	17 m	Particulate Matter, SO2, NOx	adequate
2	New dryer of starch plant	Water Scrubber	17 m		Not Approachable
3	Dryer of dextrose plant	Cyclone separator	17 m		adequate
4	Dextrose converter (Flash Vessel)	Wet cyclone separator	17 m		adequate
5	Glucose converter (Flash Vessel)	Wet cyclone separator	17 m		adequate
6	Dryer	Cyclone separator	17 m		adequate

Annexure – D 4

Details of Flue Gas & Process Stack Analysis Report

ANNEXURE – D 4

FLUE GAS & PROCESS STACK MONITORING REPORT

1ST MONITORING

LOCATION	PARAMETER	UNIT	ANALYSIS RESULTS	GPCB NORMS	% DEVIATION
CPP (Steam Base Boiler)	SPM	(mg / Nm^3)	9.65	50	-ve
	SO_2	(PPM)	15.65	600	-ve
	NO_X	(PPM)	5.99	300	-ve
Bio Gas Engine – II	SPM	(mg / Nm^3)	11.65	150	-ve
	SO_2	(PPM)	13.69	100	-ve
	NO_X	(PPM)	5.21	50	-ve
Dryer Dextrose Plant	SPM	(mg / Nm^3)	25.34	150	-ve
	SO_2	(PPM)	18.48	40	-ve
	NO_X	(PPM)	4.22	25	-ve
Dextrose Converter (Flash Vessel)	SPM	(mg / Nm^3)	18.64	150	-ve
	SO_2	(PPM)	21.66	40	-ve
	NO_X	(PPM)	5.09	25	-ve
Dryer	SPM	(mg / Nm^3)	11.22	150	-ve
	SO_2	(PPM)	23.66	40	-ve
	NO_X	(PPM)	8.51	25	-ve
Dextrose Converter (Flash Vessel)	SPM	(mg / Nm^3)		150	-ve
	SO_2	(PPM)		40	-ve
	NO_X	(PPM)		25	-ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

ANNEXURE – D 4

FLUE GAS & PROCESS STACK MONITORING REPORT

2nd MONITORING

LOCATION	PARAMETER	UNIT	ANALYSIS RESULTS	GPCB NORMS	% DEVIATION
CPP (Steam Base Boiler)	SPM	(mg / Nm^3)	8.12	50	-ve
	SO_2	(PPM)	12.32	600	-ve
	NO_X	(PPM)	6.51	300	-ve
Dryer Dextrose Plant	SPM	(mg / Nm^3)	20.90	150	-ve
	SO_2	(PPM)	16.21	40	-ve
	NO_X	(PPM)	8.87	25	-ve
Dextrose Converter (Flash Vessel)	SPM	(mg / Nm^3)	12.62	150	-ve
	SO_2	(PPM)	16.54	40	-ve
	NO_X	(PPM)	6.21	25	-ve
Glucose Converter	SPM	(mg / Nm^3)	11.62	150	-ve
	SO_2	(PPM)	14.22	40	-ve
	NO_X	(PPM)	6.84	25	-ve
Dryer	SPM	(mg / Nm^3)	19.68	150	-ve
	SO_2	(PPM)	14.95	40	-ve
	NO_X	(PPM)	6.25	25	-ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

ANNEXURE – D 4

FLUE GAS & PROCESS STACK MONITORING REPORT

3rd MONITORING

LOCATION	PARAMETER	UNIT	ANALYSIS RESULTS	GPCB NORMS	% DEVIATION
CPP (Steam Base Boiler)	SPM	(mg / Nm^3)	12.43	50	-ve
	SO_2	(PPM)	24.19	600	-ve
	NO_X	(PPM)	16.14	300	-ve
Dryer Dextrose Plant	SPM	(mg / Nm^3)	11.09	150	-ve
	SO_2	(PPM)	14.04	40	-ve
	NO_X	(PPM)	8.21	25	-ve
Dextrose Converter (Flash Vessel)	SPM	(mg / Nm^3)	22.69	150	-ve
	SO_2	(PPM)	13.69	40	-ve
	NO_X	(PPM)	8.4	25	-ve
Glucose Converter	SPM	(mg / Nm^3)	9.65	150	-ve
	SO_2	(PPM)	14.51	40	-ve
	NO_X	(PPM)	5.61	25	-ve
New Dryer	SPM	(mg / Nm^3)	15.68	150	-ve
	SO_2	(PPM)	7.65	40	-ve
	NO_X	(PPM)	6.69	25	-ve
DG Set	SPM	(mg / Nm^3)	11.32	-	-ve
	SO_2	(PPM)	8.1	-	-ve
	NO_X	(PPM)	4.2	-	-ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

Annexure – D 5

Details of Ambient Air Monitoring

ANNEXURE – D 5

AMBIENT AIR MONITORING REPORT

1ST MONITORING: 00/00/2023

Location	Sampling Duration	Parameter	Units	Results	Permissible limit as per GPCB norms	*% Deviation
Main Gate	24 hrs	$PM_{2.5}$	µG/M^3	31.65	60	- ve
		SO_2		-	80	- ve
		NO_X		-	80	- ve
Admin Office		PM_{10}		36.54	100	- ve
		SO_2		13.64	80	- ve
		NO_X		15.46	80	- ve
Central Lab		PM_{10}		16.25	100	- ve
		SO_2		10.89	80	- ve
		NO_X		11.86	80	- ve

2nd MONITORING

Location	Sampling Duration	Parameter	Units	Results	Permissible limit as per GPCB norms	*% Deviation
Main Gate	24 hrs	$PM_{2.5}$	µG/M^3	30.26	60	- ve
		SO_2		-	80	- ve
		NO_X		-	80	- ve
Admin Office		PM_{10}		31.22	100	- ve
		SO_2		10.59	80	- ve
		NO_X		14.94	80	- ve
Central Lab		PM_{10}		15.69	100	- ve
		SO_2		11.22	80	- ve
		NO_X		9.56	80	- ve

3rd MONITORING

Location	Sampling Duration	Parameter	Units	Results	Permissible limit as per GPCB norms	*% Deviation
Main Gate	24 hrs	$PM_{2.5}$	µG/M^3	22.33	60	- ve
		SO_2		-	80	- ve
		NO_X		-	80	- ve
ETP Plant		PM_{10}		41.25	100	- ve
		SO_2		15.88	80	- ve
		NO_X		11.94	80	- ve

***Note:** A +ve value of % deviation indicates value of parameter higher than consent norms. A –ve values of % deviation indicates value of parameters within consent norms.

Annexure – D 6

Details Regarding Air Consent

Annexure – D 7

Details of air pollution measures

ANNEXURE – D 7

DETAILS OF AIR POLLUTION MEASURES

FLUE GAS STACK

Sr. No.	Stack Attached to	APCM unit
1	FBCCVL Type Boiler (WATERTUBE) CAP-20 TPH	Multi cyclone separator + Scrubber
2	CPP(Steam Base) Cap-22TPH	ESP + Water Scrubber
3	BioGas Engine-1	-
4	BioGas Engine-2	-

PROCESS STACK

Sr. No.	Stack Attached to	APCM unit
1	Old Dryer of starch Plant	Water Scrubber
2	New dryer of starch plant	Water Scrubber
3	Dryer of dextrose plant	Cyclone separator
4	Dextrose converter (Flash Vessel)	Wet cyclone separator
5	Glucose converter (Flash Vessel)	Wet cyclone separator
6	Dryer	Cyclone separator

Annexure E 1

Details of Solid / Hazardous Waste

ANNEXURE – E 1

DETAILS OF SOLID / HAZARDOUS WASTE

Sr. No.	Name of Hazardous waste / Solid waste with category no.	Source	Quantity (MT/Year)		Composition
			Consent	Generated	
1	ETP Sludge	Aerartion Tank	240	20.10	Collection, Storage, Transporation, Disposal at TSDFsite
2	Used Oil	Machinery	7.2	1.40	Collection, Storage, Transporation, disposa by seling to register Refiner
3	Sludge form wet scrubber	Scrubber	60	20.80	Collection, Storage, and reuse back in process
4	Spent carbon	Ion Exchange	1080	7.6	Collection, Storage, Transporation, Disposal to Co-processing
5	Spent Resin	Ion Exchange	1.2	0.14	Collection, Storage, Transporation, Disposal at TSDFsite
6	Process Waste	Process Plant	6	19.10	Collection, Storage, and disposal to UASB for bio degradation

Sr. No.	Name of Hazardous waste / Solid waste with category no.	Quantity per ton of product		
		2021-22	2022-23	2023-24
1	ETP Sludge	18.6	20.10	
2	Used Oil	2.47	1.40	
3	Sludge form wet scrubber	20.6	20.80	
4	Spent carbon	12.00	7.6	
5	Spent Resin	0.1	0.14	
6	Process Waste	24.4	19.10	

Annexure E 2

Details Regarding Monthly Generation of Hazardous / Solid Waste

Annexure E 2

Details of Monthly Generation / Disposal of Hazardous/Solid Waste

Sr. No.	Month (Year 2023- 24)	HZW 1 Generated					
		1	2	3	4	5	6
1	April	1.4	0.14	1.0	0.6	0.03	0.9
2	May	1.2	0.14	1.6	1.0	0	1.8
3	June	1.2	0.12	1.6	1.0	0.02	1.8
4	July	1.4	0.1	1.2	0.6	0	1.6
5	August	1	0.12	1.2	0.6	0.02	1.6
6	September	1.4	0.1	1.4	0.8	0	1.6
7	October	1.8	0.10	2.0	0.4	0.02	1.6
8	November	2.2	0.12	1.8	0.4	0	2.0
9	December	2.4	0.10	2.4	0.6	0	1.4
10	January	1.9	0.12	2.6	0.6	0.03	1.6
11	February	1.8	0.10	1.6	0.4	0	1.8
12	March	2.4	0.14	2.4	0.6	0.02	1.4
Total							

1	ETP Sludge
2	Used Oil
3	Sludge form wet scrubber
4	Spent carbon
5	Spent Resin
6	Process Waste

Sr. No.	Month (Year 2022 - 23)	HZW 1 Sent to TSDF					
1	April	0	0	1.0	0.0	0	0.9
2	May	0	0	1.6	0.0	0	1.8
3	June	0	0	1.6	0.0	0	1.8
4	July	0	0	1.2	0.0	0	1.6
5	August	0	1.27	1.2	0.0	0	1.6
6	September	0	0	1.4	0.0	0	1.6
7	October	0	0	2.0	0.0	0	1.6
8	November	0	0	1.8	0.0	0	2.0
9	December	0	0	2.4	0.0	0	1.4
10	January	0	0	2.6	11.51	0	1.6
11	February	0	0	1.6	0.0	0	1.8
12	March	0	0	2.4	0.0	0	1.4
Total		0	1.27	20.80	11.5	0.0	19.10

1	ETP Sludge
2	Used Oil
3	Sludge form wet scrubber
4	Spent carbon
5	Spent Resin
6	Process Waste

1.Disposal at TSDF Site
2.Disposal by selling to register Re refiner
3. Reuse back in process
4. Disposal of Co process
5. Disposal of TSDF Site
6. Disposal to UASB for Bio-Degradation

Annexure E 3

Analysis of Hazardous / Solid Waste

Annexure E 3

Analysis of Hazardous/Solid Waste

1ST MONITORING: 00/00/2023

Sr. No.	Parameter	Analysis Result
1	pH	7.56
2	Chloride	5.21
3	TDS	153
4	Oil & Grease	0.2
5	Ammo. Nitrogen	1.2
6	BOD	3.1
7	COD	9.1
8	Sulphate	1.3
9	Copper	BDL
10	Lead	BDL

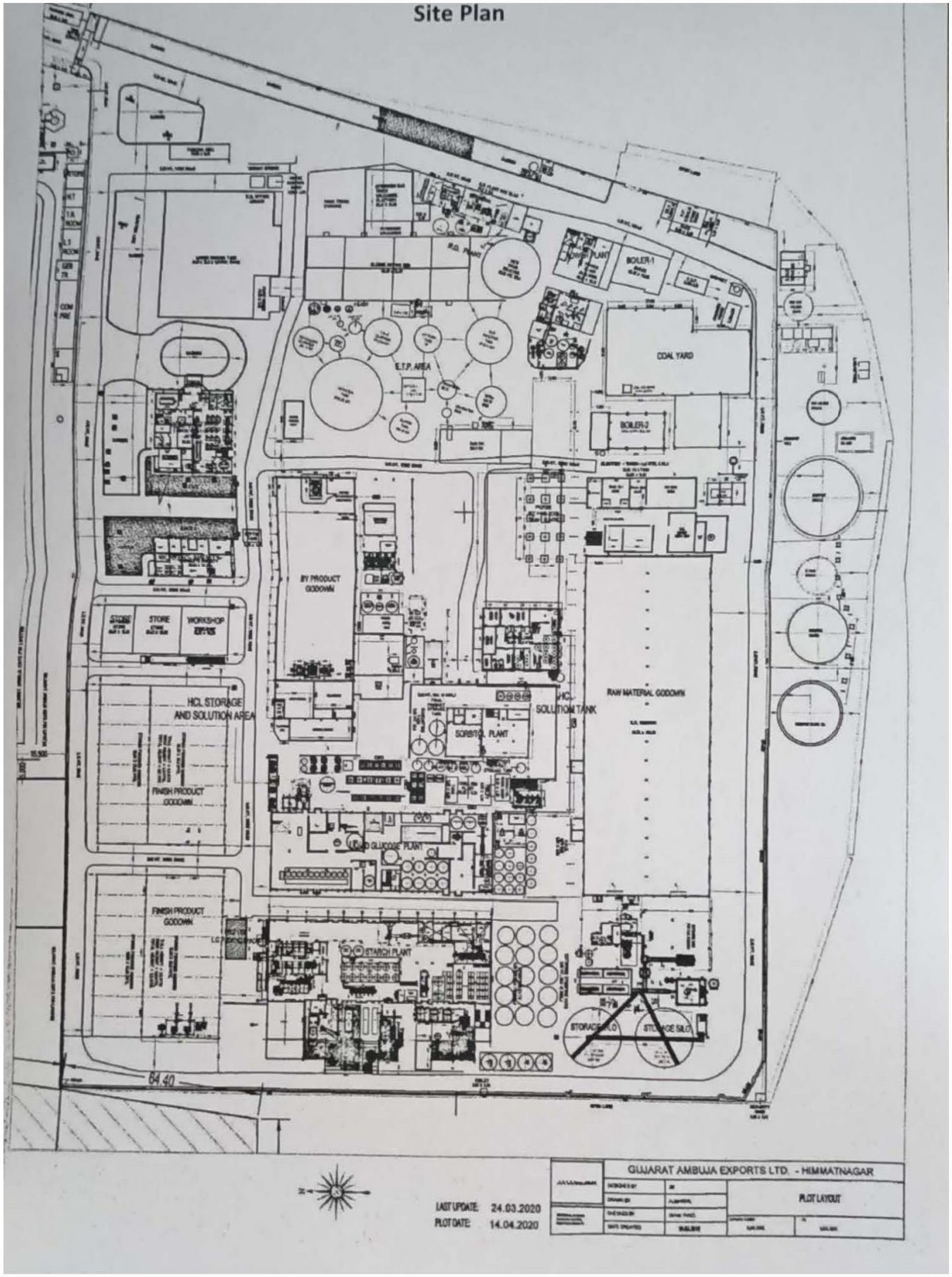
NOTE: ALL PARAMETERS ARE EXPRESSED IN mg/l: EXCEPT pH

Annexure – E 4

Details Regarding Hazardous Waste Authorization

ANNEXURE – F 1

Site Plan



Resource Recovery

Periodical medical examination
&
Health Records

Accidents

ANNEXURE – J 1

Disaster Management Plan

ANNEXURE – J 2

On site / off site emergency plan

ANNEXURE – K 1

Noise Monitoring

ANNEXURE – K 1

NOISE MONITORING

1ST MONITORING: 00/00/2023

Sr. No.	Location	Measure (dB)
1.	Main Gate	35
2.	Nr. Admin Building	21
3.	Nr. Central Lab	46
4.	Nr. ETP Plant	42

2nd & 3rd MONITORING

As per new guideline by GPCB, samples were not taken.

Annexure – K 2

Details related to Odor

Annexure – K 3

Details in respect of cases / complaints under water act 1974, Air act 1981, & the EPA 1986

Annexure – K 4

Compliance Report

ANNEXURE – K 4
COMPLIANCE REPORT

CONSOLIDATED CONSENT AND AUTHORIZATION (CC & A)

<table>
<tr><th>Sr. No.</th><th>Consent Condition</th><th>Compliance Status</th></tr>
<tr><td>1</td><td>Consent Order No. AWH-105083 Valid upto14/10/2024date of issue: 15/11/2019</td><td>Complied</td></tr>
<tr><td>1.1</td><td>The consent shall be valid up to 14/10/2024for use of outlet for the discharge of trade effluent & emission due to operation of industrial plant for manufacturing of the following items / products:
<table>
<tr><th>Sr. No.</th><th>Product</th><th>Quantity</th></tr>
<tr><td>1.</td><td>Starch</td><td rowspan="6">9750</td></tr>
<tr><td>2.</td><td>Glucose</td></tr>
<tr><td>3.</td><td>Dextrose</td></tr>
<tr><td>4.</td><td>Malto</td></tr>
<tr><td>5.</td><td>Sorbitol (70%)</td></tr>
<tr><td>6.</td><td>Dextrose Anhydrous</td></tr>
<tr><td>7.</td><td>Gluten (By product)</td><td>580</td></tr>
<tr><td>8.</td><td>Maize Husk Dry (Germ)(By product)</td><td>1026</td></tr>
<tr><td>9.</td><td>Husk (By product)</td><td>1950</td></tr>
<tr><td>10.</td><td>Power (C.P.P DG Set)</td><td>2.2 MW</td></tr>
<tr><td>11.</td><td>Power (C.P.P Steam based)</td><td>1.5 – 2.0 MW</td></tr>
</table></td><td>Complied</td></tr>
<tr><td></td><td>Specific Condition:</td><td></td></tr>
<tr><td>A</td><td>Unit shall obtain NOC permission from CGWA as per order of Hon. National green tribunal for the withdrawal of ground water at rate of 1641 KLPD</td><td>Complied</td></tr>
<tr><td>B</td><td>Unit shall provide STP for the treatment of 24 KLPD domestic waste water and unit shall obtain amendment for the same</td><td>Complied</td></tr>
<tr><td>C</td><td>Unit shall provide water meter at intake of Borewell as well as inlet and outlet of ETP.</td><td>Complied</td></tr>
<tr><td>D</td><td>Industries shall have to maintain daily record of ETP operations in separate register and shall have to submit the monthly report of the same report by first week of next month at regional office and head office of the board.</td><td>Complied</td></tr>
<tr><td>E</td><td>Unit shall comply with coal handling guidelines of the board</td><td>Complied</td></tr>
<tr><td>F</td><td>Unit shall manage solid waste generated from industrial activities as per solid waste management rules-2016</td><td>Complied</td></tr>
<tr><td>G</td><td>As per the provisions of rule-18 of solid waste management rules 2016 you are directed to make an arrangement in utilities to replace at least 5% of fuel with RDF.</td><td>Complied</td></tr>
<tr><td>H</td><td>Unit shall provide scrubber followed by ESP as APCM to the boiler and unit shall provide APCM as per the coal handling guidelines of</td><td>Complied</td></tr>
</table>

<table>
<tr><td></td><td>the board</td><td></td></tr>
<tr><td>I</td><td>Unit shall provide online monitoring system on the Boiler stack with an arrangement to reflect the monitored data on the company’s server, which can be accessed by the GPCB on real time basis.</td><td>Complied</td></tr>
<tr><td>J</td><td>Online measurement of TOC, flow & pH shall be done with an arrangement to reflect monitored data on the ETP's server, which can be accessed by the GPCB on real time basis.</td><td>Complied</td></tr>
<tr><td>K</td><td>Magnetic flow meters shall be provided at the inlet and outlet of ETP and records of the same shall be maintained and submitted to GPCB regularly.</td><td>Complied</td></tr>
<tr><td>2</td><td>CONDITIONS UNDER THE WATER ACT 1974:</td><td></td></tr>
<tr><td>2.1</td><td>The quantity of fresh water consumption for industrial purpose shall not exceed 1614 KLD.1</td><td>Complied</td></tr>
<tr><td>2.2</td><td>The quantity of fresh water consumption for domestic purpose shall not exceed 27 KLD.</td><td>Complied</td></tr>
<tr><td>2.3</td><td>The quantity of trade effluent from the industrial plant shall not exceed 1082 KLPD.</td><td>Complied</td></tr>
<tr><td>2.4</td><td>The applicant should provide adequate effluent treatment system (P+S+T treatment with three anaerobic digestors) in order to achieve the quality of the treated effluent as per GPCB norms.</td><td>Complied</td></tr>
<tr><td>2.5</td><td>The final treated effluent conforming to the standards of the consent shall be utilized on land for gardening and/or plantation purpose.</td><td>Complied</td></tr>
<tr><td>2.6</td><td>All the effluent treatment unit shall be operated and maintained efficiently so that the treated effluent always conforms to the specifications as referred in the consent.</td><td>Complied</td></tr>
<tr><td>2.7</td><td>The internal connection between various units shall be fixed pipeline</td><td>Complied</td></tr>
<tr><td>2.8</td><td>Adequate lighting arrangement shall be made all round the area of ETP.</td><td>Complied</td></tr>
<tr><td>2.9</td><td>Flow meter shall be provided on waste water reuse line and record of the waste water reuse shall be maintained.</td><td>Complied</td></tr>
<tr><td>2.10</td><td>The consent shall be lapsed automatically at any time if the discharge of trade effluent from industrial plant has been observed by the board and in case you have to close down your industrial plant immediately with intimation to board.</td><td>Complied</td></tr>
<tr><td>2.11</td><td>The quantity of sewage effluent from the industrial plant shall not exceed 24 KLD</td><td>Complied</td></tr>
<tr><td>2.12</td><td>Domestic effluent shall be disposed of through septic tank/ Soak pit system or shall be treated separately to conform the standards.</td><td>Complied</td></tr>
<tr><td>2.13</td><td>Separate meter for the record of consumption of power supply for the area off ETP shall be provided.</td><td>Complied</td></tr>
<tr><td></td><td>CONDITIONS UNDER THE AIR ACT:</td><td></td></tr>
<tr><td>3.1</td><td>The following shall be used as fuel.
<table>
<tr><th>Sr. No.</th><th>Fuel</th><th>Quantity</th></tr>
<tr><td>1</td><td>Lignite for CPP</td><td>138 MT/Day</td></tr>
<tr><td>2</td><td>Bio-Gas-I for biogas engine</td><td>20000 m3/Day</td></tr>
<tr><td>3</td><td>Bio-Gas-II for biogas engine</td><td>20000 m3/Day</td></tr>
</table></td><td>Complied</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td></tr>
<tr><td>3.2</td><td>The applicant shall install & operate air pollution control system in order to achieve norms prescribed below</td><td>Complied</td></tr>
<tr><td>3.3</td><td>The Flue gas emission through stack shall be as under.

<table><tr><th>Sr. No.</th><th>Stack Attached To</th><th>Stack Height</th><th>APCM</th><th>Parameter</th><th>Permissible Limit</th></tr><tr><td>1</td><td>FBCCVL Type Boiler (WATER TUBE) CAP-20 TPH</td><td>41 m</td><td>Multi cyclone separator + Scrubber</td><td>Particulate Matter, SO_2, NO_x</td><td>150 mg/Nm^3 100 mg/Nm^3 50 mg/Nm^3</td></tr><tr><td>2</td><td>CPP(Steam Base) Cap-22TPH</td><td>70 m</td><td>ESP + Water Scrubber</td><td>Particulate Matter, SO_2, NO_x, Mercury</td><td>50 mg/Nm^3 600 mg/Nm^3 300 mg/Nm^3 0.03 mg/Nm^3</td></tr><tr><td>3</td><td>BioGas Engine-1</td><td>15 m</td><td></td><td rowspan="2">Particulate Matter, SO_2, NO_x</td><td>150 mg/Nm^3 100 mg/Nm^3 50 mg/Nm^3</td></tr><tr><td>4</td><td>BioGas Engine-2</td><td>15 m</td><td></td></tr></table></td><td>Complied</td></tr>
<tr><td>3.4</td><td>The process emission through various stack/vent and vessel shall conform to following standards

<table><tr><th>Sr. No.</th><th>Stack Attached To</th><th>Stack Height</th><th>APCM</th><th>Parameter</th><th>Permissible Limit</th></tr><tr><td>1</td><td>Old Dryer of starch Plant</td><td>17 m</td><td>Water Scrubber</td><td rowspan="6">Particulate Matter, SO_2, NO_x</td><td rowspan="6">150 mg/Nm^3 40 mg/Nm^3 25 mg/Nm^3</td></tr><tr><td>2</td><td>New dryer of starch plant</td><td>17 m</td><td>Water Scrubber</td></tr><tr><td>3</td><td>Dryer of dextrose plant</td><td>17 m</td><td>Cyclone separator</td></tr><tr><td>4</td><td>Dextrose converter (Flash Vessel)</td><td>17 m</td><td>Wet cyclone separator</td></tr><tr><td>5</td><td>Glucose converter (Flash Vessel)</td><td>17 m</td><td>Wet cyclone separator</td></tr><tr><td>6</td><td>Dryer</td><td>17 m</td><td>Cyclone</td></tr></table></td><td>Complied</td></tr>
</table>

<table>
<tr><td></td><td><table><tr><td></td><td></td><td></td><td>Separat or</td><td></td><td></td></tr></table></td><td></td></tr>
<tr><td>3.5</td><td>The concentration of the following parameters in the ambient air within - the premises of the industry shall not exceed the limits specify hereby

<table><tr><th>Parameter</th><th>Permissible limit</th><th>24 Hrs Average</th></tr><tr><td>Particulate Matter-10
(PM 10)</td><td>60 Microgram/m_3</td><td>100 Microgram / m_3</td></tr><tr><td>Particulate Matter-10
(PM 2.5)</td><td>40 Microgram / m_3</td><td>60 Microgram / m_3</td></tr><tr><td>$S0_2$</td><td>50 Microgram/m_3</td><td>80 Microgram / m_3</td></tr><tr><td>NO_x</td><td>40 Microgram/m_3</td><td>80 Microgram / m_3</td></tr></table></td><td>Complied</td></tr>
<tr><td>3.6</td><td>The application shall install & operate air pollution control Equipment’s very efficiently and continuously so that the gaseous always conforms to the standards specified in condition No. 3.2 & 3.5above.</td><td>Complied</td></tr>
<tr><td>3.7</td><td>The CTO the industrial plant shall lapse if at any time the parameters of the gaseous emission are not within the tolerance limits specified in the condition no. 3.2 & 3.5 above.</td><td>Complied</td></tr>
<tr><td>3.8</td><td>The industry shall take adequate measures to control of noise level from its own sources within 75 dB (A) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6a.m.</td><td>Complied</td></tr>
<tr><td>3.9</td><td>The applicant shall provide proper ventilation & exhaust facilities so as to maintain healthy working atmosphere within factory premises.</td><td>Complied</td></tr>
<tr><td>4</td><td>GENERAL CONDITIONS:</td><td></td></tr>
<tr><td>4.1</td><td>Any change in personnel, equipment or working conditions as mention in the consents form/order should immediately be intimated to this board.</td><td>Complied</td></tr>
<tr><td>4.2</td><td>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. In case of failure of pollution control equipment’s, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.</td><td>Complied</td></tr>
<tr><td>4.3</td><td>Environmental management Unit / Cell shall be setup to ensure implementation on and monitoring f environmental safeguards and other conditions stipulated by statutory authorities. The environmental management cell / unit shall directly report to Chief</td><td>Complied</td></tr>
</table>

<table>
<tr><td></td><td>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.</td><td></td></tr>
<tr><td>4.4</td><td>The environmental audit shall be carried out yearly and the environmental statement pertaining to previous year shall be submitted to the board latest by 30th September every year.</td><td>Complied</td></tr>
<tr><td>4.5</td><td>The board reserves right to review and/or revoke the consent and/or make variations in the conditions, which board deems fit in accordance with section 27 of the act.</td><td>Complied</td></tr>
<tr><td>4.6</td><td>In case of change of ownership/management the name address of new owners/partners/directors/proprietor should immediately be intimated to board.</td><td>Complied</td></tr>
<tr><td>5</td><td>AUTHORIZATION FOR THE MANAGEMENT & HANDLING OF HAZARDOUS WASTES FROM-2 (SEE RULE 5(4))</td><td></td></tr>
<tr><td>5.1</td><td>Form for grant of authorization for occupier or operator handling hazardous waste.</td><td>Complied</td></tr>
<tr><td>5.2</td><td>M/s. Gujarat Ambuja Exports ltd is hereby granted an authorization to operate facility for following hazardous waste on the premises situated at Plot no. 1, Bio Chemical Division, Vrindavan Road, PO: Dalpur, Tal: Prantij, Dist: Sabarkantha as mentioned in consent.
Solid /Hazardous Waste :
<table>
<tr><th>Sr. No.</th><th>Types of hazardous waste</th><th>Category</th><th>Quantity, MT/A</th><th>Disposal mode</th></tr>
<tr><td>1</td><td>ETP Sludge</td><td>35.3</td><td>240 MT/Year</td><td>Collection, Storage, Transportation, Disposal To TSDF</td></tr>
<tr><td>2</td><td>Used Oil</td><td>5.1</td><td>7.2 MT/Year</td><td>Collection, Storage, Used AS Lubrication in Machinery & Sale Authorized Recycler</td></tr>
<tr><td>3</td><td>Sludge form wet scrubber</td><td>37.1</td><td>60 MT/Year</td><td>Collection, Storage & Return Back To Supplier</td></tr>
<tr><td>4</td><td>Spent carbon</td><td>36.2</td><td>1080 MT/Year</td><td rowspan="3">Collection, Storage, Transportation, Disposal To TSDF</td></tr>
<tr><td>5</td><td>Spent Resin</td><td>35.2</td><td>1.2 MT/Year</td></tr>
<tr><td>6</td><td>Process Waste</td><td>28.1</td><td>6 MT/Year</td></tr>
</table></td><td>Complied</td></tr>
</table>

5.3	The authorization is granted to operate a facility for collection, storage, treatment, transportation and ultimate disposal of hazardous waste as given in consent.	Complied
5.4	The authorization shall be in force for a period of 14/10/2024 from the date of application.	Complied
5.5	The authorization is subject to the conditions stated below & such other conditions as may be specified in the rules from time to time under the EPA – 1986.	Complied
6	**TERMS AND CONDITION OF AUTHORIZATION**	
6.1	The applicant shall comply with the provisions of the Environment (Protection) act-1986 and the rules made there under.	Complied
6.2	The authorization shall be prepared for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.	Complied
6.3	The persons authorized shall not rent, lend, sell, and transfer of otherwise transport the hazardous waste without obtaining prior permission of the Gujarat Pollution Control Board.	Complied
6.4	Any Un-authorized change in personnel, equipment or working condition as mention authorization order by the persons authorized shall constitute a breach of this authorization.	Complied
6.5	It is the duty of the authorised person to take permission of GPCB to close the unit.	Complied
6.6	An application for the renewal of an authorization shall be made as laid down in rule 5(6) (ii).	Complied
6.7	Industry shall have to manage waste oil; discarded container etc. as per amended rules 2003 and shall apply authorisation/submit details for all applicable waste as per amended rules within 15 days.	Complied
6.8	Industry shall submit annual report within 15 days and subsequently by 31st January every year.	Complied
6.9	As per u/t submitted by applicant, they shall procure the raw materials within India only , they have not imported raw material from other country	Complied
7	**General Conditions**	
7.1	The waste generator shall be totally responsible for (i.e. collection, storage, encapsulation, incineration, treatment, transportation and ultimate disposal) of the wastes generated.	Complied
7.2	Records of waste generation, its management & annual return shall be submitted to GPCB in Form-4 by 30th July of every year.	Complied
7.3	In case of any accident, details of the same shall be submitted in Form-5 to GPCB	Complied
7.4	As per “Public Liability Insurance Act -91” company shall get insurance policy , if applicable	Complied
7.5	Empty drums & containers of toxic & hazardous material shall be treated as per guidelines published for “Management & Handling of discarded containers”. Records of the same shall be maintained & forwarded to GPCB regularly.	Complied
7.6	No any kind of hazardous waste shall be imported without prior approval of appropriate authority.	Complied
7.7	In case of transport of hazardous waste to a facility for existing in state other than the state where hazardous wastes are generated, the occupier shall obtain NOC from SPCB or UTPCC.	Complied

7.8	Unit shall take concrete measure for minimum waste generation.	Complied
7.9	Display board should be as per NGT order.	Complied
7.10	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 waste water and air emissions and solid hazardous wastes generated within factory premise.	Complied
7.11	It is established by any competent authority that the damage is caused due to their industrial act to any person or his property in that case, they are obliged to pay the compensation is determined by the competent authority.	Complied

Annexure – K 5

Details regarding incidents of spillages, leakages etc. and remedial measures thereof

Annexure – K 6

Insurance policy details under PLI policy

Annexure – L 1

Details related to water cess

Certificate for sampling and Analysis

Certificate for sampling and Analysis

This is to certify that the following samples of emissions (air, water , waste water, solid and hazardous wastes) have been collected and analyzed as per the following details :

Sample details	Sampling location	Collected by	Sample collection	
			Date	Time
Ambient Air	Main Gate	SSIU University Audit Team	03.08.2023	09:15 AM
	Admin Office			09:40 AM
	Central Lab			10:00 AM
Wastewater	ETP Inlet			02:15 PM
	Final Outlet			02:30 PM
	Digester Outlet			02:45 PM
	Buffer			03:00 PM
	Raw Water			02:40 PM
Process Stack	CPP (Steam Base Boiler)			10:15 AM
	Bio Gas Engine – II			10:30 AM
	Dryer Dextrose Plant			10:40 AM
	Dextrose Converter (Flash Vessel)			11:00 AM
	Dryer			11:15 AM
	Dextrose Converter (Flash Vessel)			11:40 AM
Hazardous Waste	ETP Sludge			12:15 PM
Noise Monitoring	Main Gate			03:10 PM
	Nr. Admin Building			03:20 PM
	Nr. Central Lab			03:30 PM
	Nr. ETP Plant			03:45 PM
Wastewater	ETP Inlet	SSIU University Audit Team	21.11.2024	02:30 PM
	Final Outlet			02:45 PM
	Buffer			03:00 PM
	CPP (Steam Base Boiler)			10:00 AM
	Dryer Dextrose Plant			10:20 AM
	Dextrose Converter (Flash Vessel)			10:40 AM
	Glucose Converter			10:50 AM
	Dryer			11:15 AM
Ambient	Main Gate	SSIU University Audit Team	10.02.2024	09:15 AM
	ETP Plant			09:40 AM
Wastewater	ETP Inlet			11:00 AM
	Final Outlet			11:15 AM
	Buffer			11:30 AM
Process Stack	CPP (Steam Base Boiler)			12:15 PM
	Dryer Dextrose Plant			12:30 PM
	Dextrose Converter (Flash Vessel)			12:45 PM
	Glucose Converter			01:00 PM
	New Dryer			01:15 PM
	DG Set			01:30 PM

1. Parameters analyzed on site		pH, TDS, Temperature
2. Parameters analyzed off site		Wastewater / Sludge / Air
3. Whether samples were preserved as per standard procedure for off site analysis :		Yes
4. Parameters analyzed by auditors team :		All the parameters are analyzed by Swarrnim University
5. Parameters analyzed by third party: o Name & Address of the laboratory: o Whether the laboratory is classified under Schedule 1 of the GPCB		None
6. Method followed for analysis		
6.1	Wastewater / Sludge	The samples were analysed as per the APHA & IS methods for all the parameters listed in Environment Audit Report.
6.2	Air Emission	
	Flue Stack Monitoring	PM : IS:11255 (Part-1):1995-RA 2009
		SOx: : IS:11255 (Part-2):1995-RA 2009
		NOx: : IS:11255 (Part-7):1995-RA 2009
	Ambient Air Quality	PM_{10} : IS:5182(Part-23: 1999-RA 2006 $PM_{2.5}$: As per CPCB
		SO_2: : IS:5182 (Part-2): 2001-RA 2006
		NOx: : IS:5182 (Part-6): 2006-RA 2006

This is to certify that the third party laboratory in which the analysis has been done is approved under EPA/Accredited by NABL/recognized under Schedule I of GPCB.

Date: **Principal,**
Place: **SSIU University**

Adequacy Certificate of Environmental Management System

Institute of Technology, SSIU University of Ahmedabad is recognized by the GPCB, Gandhinagar under the Environmental Audit Scheme introduced by the Hon'ble High Court Gujarat, vide its Orders dtd.20-13-96 & 13-03-97 and modified vide order dated. 16-09-99, as an environmental auditor for the purpose of the auditing, having carried out Environmental Audit of,

M/S Gujarat Ambuja Exports Ltd.
Plot No. 1, (Bio Chemical Division)
Vrindavan Road, Dalpur – 383120.
Taluka: Prantij, Dist: Sabarkantha.

Manufacturing products:

Sr. No.	Products & By-Products	Capacity, MT/Month		
		Granted	Actual	Installed
1.	Starch	9750	3649.39	9750
2.	Glucose		1171.369	
3.	Dextrose		420.792	
4.	Malto		166.750	
5.	Sorbitol (70%)		253.277	
6.	Dextrose Anhydrous		1107.50	
7.	Gluten (By product)	580	371.375	580
8.	Maize Husk Dry (Germ)(By product)	1026	561.017	1026
9.	Husk (By product)	1950	1325.235	1950
10.	Power (C.P.P DG Set)	2.2 MW	2.7MW	2.2 MW
11.	Power (C.P.P Steam based)	1.5-2.0 MW		1.5-2.0 MW

Having completed the environmental audit period on personal monitoring, and audit report, prepared as per the direction of the Hon.'ble High Court in Environment Audit Scheme, it is certified that the Environmental Management System (EMS) provided by this industry for the products manufactured and capacity as stated above is adequate and efficient to achieve quality of effluents (Air + Wastewater + Solid Waste) as specified in Consent / Notifications by GPCB, Gandhinagar for the following Quantity of waste generation:

	Consent	Actual	Adequate or Not
Ground Water With drawl	1641 KL/Day		
STP Effluent	24 KL/Day		
Freshwater consumption	1641 KL/Day	1143.11	
Wastewater generation	1082 KL/Day		
Hazardous waste			
• ETP Sludge	240 MT/Year		
• Used Oil	7.2 MT/Year		
• Sludge form wet scrubber	60 MT/Year		
• Spent carbon	1080 MT/Year		
• Spent Resin	1.2 MT/Year		
• Process Waste	6 MT/Year		

1. Parameters analyzed on site		pH, TDS, Temperature
2. Parameters analyzed off site		Wastewater / Sludge / Air
3. Whether samples were preserved as per standard procedure for off site analysis :		Yes
4. Parameters analyzed by auditors team :		All the parameters are analyzed by Swarrnim University
5. Parameters analyzed by third party: ○ Name & Address of the laboratory: ○ Whether the laboratory is classified under Schedule 1 of the GPCB		None
6. Method followed for analysis		
6.1	Wastewater / Sludge	The samples were analysed as per the APHA & IS methods for all the parameters listed in Environment Audit Report.
6.2	Air Emission	
	Flue Stack Monitoring	PM : IS:11255 (Part-1):1995-RA 2009
		SOx: : IS:11255 (Part-2):1995-RA 2009
		NOx: : IS:11255 (Part-7):1995-RA 2009
	Ambient Air Quality	PM_{10} : IS:5182(Part-23: 1999-RA 2006 $PM_{2.5}$: As per CPCB
		SO_2: : IS:5182 (Part-2): 2001-RA 2006
		NOx: : IS:5182 (Part-6): 2006-RA 2006

This is to certify that the third party laboratory in which the analysis has been done is approved under EPA/Accredited by NABL/recognized under Schedule I of GPCB.

Date:
Place:

Principal,
SSIU University

Bhoyan Road, Gandhinagar

• Sludge form wet scrubber	60 MT/Year	42.1	**Adequate**
• Spent carbon	1080 MT/Year	9.9	**Adequate**
• Spent Resin	1.2 MT/Year	0.68	**Adequate**
• Process Waste	6 MT/Year	3.58	**Adequate**

This certificate is valid for the audit period only. However, it is subject to automatic cancellation in case of any change in product profile/capacity, quality & quantity of effluents emission (Air + Waste Water + Solid/Hazardous) and efficiency of EMS equipment.

This Certificate forms part of environmental audit report.

Date:
Place: Gandhinagar

Coordinator
Department of Environmental and
Environment and Chemical Engineering

Swarnim Startup & Innovation University
Gandhinagar

GUJARAT AMBUJA EXPORTS LTD.
Bio-Chemical Division
DALPUR

Reporting Period: FY 2023-24

Compliance Report for Stipulated Conditions of Environmental Clearance
EC Order No. **J-11011/779/2008 – IA II (I) on dated 17th March, 2009**

<table>
<tr><th>Sr No</th><th>Description</th><th>Compliance Status</th></tr>
<tr><td>2.0</td><td>The Ministry of Environment, Forests and Climate Change has examined the proposal and it is noted that M/s. Rallis India Limited has proposed for manufacturing of Agrochemicals with production capacity of 45790 MTPA. Besides 10,000 MTPA of formulations in the solid and liquid form and byproducts wii be manufactured at SEZ, Dahej in District bharuch in Gujarat.
<table>
<tr><th>Sr No</th><th>Particulars</th><th>Quantity</th></tr>
<tr><td rowspan="2">1</td><td>Agrochemical Technical</td><td>45790 TPA</td></tr>
<tr><td>Agrochemical Formulations</td><td>10000 TPA</td></tr>
<tr><td>2</td><td>Captive Power plant</td><td>6 MW</td></tr>
</table></td><td>Complied.
The production for the FY 2023-24 is within the capacity.
The production details are as follows:
<table>
<tr><th>Particulars</th><th>Actual FY 2023-24</th></tr>
<tr><td>Agrochemical Technical</td><td>5075.65 TPA</td></tr>
<tr><td>Agrochemical Formulations</td><td>481.61 TPA</td></tr>
<tr><td>Captive Power plant</td><td>Till plant is not implemented</td></tr>
</table></td></tr>
<tr><td>3.0</td><td>Details of products along with their production capacity are given below:
<table>
<tr><td>SR NO.</td><td>Name of product</td><td>Capacity MT/Year</td></tr>
<tr><td>1</td><td>Metribuzin</td><td>750</td></tr>
<tr><td>2</td><td>Pendimethylene</td><td>4000</td></tr>
<tr><td>3</td><td>Hexaconazole</td><td>500</td></tr>
<tr><td>4</td><td>Propiconazole</td><td>100</td></tr>
<tr><td>5</td><td>Tebuconazole</td><td>500</td></tr>
<tr><td>6</td><td>Metaconazole</td><td>300</td></tr>
<tr><td>7</td><td>Metalaxyl</td><td>200</td></tr>
<tr><td>8</td><td>Metalaxyl-M</td><td>200</td></tr>
<tr><td>9</td><td>Acephate</td><td>10000</td></tr>
<tr><td>10</td><td>2,3 Dichloro-4-Hydroxy Aniline</td><td>50</td></tr>
<tr><td>11</td><td>4-Bromo-1,2 Dichlorobenzene</td><td>50</td></tr>
<tr><td>12</td><td>Acetonitrile</td><td>50</td></tr>
</table></td><td>Complied.
As per CCA AWH-113914 dated 26.07.21 valid upto 15.04.26 the capacity of production of Metribuzin and Pendimethylene are 4000 and 5000 TPA respectively.
Therefore, the production for the FY 2023-24 is within the capacity.
The details of Authorized Product along with capacity is mentioned in Annexure-1.
The production details are as follows:
<table>
<tr><td>Name of product</td><td>Production</td></tr>
</table></td></tr>
</table>

13	Allyl Alcohol	5000
14	Atorvastatin	5
15	Pentoxazone	50
16	Epichlorohydrin	5000
17	Flumetralin	25
18	GY-250(Bisphenol-A-Epoxy Resin)	100
19	Probenazole	50
20	Trimethyl Acetonitrile	50
21	Valsartan	10
22	Allyl Glycidyl Ether	5000
23	PEKK	200
24	Difenoconazole	500
25	Dimethomorph	500
26	Mancozeb	100
27	Myclobutanil	100
28	Propineb	100
29	Thiacloprid	500
30	Thiamethoxam	100
31	Epoxyconazole	300
32	Azoxystrobin	100
33	Bispyribac Sod.	100
34	Cartap Hydrochloride	1000
35	Azimsulfuron	100
36	Kresoxim Methyl	100
37	Potassium Sorbate	10000
Total		45790
38	Captive power Plant	6 MW
39	Formulation (Solid)	5000

	MT/Year
Pendimethline	4159.28
Metribuzin	870.7
Difenoconazole	25.62
Imibenconazole	20.05
Pesticides Formulation (MT)	28.61
Pesticides Formulation (KL)	453

- The by-product details are as follows:

Name of by-product	Generation MT/Year
Spent Acid	7335.68
Sodium Sulphate	1108.53
KCl	

- The Month wise details are attached as **Annexure-2.**

40	Formulation (Liquid)	5000

List of By-Products along with their Product capacity

SR NO.	Name of Product	Capacity MT/Year
1	Spent Sulfuric Acid About (30 %)	15000
2	Spent Acid (35%)	5000
3	NaSH Solution (20%)	1118
4	Sodium Sulpahte	2000
5	Sodium Sulphite	1500
6	Sodium BI Sulphite	1500
7	Ammonium Chloride	2500
8	Ammonium Sulphate	500
9	HCL solution	5000
10	AlCl3 Solution	500

It is noted that water requirement of 1875 m3/day will be met from GIDC water supply. The total wastewater generation will be 1266.25 m3/day. The effluent will be segregated into high TDS effluent from the process which will be sent to proposed evaporation system. Water will be evaporated , condensed and recycled to process/ scrubber or sent to proposed ETP. After recovery of solvent from mother liquor, water will be sent to ETP. The biodegradable effluent will be sent to ETP for primary , secondary, and tertiary treatment . The final treated effluent will be discharged through GIDC sewer line to deep sea. Power requirement of 6 MW will be met from the captive power plant (CPP). Till CPP is completed , company would purchase power from GRID/DGVCL/Torrent power. DG sets of 3 MW capacity will be installed for emergency power back up.

Complied.

- As per CCA AWH-113914 dated 26.07.21 valid upto 15.04.26, the water consumption permission is 1905 KLD.
- The Average is as below:

Water Consumption from GIDC	Avg of FY 2023-24
Raw water	413.38 KLD

- For general stream wastewater, the process begins with separating and collecting effluents in equalization tanks. These undergo flocculation and settling in primary clarifiers to remove solids before biological treatment in reactors. Secondary treatment includes further settling and filtration to ensure the water meets discharge

<table>
<tr>
<td></td>
<td></td>
<td>standards for disposal. A portion of treated wastewater is fed to RO (Reverse Osmosis) system. The permeate, through this process, is then recycled back into our industrial activities.
• Complex wastewater undergoes a pre-treatment phase where it is mixed in sumps and collection tanks, followed by pH adjustment in neutralization tanks. Then it is passed through evaporator system. The condensate from the system is further treated with general stream. And the solids are disposed off to TSDF/end-users.
• As per CCA AWH-113914 dated 26.07.21 valid upto 15.04.26, the Waste water generation permission is 1291.25 KLD.
<table>
<tr><td>Particular</td><td>Avg of FY 2023-24</td></tr>
<tr><td>Waste water generation</td><td>186.7 KLD</td></tr>
</table>
• The month wise details of water consumption and waste water generation are attached as Annexure-3.
• As CPP plant is not implemented, we are purchasing electricity from Torrent power and the DG sets is installed at site as stand by.</td>
</tr>
<tr>
<td>5.0</td>
<td>The sources of air pollution will be flue gas emission & process gas emissions from the stack attached to the boilers , CPP, process vents attached to reactor.</td>
<td>Complied.

Scrubbers are provided through</td>
</tr>
</table>

	The process emissions in the form of HCL, SO2, NH3, and H2S will be scrubbed with water & caustic scrubbers. Tertiary scrubber would also be installed . Before scrubbing the HCL and SO2 to the scrubbers, these gases will be pass through primary and secondary condensers to remove solvents. The gases will be pass through primary and secondary condensers to remove solvents. The gases free from solvents will be trapped in VOC trapped to recover traces of VOC before scrubbing.	condenser.
6.0	The hazardous wastes generation will be in the form of used / spent oil (5 MTPA) which will be collected, stored, transported & disposed by selling to registered reprocessors. Process waste / waste residue (4000 MTPA) containing pesticides & date expired/off specification products (10 MTPA) will be collected, stored, incinerated at second unit / common incinerator. ETP sludge (7500 MTPA) will be disposed at nearest TSDF site at BEIL, Ankleshwar . Discarded containers (35000 nos. /annum) will be sold to authorized agencies after decontamination & detoxification. Discarded bags / liners (20 MTPA) will be disposed by incineration at second unit / re-use. Distillation residue (100 MTPA) fro, contaminated organic solvents will be incinerated at second unit / common incinerator.	**Complied.** • As per CCA AWH-113914 dated 26.07.21 valid upto 15.04.26, the hazardous waste generation, management and disposal details are attached as **Annexure-4**. • The month-wise details of Hazardous waste generation and disposal are attached as **Annexure-5.**
7.0	The project activity is listed at 5(b) in the schedule of EIA notification ,2006 and is of 'A' category . The proposal was considered by the expect appraisal committee (l) in its 91 st meeting held on 9th to 11 th February, 2009. The committee recommended the proposal for environmental clearance . As the unit is located in the industrial estate, the public hearing / consultation of the project is not required as per Para 7 (i) –lll (b)- public consolation of EIA notification,2006.	**Noted.**
8.0	Based on the information submitted by the project authorities, the ministry of environment and forests hereby accords the environmental clearance to the	**Noted.**

<table>
<tr><td></td><td>above project under the provisions of EIA Notification dates 14th September, 2006 subject to compliance of the following specific and general conditions:</td><td></td></tr>
<tr><td>A</td><td colspan="2">SPECIFIC CONDITIONS</td></tr>
<tr><td>I</td><td>The effluent generation shall not exceed 1266.25m3/d. The effluent shall be segregated based on their bio-degradability. The high TDS effluent generated from the process shall be evaporated. The condensate from the evaporator shall be condensed and recycled to process / scrubber or sent to ETP. After recovery of solvent from mother liquor water shall be sent to ETP. The treated effluent shall meet the industry specific discharge standards. The biodegradable effluent after primary secondary and tertiary treatment shall be sent to guard pond for bioassay test before discharging into GIDC sewer for final disposal into deep sea.</td><td>Complied.

• As per CCA AWH-113914 dated 26.07.21 valid upto 15.04.26, the Waste water generation permission is 1291.25 KLD.
<table><tr><td>Particular</td><td>Avg of FY 2023-24</td></tr><tr><td>Waste water generation</td><td>186.7 KLD</td></tr></table>• Unit is monitoring the final treated effluent regularly. Moreover, third party agency is also monitoring periodically.
• The results are found within the prescribed permissible limits.
• The Monitoring results are attached as Annexure-6.</td></tr>
<tr><td>II</td><td>The company shall undertake water conservation measures to minimize the fresh water conservation.</td><td>Complied.
• Unit is implementing best practices to minimum usage of fresh water.
• Unit has installed RO system after the secondary treatment. The permeate is recycled in industrial purposes.</td></tr>
<tr><td>III</td><td>The unit shall carry out the monitoring for all pesticides in the ground water. Results shall be submitted to the Ministry and Ministry's Regional Office at Bhopal.</td><td>Complied.

The results are attached as Annexure-7.</td></tr>
<tr><td>IV</td><td>The gaseous emissions (SO2, NOx, HCl, HC, NH3, Cl2, H2S and VOC) along with SPM and RSPM from</td><td>Complied.</td></tr>
</table>

	various process units and work environment shall be monitored regularly and shall conform to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.	• As per the given permissible limits in CC&A, process gas stack monitoring done through third party agency. The results are found well within the limits. • The Monitoring results are attached as **Annexure-8.**
V	Flue gas emissions from the CPP, Boilers, DG sets shall be dispersed through stack of height as per CPCB standards. Acoustic enclosures shall be provided to the DG sets to mitigate noise pollution.	**Complied.** • As per the given permissible limits in CC&A, process gas stack monitoring done through third party agency. The results are found well within the limits. • The Monitoring results are attached as **Annexure-9.** • Acoustic enclosures is provided to the DG sets to reduce the noise pollution.
VI	The company shall provide the monitoring arrangement with all the vents for monitoring of (SO2, NOx, HCI, HC, NH3, Cl2, H2S and VOC) along with PM, SPM and RSPM and reports shall be submitted to the SPCB, CPCB and Ministry's Regional Office at Bhopal.	**Complied.** • As per the given permissible limits in CC&A, process gas stack monitoring done through third party agency. The results are found well within the limits. • The Monitoring results are attached as **Annexure-8.**
VII	Standards notified for pesticides unit under the Environment (Protection) Act, 1986 and amended time to time shall be followed by the Unit.	**Complied.** • Unit is following all the rules and regulations as amended.
VIII	The height of stacks shall be as per the CPCB guidelines. For control of process emissions like HCI, SO2, NH3, Cl2 and H2S etc. high efficiency water and caustic scrubbers with dual chamber shall be provided.	**Complied.** • Adequate height is provided with SMF with required APCM.
IX	The project authorities shall provide the chilled brine	**Complied.**

	solution in secondary condenser for condensation of the VOCs. The project authority shall ensure that the solvent recovery shall not be less than 95%. The VOC monitoring shall be carried in the solvent storage area and data submitted to the Ministry.	• Unit has provided Chilled brine circulation system is provided to condensate solvent vapors and reduce solvent losses.
X	Solvent management shall be as follows : A. Reactor shall be connected to chilled brine condenser system B. Reactor and solvent handling pump shall have mechanical seals to prevent leakages. C. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery D. Solvents shall be stored in a separate space specified with all safety measures. E. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. F. Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.	**Complied.** unit has provided the following solvent management methods which is given below: A. The entire manufacturing activities & distillation process within the unit are carried out in totally closed system and Chilled brine circulation for vapor condensation B. Reactor and solvent handling pump having mechanical seal to prevent leakages. C. The condensers are provided with the sufficient HTA and residence time to achieve more than 95% recovery D. Separate space for storage of solvents is provided with all safety measures under PESO premises. E. Proper earthling is provided in all the electrical equipment wherever solvent handling is done. F. Entire plants are flame proof. The solvent storage tanks provided with breather valve to prevent losses.
XI	Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be	**Complied.**

	regularly monitored. The emissions shall conform to the limits imposed by MPCB.	• Work area monitoring is done by 3rd party. • The results are attached as **Annexure-10.**
XII	For control of fugitive emission and VOCs following steps shall be followed : 1. Closed handling system shall be provided for chemicals 2. Reflux condenser shall be provided over reducer 3. Solvent handling pump shall be provided with mechanical seals to prevent leakages 4. System of leak detection and repair of pump/pipeline based on preventive maintenance. 5. Solvent shall be taken from underground storage tanks to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water.	**Complied.** • Closed handling system and Seal-less pumps/Mechanical seal are provided for hazardous/toxic chemical handling. • LDAR (Leak Detection And Repairs) system is being followed to reduce VOC / HC emission. • VOC monitoring is being carried out through third party.
XIII	Use of toxic solvents like Methylene Chloride (M.C.) etc. shall be minimized to the extent possible. Benzene shall not be used as solvent and no odorous compounds/gas like Mercaptans or Hydrogen Sulfide shall be used or formed in any of reactions at the site.	**Complied.** • Unit is not using Methylene Chloride OR Benzene or Mercaptan at the site.
XIV	All the storage tanks shall be under negative pressure to avoid any leakages. Breathers, N2 blanketing and condensers will be provided for all the storage tanks. Closed handling systems for chemicals and solvents will be provided. Magnetic seals will be provided for pumps/agitators for reactors for reduction of fugitive emissions. Chilled Brine based condensers shall be used to prevent VOC emissions. Solvent traps shall be installed wherever necessary.	**Complied.** • Nitrogen blanketing is used for certain material storages. • Breather valves are provided for solvent storages wherever necessary. Closed handling system and Seal-less pumps/Mechanical seal are provided. • Solvent traps/ Condensers are provided. Chilled Brine system is provided for VOC emission control. VOC monitoring is being carried out through third party.
XV	All venting equipment shall have vapour recovery	**Complied.**

	system. All the pumps and other equipment's where there is a likelihood of HC leakages shall be provided with Leak Detection and Repair (L.DAR) system and LEL indicators and Hydrocarbon detectors. Provision for immediate isolation of such equipment, in case of a leakage will also be made. The company shall provide a well defined Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions. The detectors sensitivity will be in ppm levels.	• LDAR (Leak Detection And Repairs) system is being followed to reduce VOC / HC emission.
XVI	During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.	**Complied.** • Transfer of material is done under supervision.
XVII	The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management, Handling and Trans Boundary Movement) Rules, 2008. Authorization from the SPCB_ shall be obtained for collections/treatment/ storage/disposal of hazardous wastes.	**Complied.** • CCA AWH-113914 dated 26.07.21 valid upto 15.04.26 is obtained from GPCB. • The copy of the same is attached as **Annexure-11**.
XVIII	The company shall make adequate arrangement for control of odour nuisance from the plant premises. There shall be no odour from the unit.	**Complied.**
XIX	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	**Complied.** • Periodical health check up is done every Six monthly and the records for the same is maintained. • The health reports are attached as **Annexure-12**.
XX	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	**Complied.** • Fire hydrant line is installed at every plant premises.
XXI	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-	**Complied.**

	employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	• Training is imparted to all employees while joining the organization and through refresher courses on safety, health and environment. • There is Safety Talk every day which includes different themes on safety, health and environmental aspects. • Unit has obtained Accreditation of ISO 45001:2018 & ISO 14001:2015. • Pre employment and routine periodical medical examination for all employees has been conducted annual and six month basis. • Training on various safety aspects has been given to all employees. Moreover, Safety week / World Environment Day is celebrated every year in order to sensitize all employees.
XXII	Usage of PPEs by all employees/ workers shall be ensured.	**Complied.** • It is observed that PPEs are given to each employee and worker as per the requirement.
XXIII	The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP) for pesticide units.	**Complied.** • The Company has spent for environmental protection measures along with the projects implemented. The revenue expenditure for environmental protection measures is included in budget and sufficient amount is available.

XXIV	The project authorities shall develop greenbelt in 33% of project area as per the guidelines of CPCB to mitigate the effect of fugitive emission.	**Complied.** • Existing land area is 83110.70 sqm. We have allotted greenbelt in an area of 32123 sqm covering 38% of total project area. • 12000 m2 of land is also developed at Kosamdi Village which is located near Ankleshwar which approximately 65 kms away from our site.
XXV	The recommendations made in the EIA/EMP/Risk assessment study — shall be complied with.	**Complied.**
B	**GENERAL CONDITIONS**	
I	The project authorities shall strictly adhere to the stipulations of the SPCB/state government or any statutory body.	**Noted.**
II	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	**Complied.** • Unit has not started any expansion /Modification in the plant for increasing the capacity of product without approval of MoEF&CC /SPCB. • For any modernization/product mix change we have applied to state pollution control board and obtain product mix change CTE/CC&A.
III	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	**Complied.** • Unit is complying all rules and regulations as per MSIHC Rules and Hazardous waste rule & their amendments from time to time. • Unit has obtained authorization

		from SPCB.
IV	Ambient air quality monitoring stations shall be set up in the downwind direction as well as where maximum ground level concentration are anticipated in consultation with the State Pollution Control Board.	**Complied.** • Ambient Air monitoring stations are in upwind and downward direction.
V	For control of process emissions, stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided. The scrubbed water shall be sent to ETP for further treatment.	**Complied.** • SMF is as per rules. And the blow down is treated in ETP.
VI	The company shall undertake following Waste Minimization measures :- • Metering of quantities of active ingredients to minimize waste. • Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. • Maximizing recoveries • Use of automated material transfer system to minimize spillage. • Use of "Closed Feed" system into batch reactors.	**Complied.** • Hazardous waste is being monitored on daily basis and report is being sent to top management. • Unit has also adopted automated system for filling and packing. Also, closed loop system is used in reactors to minimize wastage. • All venting of equipment are connected to condensors/ process Scrubbers to scrub excess vapour. • Unit is using high pressure hose system for equipment cleaning.
VIII	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	**Complied.** • Noise monitoring done through third party agency. The results are found well within the limits. • The Monitoring results are attached as **Annexure-13.**
IX	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.	**Complied.** • Unit has separate Environmental Management Cell. Which

		working on improving in environmental performance by converting waste streams into valuable products, improving ETP performance etc. • Water, VOC, Noise Level Monitoring are carried out in our internal laboratory. • Also, Environmental Audit is being carried out regularly & the report is submitted to GPCB.
X	The adequate financial provisions shall be made in the budget of the project for implementation of the above suggested environmental safeguards. Fund so earmarked shall not be diverted for any other purposes.	**Complied.** • The revenue expenditure for environmental protection measures is included in our budget and sufficient amount is available.
XI	The project authorities shall provide rainwater harvesting system and ground water recharge.	**Complied.** • Unit is collecting the rain water from Roof Top area and reuse for gardening/nearby cooling tower. • Unit do not recharge ground water.
XII	The implementation of the project vis-a-vis environmental action plans shall be monitored by Ministry's Regional Office /SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies.	**Complied.** • Unit is submitting the half yearly compliance report regularly to the MoEF&CC/SPCB/CPCB.
XIII	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local	**Complied.** Unit had given advertisement at the time of approval.

	newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Ministry's Regional Office.	
XIV	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	**Complied.**
9.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	**Noted.**
10.0	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	**Noted and shall be complied.**
11.0	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.	**Noted.**
12.0	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Wastes (Management, Handling and Trans Boundary) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	**Complied.** • Unit is complying all the said rules and regulations as per & their amendments from time to time. • Unit has obtained authorization under Air, Water & Hazard act from SPCB. • Also, Unit have PLI policy valid upto April'25. The policy is attached as **Annexure-14**.

N It is declared that all the information submitted in & with respect to this format by us is correct and for any lapse regarding incorrect information or not giving complete information we are responsible for that.

A	**Name & Signature of the recognized person of the Industry/Organization Institute with stamp**		**Signature**
1.	**Mr. Balkrishn Patidar** Unit Head – Operations		
2.	**Mr. Suhash Salunkhe** Senior Manager- Production		
3.	**Mr. M Balamurugan** Assistant General Manager-Head Eng.		
4.	**Mr. Ratnadeep Patel** Manager- EHS		
B	**Name & Signature of Team members, Department of Civil Engineering**		**Signature**
1	**Dr. Savan Tank** Co-ordinator		
2	**Dr. Parwathi Pillai** Chemical Engineer		
3	**Ms. Brinda Govani** Environmental Engineer		
4	**Ms. Apeksha Brahmbhatt** Microbiologist		
The Environment Management System Adequacy Efficacy Certificate		:	Attached

quality of effluents (Air + Wastewater + Solid Waste) as specified in Consent/Notifications by GPCB, Gandhinagar for the following quantity of waste generation.

d) Liquid effluent : 186.70 KL/Day

e) Solid waste :

No.	Type of Waste	Category *	Quantity MT/Y
1	Used spent Oil	5.1	5 MT/Y
2	Process waste	29.1	4000 MT/Y
3	ETP Sludge	35.3	7500 MT/Y
4	Date expired and off specification pesticides	29.3	10 MT/Y
5	Discarded Containers	33.1	35000 Nos/Y
6	Discarded bags/liners	33.1	20 MT/Y
7	Distillation residue from contaminated organic solvents	36.1	100 MT/Y

*Category 5.1,29.1,35.3,29.3,36.1shall be disposed to M/S BEIL/SEPPL/RSPL & 33.1 to Regd. Recyclers.

f) Air Emission (Flue gas stack as well as process stacks) : Adequate efficacious Pl. refer Annexure - XV

This certificate is valid for the audit period only. However, it is subject to automatic cancellation in case of any change in product profile/capacity, quality & quantity of effluents (Air + Water + Solid/Hazardous) and efficiency of EMS equipment.

This certificate forms part of the Environmental Audit report.

Date:
Place: Gandhinagar

Name & Address of the Auditor:
Swarrnim Institute of Technology
Swarrnim Startup and Innovation University, Gandhinagar

Signature of the Authorized Person

(Dr. Savan Tank)
Coordinator
Environmental Audit Team

Swarrnim Startup & Innovation University Gandhinagar

Sr. No	List of Products	Quantity (MT/A)
1	Metribuzin	4000
2	Pendimethylene	5000
3	Hexaconazole	500
4	Propiconazole	100
5	Tebuconazole	500
6	Metconazole	1000
7	Metalaxyl	200
8	Metalaxyl-M	200
9	Allyl alcohol	2750
10	Atorvastratin	5
11	Pentoxazone	50
12	Flumetrain	25
13	Gy-250 (bisphenol-a-epoxy resin)	100
14	Probenazole	50
15	Valsartan	10
16	Pekk	500
17	Difenoconazole	500
18	Dimethomorph	500
19	Myclobutanil	100
20	Propineb	100
21	Thiamethoxam	100
22	Epoxyconazole	300
23	Azoxystrobin	100
24	Bispyribac sod.	300
25	Cartop hydrochloride	1000
26	Azimsulfuron	100
27	Kresoxim methyl	100
28	Trifloxystorbin	200
29	Imibenconazole	200
30	Tricyclozole	200
31	Aromatic Ketone	200
32	(2- 4-phenylbenzoyl)benzoic acid	130
33	KM 119	150
34	Benfuresate	200
35	Benzofenap	200
36	Triazolinone	1000
37	Quizalofop	100
38	Flumioxazine	100
39	Thiophanat Methyl	700

40	Iprovalicarb	150
41	Fenoxaprop-P –ethyl	100
42	Imidachloropid	200
43	Pinacolone	1990
44	Amicarbazone	1000
45	6 FMI	100
46	Dimoxystrobin	10
47	Orysastrobin	10
48	Atrazine	1200
49	Fluoxastrobin	100
50	Fenoxycarb	100
51	Cyproconazole	100
52	Diafenthiuron	100
53	Fipronil	100
54	Thiamethoxam-M	100
55	Metsulfuron	100
56	Clodinafop	100
57	Chlorimuron	100
58	Pyrazosulfuron	100
59	Propaquizafop	100
60	3-Amino pentane	2000
61	Bis-stearylformal (BSF)	100
62	Pyraftalid	250
63	Propargyl-ABO	500
64	MOAT (N-methoxy-1-(2,4,6-trichlorophenyl propan)-2-amine	500
65	Caprolactam disulphide	400
66	Cologne	1500
67	Cyclopropylacetylene	1200
68	4-Chloro-2-(trifluoroacetyl)aniline hydrochloride	1200
69	Guanine	1500
70	N,O-Dimethyl-N'-nitrosourea	600
71	Tetrachlorovinphos	600
72	Amitrol	1000
73	Aclonifen	500
74	Pilot Plant (R&D Products Only)	10
Formulation		
1	Pesticide Formulation (Solid)	5000
2	Pesticide Formulation (Liquid)	5000

Production details						
Month	**Pendimethylene**	**Metribuzin**	**Difenoconazole**	**Imibenconazole**	**Pesticides Formulation (MT)**	**Pesticides Formulation (KL)**
Apr-23	163.46	59.60	0.00	0.00	0.00	85.00
May-23	456.56	141.30	0.00	0.00	0.00	0.00
Jun-23	443.04	50.50	0.00	0.00	0.00	0.00
Jul-23	452.15	87.20	0.00	0.00	8.02	32.00
Aug-23	436.41	155.60	4.53	0.00	0.00	48.00
Sep-23	437.24	100.20	12.75	0.00	0.00	16.00
Oct-23	465.16	37.50	8.35	0.00	5.04	48.00
Nov-23	366.36	0.00	0.00	0.00	0.00	80.00
Dec-23	25.94	35.40	0.00	2.93	4.03	96.00
Jan-24	302.55	0.00	0.00	6.34	0.00	16.00
Feb-24	398.20	74.20	0.00	5.95	0.00	32.00
Mar-24	212.20	129.20	0.00	4.83	11.52	0.00
Total	4159.28	870.70	25.62	20.05	28.61	453.00
AVG/Month	346.61	72.56	2.14	1.67	2.38	37.75
AVG/Day	11.40	2.39	0.07	0.05	0.08	1.24

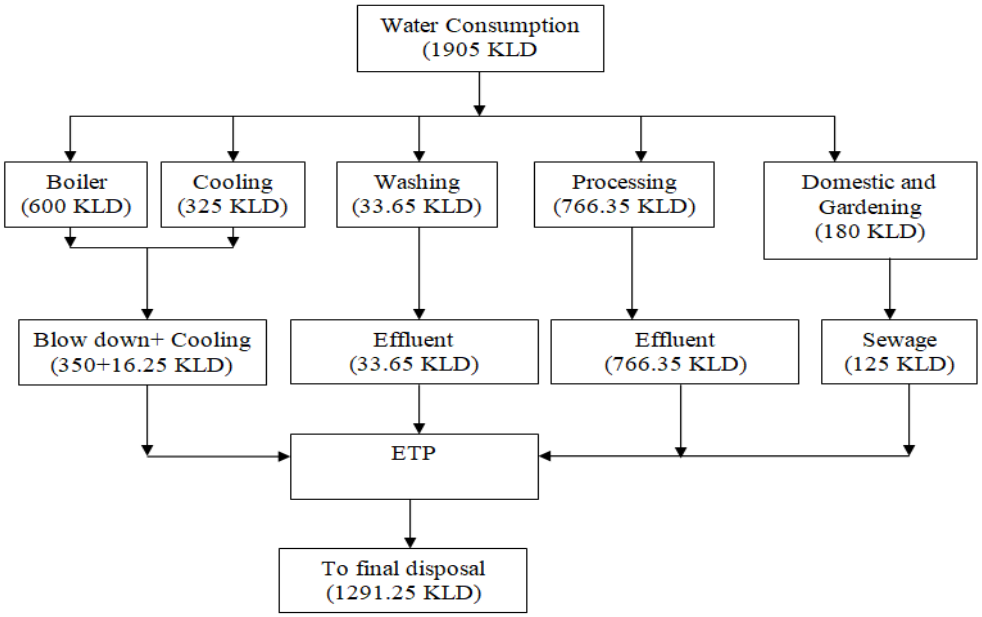
By-product Details (MT)		
Month	**Spent Sulfuric acid**	**Sodium Sulphate**
Apr-23	217.47	0.00
May-23	863.27	0.00
Jun-23	722.10	74.69
Jul-23	860.74	103.19
Aug-23	767.41	132.14
Sep-23	673.89	74.77
Oct-23	790.64	214.92
Nov-23	590.30	113.88
Dec-23	303.40	114.21
Jan-24	471.72	40.19
Feb-24	682.85	60.83
Mar-24	453.69	179.71
Total	7397.48	1108.53
AVG/Month	616.46	92.38
AVG/Day	20.27	3.04

Total Water Consumption			
Month	**Raw water from GIDC**	**Recycled Water**	**Total water consumption**
Apr-23	14189.00	3176.39	17365.39
May-23	16216.00	3539.43	19755.43
Jun-23	11937.00	3962.71	15899.71
Jul-23	12210.00	5770.29	17980.29
Aug-23	14247.00	8362.39	22609.39
Sep-23	11598.00	7711.41	19309.41
Oct-23	10968.00	5727.48	16695.48
Nov-23	11573.00	3887.76	15460.76
Dec-23	9596.00	2896.77	12492.77
Jan-24	10260.00	2990.98	13250.98
Feb-24	13089.00	4924.05	18013.05
Mar-24	15000.00	6337.85	21337.85
Total	150883.00	59287.51	210170.51
AVG/Month	12573.58	4940.63	17514.21
AVG/Day	413.38	162.43	575.81
Water Consumption/ MT of product	37.819		

Average fresh water consumption over the last three years:

Year	Total	Average water Consumption (m^3/Day)
2021-22	143953	425.43
2022-23	159467	436.90
2023-24	150883	413.38

WATER BALANCE DIAGRAM



Waste water Generation	
Month	Unit in KL (Industrial+Domestic)
Apr-23	3999.00
May-23	5297.00
Jun-23	4497.00
Jul-23	6138.00
Aug-23	7148.00
Sep-23	7522.00
Oct-23	6411.00
Nov-23	5662.00
Dec-23	4298.00
Jan-24	5193.00
Feb-24	5763.00
Mar-24	6218.00
Total	68146.00
AVG/Month	5678.83
AVG/Day	186.70

Average wastewater generation over the last three years:

Year	Total	Average Wastewater Generation (m^3/day)
2021-22	46867	135.38
2022-23	57917	160.88
2023-24	68146	186.70

Sr. No.	Haz Waste Name	CCA Category	Quantity (MT/A)	Mode of Disposal
1	Used/ Spent Oil	S.1	5	Collection, Storage, Transportation & Disposal by reuse selling to registered re-refiner.
2	Process Waste	29.1	4000	Collection, Storage, Transportation & Disposal to Common incineration at BElL/SEPPL or co- processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
3	ETP Sludge	35.3	7500	Collection, Storage, Transportation & Disposal to Common TSDF at BEI L/SEPPL or co- processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
4	Date-expired and off - specification pesticides	29.3	10	Collection, Storage, Transportation & Disposal to Common incineration at BEIL/SEPPL or co- processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
5	Discarded Containers	33.1	35000 Nos	Collection, Storage, decontamination, Transportation , Disposal by selling to authorized decontamination facility or common facility of BEIL, Dahej
6	Discarded bags/ liners	33.1	20	Collection, Storage, Decontamination, Transportation, Disposal by selling to authorized decontamination facility or common facil ity of BEIL, Dahej
7	Distillation residue from contaminate organic solvents	36.1	100	Collection, Storage, Transportation & Disposal to Common incineration at BEIL/SEPPL or co- processing at Ultra Téch Cement limited, Shree Cement or pre-processing at RSPL, GSPL

8	Spent Sulfuric Acid About (30%)	29.6/B-15	12000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU. Optional Mode - Shall be sent to Common MEEs facility. (DIPL & BEIL), Co processing units and Inhouse Neutralization on need basis.
9	Spent Acid (35%)	29.6/B-15	3000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU. Optional Mode - Shall be sent to Common MEEs facility. (DIPL & BEIL), Co processing units and Inhouse Neutralization on need basis.
10	NaHS Solution (20%)	B-37	718	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
11	Sodium Sulfate	B-36	3000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
12	Sodium Sulphite	B-15/B-23/B-36	800	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.

13	Sodium Bi Sulphate	B-23	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
14	Ammonium Chloride	A-10/B-15	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
15	Ammonium Sulphate	A-10/B-15	500	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
16	HCl Solution	29.6/B-15	1650	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
17	AlCl3 Solution	B-10	2820	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
18	Recovered Solvent	29.4/B-28	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
19	Ammonium Acetate	A-10/B-15	400	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.

20	Spent KOH	B-32	100	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
21	Spent Acetic Acid	29.6/B-15	700	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
22	Sodium Iodide	B-18	300	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
23	Potassium Sulphate	B-36	300	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
24	Potassium chloride	B-36	1260	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
25	Sodium Chloride	B-36	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
26	Sodium Phosphate	B-35	1200	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.

27	Phosphoric Acid	29.6/B-15	950	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.
28	Sodium Nitrate	B-36	920	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule 09 permission to receive this waste after making MoU.

Hazardous waste Generation, treatment and Disposal

Sr.No	Description of waste	Cat No	Remarks
1	Wastes/residues containing Pesticides	29.1	Co-process/ Recycler (RSPL/ GEPIL)
2	Chemical sludge from waste water treatment	35.3	TSDF (BEIL/SEPPL/Digvijay)
3	Discarded containers/ barrels contaminated with Hazardous Wastes/Chemicals (Nos)	33.1	Recycler (BEIL/ GEPIL /Tulsi Enterprise/RSPL)
4	Discarded Bags/Liners	33.1	Recycler (BEIL/ GEPIL /Tulsi Enterprise/RSPL)
5	Distillation Residues from Contaminated Organic Solvents	36.1	Recycler (RSPL)
6	Spent Sulphuric Acid	29.6	End-user (Ferric/Novel/KSF)
7	Sodium Sulphate	B36	End-user (Preet/Destiny)

Hazardous waste Generation, treatment and Disposal									By-product Details (MT)			
Month	Category 5.1		Category 29.1		Category 35.3		Category 33.1		Category 29.6		Category B36	
	Used Oil		Pro. Waste (MT)		ETP Sludge (MT)		Dis. Cont (Nos.)		SPENT SULFURIC ACID (MT)		SODIUM SULPHATE MT)	
	G	D	G	D	G	D	G	D	G	D	G	D
Apr-23	0.00	0.00	62.00	61.53	242.00	242.23	720.00	718.00	217.00	161.17	0.00	0.00
May-23	0.00	0.00	94.00	94.11	490.00	490.43	560.00	556.00	863.00	856.77	0.00	0.00
Jun-23	0.00	0.00	75.00	74.89	99.00	98.83	430.00	424.00	722.00	722.10	75.00	74.69
Jul-23	0.00	0.00	51.00	51.29	88.00	87.49	890.00	884.00	860.00	860.74	103.00	103.19
Aug-23	0.00	0.00	60.00	59.62	130.00	129.61	60.00	54.00	767.00	767.41	135.00	132.14
Sep-23	0.00	0.00	68.00	68.06	46.00	45.91	860.00	864.00	675.00	673.89	75.00	74.77
Oct-23	0.00	0.00	112.00	111.63	370.00	368.12	1440.00	1440.00	760.00	790.64	215.00	214.92
Nov-23	0.00	0.00	96.00	96.46	120.00	120.42	1135.00	1131.00	590.00	590.30	115.00	113.88
Dec-23	0.00	0.00	36.00	35.63	109.00	109.06	200.00	200.00	305.00	303.40	115.00	114.21
Jan-24	0.00	0.00	76.00	75.97	104.00	104.34	300.00	300.00	470.00	471.72	40.00	40.19
Feb-24	0.00	0.00	77.00	77.32	100.00	99.78	0.00	0.00	685.00	682.85	60.00	60.83
Mar-24	0.00	0.00	33.00	33.39	111.00	111.28	440.00	432.00	455.00	453.69	180.00	179.71
Total	**0.00**	**0.00**	**840.00**	**839.90**	**2009.00**	**2007.50**	**7035.00**	**7003.00**	**7369.00**	**7334.68**	**1113.00**	**1108.53**
AVG/Month	0.00	0.00	70.00	69.99	167.42	167.29	586.25	583.58	614.08	611.22	92.75	92.38
AVG/Day	0.00	0.00	2.30	2.30	5.50	5.50	19.27	19.19	20.19	20.10	3.05	3.04

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Chemical Analysis Of Water / Waste water

Report No	ULR-TC765323000003834P	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	WW/2023/500703	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	18.04.2023	5	Test Requirement	Waste Water Analysis
6	Analysis Commenced on	19.04.2023	7	Analysis Completed on	24.04.2023
8	Sample Location	Final Treated Effluent	9	Sample Collected By	EET Team
10	ETP / STP Status:	ETP Running	11	Sample Category	Grab
12	Sampling Procedure	IS 3025 (Part 1)	13	Packing Condition & Quantity	Sealed & 10 Lit
14	Environment Condition During Sampling	25 ± 3 °C			
15	Environment Condition During Testing	25 ± 3 °C			

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Results	Permissible Limit/ GPCB Norms	Test Method
1	Temperature	°C	29.2	40	APHA : (2550 B) 23rd Edition
2	pH @25 °C	-	7.50	6.5 - 8.5	APHA : (4500 – H^+ B) 23rd Edition
3	Color	Hazen	12	100	APHA : (2550 B&C) 23rd Edition
4	Total Suspended Solid	mg/L	23.80	100	APHA : (2540 D) 23rd Edition
5	COD	mg/L	119.52	250	APHA : (5220 B) 23rd Edition
6	BOD (3 day at 27 °C)	mg/L	25.31	100	IS 3025 (Part 44):1993 (Reaffirmed 2014)
7	Oil & Grease	mg/L	BDL	10	APHA : (5520 B) 23rd Edition
8	Phenolic Compound	mg/L	BDL	5	APHA : (5530 D) 23rd Edition
9	Sulphides	mg/L	BDL	5	APHA : (4500 SO^2 F) 23rd Edition
10	Ammonical Nitrogen	mg/L	12.68	50	APHA : (4500 NH_3) 23rd Edition
11	Total Kjeldahl Nitrogen	mg/L	BDL	50	APHA, 23rd Edition 2017/ 4500-Norg –A,B
12	Nitrate Nitrogen	mg/L	BDL	50	APHA : (4500 NO_3)23rd Edition
13	Phosphate	mg/L	BDL	5	APHA, 23rd Edition 2017/ 4500P-D
14	Chlorides (as Cl)	mg/L	156.73	1000	APHA : (4500 Cl B) 23rd Edition
15	Sulphates	mg/L	148.21	1000	APHA : (4500 SO_4^{-2} E) 23rd Edition
16	Cyanides	mg/L	BDL	0.2	APHA : (4500 CN^- E) 23rd Edition
17	Fluorides	mg/L	BDL	1.5	APHA : (4500 F^- D) 23rd Edition
18	Hexavalent Chromium	mg/l	BDL	0.1	APHA : (3500 Cr) 23rd Edition
19	Trivalent Chromium	mg/L	BDL	2	APHA : (3500 Cr) 23rd Edition
20	Total Chromium	mg/L	BDL	0.05	APHA : (3500 Cr) 23rd Edition
21	Copper	mg/L	BDL	3	APHA : (3500 Cu A) 23rd Edition
22	Nickle	mg/L	BDL	3	APHA : (3500 Ni) 23rd Edition
23	Zinc	mg/L	BDL	15	APHA : (3500 Zn A) 23rd Edition
24	Mercury	mg/L	BDL	0.01	APHA : (3500 Hg A) 23rd Edition
25	Lead	mg/L	BDL	0.1	APHA : (3500 pb A) 23rd Edition
26	Arsenic	mg/L	BDL	0.2	APHA : (3500 As A) 23rd Edition
27	Cadmium	mg/L	BDL	0.05	APHA : (3500 cd A) 23rd Edition
28	Selenium	mg/L	BDL	0.05	APHA : (3500-Se B) 23rd Edition
29	Vanadium	mg/L	BDL	0.2	APHA 23rd Edition, 3500 V-B
30	Iron as Fe	mg/L	BDL	3	APHA, 23rd Edition 2017/3500-Fe-B
31	Manganese as Mn	mg/L	BDL	2	IS 3025 (Part 59):2006 (Reaffirmed 2009)
32	Insecticide / Pesticide	mg/L	Absent	Absent	USEPA 3510 & 8141 A, 8181A
33	Bio – Assay Test	%	100	90% Survival of fish after 96 hrs. in 100% Effluent	IS 6582 (Part 2):2001 (Reaffirmed 2007)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D. Mukherjee
Analysed By

Checked By

Authorized Signatory

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Chemical Analysis Of Water / Waste water

Report No	EET225823000014113	Date of Report	03.01.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	WW/2023/502168	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	26.12.2023	5	Test Requirement	Waste Water Analysis
6	Analysis Commenced on	27.12.2023	7	Analysis Completed on	03.01.2024
8	Sample Location	Final Treated Effluent	9	Sample Collected By	EET Team
10	ETP / STP Status:	ETP Running	11	Sample Category	Grab
12	Sampling Procedure	IS 3025 (Part 1)	13	Packing Condition & Quantity	Sealed & 10 Lit
14	Environment Condition During Sampling	25 ± 3 °C			
15	Environment Condition During Testing	25 ± 3 °C			

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Results	Permissible Limit/ GPCB Norms	Test Method
1	Temperature	°C	28.6	40	APHA : (2550 B) 23rd Edition
2	pH @25 °C	-	8.06	6.5 - 9.0	APHA : (4500 – H^+ B) 23rd Edition
3	Colour	Hazen	52	100	APHA : (2550 B&C) 23rd Edition
4	Total Suspended Solid	mg/L	21	100	APHA : (2540 D) 23rd Edition
5	COD	mg/L	43.64	250	APHA : (5220 B) 23rd Edition
6	BOD (3 day at 27 °C)	mg/L	10.58	100	IS 3025 (Part 44):1993 (Reaffirmed 2014)
7	Oil & Grease	mg/L	0.21	10	APHA : (5520 B) 23rd Edition
8	Phenolic Compound	mg/L	BDL	5	APHA : (5530 D) 23rd Edition
9	Sulphides	mg/L	BDL	5	APHA : (4500 SO^2 F) 23rd Edition
10	Ammonical Nitrogen	mg/L	30.35	50	APHA : (4500 NH_3) 23rd Edition
11	Total Kjeldahl Nitrogen	mg/L	31.18	50	APHA, 23rd Edition 2017/ 4500-Norg –A,B
12	Nitrate Nitrogen	mg/L	BDL	50	APHA : (4500 NO_3)23rd Edition
13	Phosphate	mg/L	BDL	5	APHA, 23rd Edition 2017/ 4500P-D
14	Chlorides (as Cl)	mg/L	622.76	1000	APHA : (4500 Cl B) 23rd Edition
15	Sulphates	mg/L	252.70	1000	APHA : (4500 SO_4^{-2} E) 23rd Edition
16	Cyanides	mg/L	BDL	0.2	APHA : (4500 CN^- E) 23rd Edition
17	Fluorides	mg/L	BDL	15	APHA : (4500 F^- D) 23rd Edition
18	Hexavalent Chromium	mg/l	BDL	0.1	APHA : (3500 Cr) 23rd Edition
19	Trivalent Chromium	mg/L	BDL	2	APHA : (3500 Cr) 23rd Edition
20	Total Chromium	mg/L	BDL	0.05	APHA : (3500 Cr) 23rd Edition
21	Copper	mg/L	BDL	3	APHA : (3500 Cu A) 23rd Edition
22	Nickle	mg/L	BDL	3	APHA : (3500 Ni) 23rd Edition
23	Zinc	mg/L	BDL	15	APHA : (3500 Zn A) 23rd Edition
24	Mercury	mg/L	BDL	0.01	APHA : (3500 Hg A) 23rd Edition
25	Lead	mg/L	BDL	0.1	APHA : (3500 pb A) 23rd Edition
26	Arsenic	mg/L	BDL	0.2	APHA : (3500 As A) 23rd Edition
27	Cadmium	mg/L	BDL	0.05	APHA : (3500 cd A) 23rd Edition
28	Selenium	mg/L	BDL	0.05	APHA : (3500-Se B) 23rd Edition
29	Vanadium	mg/L	BDL	0.2	APHA 23rd Edition, 3500 V-B
30	Iron as Fe	mg/L	BDL	3	APHA, 23rd Edition 2017/3500-Fe-B
31	Manganese as Mn	mg/L	BDL	2	IS 3025 (Part 59):2006 (Reaffirmed 2009)
32	Insecticide / Pesticide	mg/L	Absent	Absent	USEPA 3510 & 8141 A, 8181A
33	Bio – Assay Test	%	100	90% Survival of fish after 96 hrs. in 100% Effluent	IS 6582 (Part 2):2001 (Reaffirmed 2007)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiziya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Chemical Analysis Of Water / Waste water

Report No	EET225824000002871	Date of Report	18.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	WW/2024/500426	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	08.03.2024	5	Test Requirement	Waste Water Analysis
6	Analysis Commenced on	09.03.2024	7	Analysis Completed on	18.03.2024
8	Sample Location	Final Treated Effluent	9	Sample Collected By	EET Team
10	ETP / STP Status:	ETP Running	11	Sample Category	Grab
12	Sampling Procedure	IS 3025 (Part 1)	13	Packing Condition & Quantity	Sealed & 10 Lit
14	Environment Condition During Sampling	25 ± 3 °C			
15	Environment Condition During Testing	25 ± 3 °C			

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Results	Permissible Limit/ GPCB Norms	Test Method
1	Temperature	°C	28.6	40	APHA: (2550 B) 23rd Edition
2	pH @25 °C	-	7.06	6.5 - 9.0	APHA: (4500 – H^+ B) 23rd Edition
3	Colour	Hazen	32	100	APHA: (2550 B&C) 23rd Edition
4	Total Suspended Solid	mg/L	33.84	100	APHA: (2540 D) 23rd Edition
5	COD	mg/L	116.58	250	APHA: (5220 B) 23rd Edition
6	BOD (3 day at 27 °C)	mg/L	32.5	100	IS 3025 (Part 44):1993 (Reaffirmed 2014)
7	Oil & Grease	mg/L	0.27	10	APHA: (5520 B) 23rd Edition
8	Phenolic Compound	mg/L	BDL	5	APHA: (5530 D) 23rd Edition
9	Sulphides	mg/L	BDL	5	APHA: (4500 SO^2 F) 23rd Edition
10	Ammonical Nitrogen	mg/L	10.95	50	APHA: (4500 NH_3) 23rd Edition
11	Total Kjeldahl Nitrogen	mg/L	24.07	50	APHA, 23rd Edition 2017/ 4500-Norg –A,B
12	Nitrate Nitrogen	mg/L	BDL	50	APHA: (4500 NO_3)23rd Edition
13	Phosphate	mg/L	BDL	5	APHA, 23rd Edition 2017/ 4500P-D
14	Chlorides (as Cl)	mg/L	612.98	1000	APHA: (4500 Cl B) 23rd Edition
15	Sulphates	mg/L	134.86	1000	APHA: (4500 SO_4^{-2} E) 23rd Edition
16	Cyanides	mg/L	BDL	0.2	APHA: (4500 CN^- E) 23rd Edition
17	Fluorides	mg/L	BDL	15	APHA: (4500 F^- D) 23rd Edition
18	Hexavalent Chromium	mg/l	BDL	0.1	APHA: (3500 Cr) 23rd Edition
19	Trivalent Chromium	mg/L	BDL	2	APHA: (3500 Cr) 23rd Edition
20	Total Chromium	mg/L	BDL	0.05	APHA: (3500 Cr) 23rd Edition
21	Copper	mg/L	BDL	3	APHA: (3500 Cu A) 23rd Edition
22	Nickle	mg/L	BDL	3	APHA: (3500 Ni) 23rd Edition
23	Zinc	mg/L	BDL	15	APHA: (3500 Zn A) 23rd Edition
24	Mercury	mg/L	BDL	0.01	APHA: (3500 Hg A) 23rd Edition
25	Lead	mg/L	BDL	0.1	APHA: (3500 pb A) 23rd Edition
26	Arsenic	mg/L	BDL	0.2	APHA: (3500 As A) 23rd Edition
27	Cadmium	mg/L	BDL	0.05	APHA: (3500 cd A) 23rd Edition
28	Selenium	mg/L	BDL	0.05	APHA : (3500-Se B) 23rd Edition
29	Vanadium	mg/L	BDL	0.2	APHA 23rd Edition, 3500 V-B
30	Iron as Fe	mg/L	BDL	3	APHA, 23rd Edition 2017/3500-Fe-B
31	Manganese as Mn	mg/L	BDL	2	IS 3025 (Part 59):2006 (Reaffirmed 2009)
32	Insecticide / Pesticide	mg/L	Absent	Absent	USEPA 3510 & 8141 A, 8181A
33	Bio – Assay Test	%	95	90% Survival of fish after 96 hrs. in 100% Effluent	IS 6582 (Part 2):2001 (Reaffirmed 2007)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Chemical Analysis of Water / Waste water

Report No	ULR-TC765323000003743P	Date of Report	28.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	**Sample ID**	DW/2023/700115	3	**Client Representative**	Mr Ratnadeep Patel
4	**Sampling Date**	18.04.2023	5	**Test Requirement**	Water Analysis
6	**Analysis Commenced on**	19.04.2023	7	**Analysis Completed on**	28.04.2023
8	**Sample Location**	Ground Water	9	**Sample Collected By**	EET Team
10	**ETP / STP Status:**	NA	11	**Sample Category**	Grab
12	**Sampling Procedure**	IS 3025 (Part 1)	13	**Packing Condition & Quantity**	Sealed & 5 Lit
14	**Environment Condition During Sampling**	25 ± 3 °C			
15	**Environment Condition During Testing**	25 ± 3 °C			

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Results	Test Method
1	pH@25°C	-	8.14	IS 3025 (Part 11)
2	Total Hardness	mg/L	246	IS 3025 (Part 21)
3	Total Dissolved Solid (TDS)	mg/L	570	IS 3025 (Part 16)
4	Chlorides (as Cl)	mg/L	57.34	IS 3025 (Part 32)
5	Sulphates (as SO_4)	mg/L	24.06	IS 3025 (Part 24)
6	Copper (as Cu)	mg/L	0.24	IS 3025 (Part 42)
7	Iron (as Fe)	mg/L	0.35	IS 3025 (Part 53)
8	Manganese (as Mn)	mg/L	BDL	IS 3025 (Part 59)
9	Nitrate (as NO_3)	mg/L	0.26	IS 3025 (Part 34)
10	Fluorides (as F)	mg/L	0.19	IS 3025 (Part 60)
11	Zinc (as Zn)	mg/L	0.21	IS 3025 (Part 49)
12	Alkalinity (as $CaCO_3$)	mg/L	180	IS 3025 (Part 23)
13	Magnesium (as Mg)	mg/L	34.69	IS 3025 (Part 59)
14	Calcium (as Ca)	mg/L	36.08	IS 3025 (Part 40)

ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A. D. Keetheriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Chemical Analysis of Water / Waste water

Report No	EET225823000013884	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	DW/2023/700364	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	25.12.2023	5	Test Requirement	Water Analysis
6	Analysis Commenced on	26.12.2023	7	Analysis Completed on	30.12.2023
8	Sample Location	Ground Water	9	Sample Collected By	EET Team
10	ETP / STP Status:	NA	11	Sample Category	Grab
12	Sampling Procedure	IS 3025 (Part 1)	13	Packing Condition & Quantity	Sealed & 5 Lit
14	Environment Condition During Sampling	25 ± 3 °C			
15	Environment Condition During Testing	25 ± 3 °C			

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Results	Test Method
1	pH@25°C	-	7.96	IS 3025 (Part 11)
2	Total Hardness	mg/L	176	IS 3025 (Part 21)
3	Total Dissolved Solid (TDS)	mg/L	620	IS 3025 (Part 16)
4	Chlorides (as Cl)	mg/L	61.48	IS 3025 (Part 32)
5	Sulphates (as SO_4)	mg/L	35.24	IS 3025 (Part 24)
6	Copper (as Cu)	mg/L	0.21	IS 3025 (Part 42)
7	Iron (as Fe)	mg/L	0.38	IS 3025 (Part 53)
8	Manganese (as Mn)	mg/L	BDL	IS 3025 (Part 59)
9	Nitrate (as NO_3)	mg/L	0.13	IS 3025 (Part 34)
10	Fluorides (as F)	mg/L	0.20	IS 3025 (Part 60)
11	Zinc (as Zn)	mg/L	0.27	IS 3025 (Part 49)
12	Alkalinity (as $CaCO_3$)	mg/L	229	IS 3025 (Part 23)
13	Magnesium (as Mg)	mg/L	36.84	IS 3025 (Part 59)
14	Calcium (as Ca)	mg/L	59.70	IS 3025 (Part 40)

ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Chemical Analysis of Water / Waste water

Report No	EET225824000002774	Date of Report	11.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	DW/2024/700082	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	07.03.2024	5	Test Requirement	Water Analysis
6	Analysis Commenced on	08.03.2024	7	Analysis Completed on	11.03.2024
8	Sample Location	Ground Water	9	Sample Collected By	EET Team
10	ETP / STP Status:	NA	11	Sample Category	Grab
12	Sampling Procedure	IS 3025 (Part 1)	13	Packing Condition & Quantity	Sealed & 5 Lit
14	Environment Condition During Sampling	25 ± 3 °C			
15	Environment Condition During Testing	25 ± 3 °C			

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Results	Test Method
1	pH@25°C	-	8.12	IS 3025 (Part 11)
2	Total Hardness	mg/L	145	IS 3025 (Part 21)
3	Total Dissolved Solid (TDS)	mg/L	689	IS 3025 (Part 16)
4	Chlorides (as Cl)	mg/L	72.06	IS 3025 (Part 32)
5	Sulphates (as SO_4)	mg/L	31.52	IS 3025 (Part 24)
6	Copper (as Cu)	mg/L	0.20	IS 3025 (Part 42)
7	Iron (as Fe)	mg/L	0.27	IS 3025 (Part 53)
8	Manganese (as Mn)	mg/L	BDL	IS 3025 (Part 59)
9	Nitrate (as NO_3)	mg/L	0.14	IS 3025 (Part 34)
10	Fluorides (as F)	mg/L	0.22	IS 3025 (Part 60)
11	Zinc (as Zn)	mg/L	0.16	IS 3025 (Part 49)
12	Alkalinity (as $CaCO_3$)	mg/L	180.97	IS 3025 (Part 23)
13	Magnesium (as Mg)	mg/L	42.61	IS 3025 (Part 59)
14	Calcium (as Ca)	mg/L	55.08	IS 3025 (Part 40)

ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	ULR-TC765323000003792P	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	PSE/2023/400360	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	17.04.2023	5	Sample Location	Process Stack 1 (Methylation)
6	Sampling start Time	03:10 PM	7	Sampling Duration	30 Min
8	Analysis Commenced On	18.04.2023	9	Analysis Completed On	24.04.2023
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team
13	Test Requirement	Air Analysis of Process Stack Emission of Process Stack 1 (Methylation)			
15	Description of Sample	Sampling Bottle: Sealed	Filter Paper: NA	Bladder: NA	
16	Environment Condition During Sampling	25 ± 3 °C			
17	Environment Condition During Testing	25 ± 3 °C			

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack 1 (Methylation)
2	Height	m	25
4	Diameter	Mm	150
5	Temperature	°C	35.62
6	Velocity	m/s	5.68
7	Stack attached to	-	Process Stack 1 (Methylation)
8	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	H_2S	mg/Nm^3	BDL	5	IS 11255 (Part 4) : 2006

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1) Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3) The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A. D. Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	ULR-TC765323000003793P	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	**Sample ID**	PSE/2023/400361		3	**Client Representative**	Mr Ratnadeep Patel		
4	**Sampling Date**	17.04.2023		5	**Sample Location**	Process Stack – 2 (Nitration)		
6	**Sampling start Time**	03:40 PM		7	**Sampling Duration**	30 Min		
8	**Analysis Commenced On**	18.04.2023		9	**Analysis Completed On**	24.04.2023		
10	**Sampling Procedure**	IS 11255 (Part 3) : 2008		11	**Sample Collected By**	EET Team		
13	**Test Requirement**	Air Analysis of Process Stack Emission of Process Stack – 2 (Nitration)						
15	**Description of Sample**	**Sampling Bottle**	Sealed	**Filter Paper**	NA	**Bladder**	NA	
16	**Environment Condition During Sampling**	25 ± 3 °C						
17	**Environment Condition During Testing**	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack – 2 (Nitration)
2	Height	m	25
4	Diameter	mm	150
5	Temperature	°C	34.6
6	Velocity	m/s	6.24
7	Stack attached to	-	Process Stack – 2 (Nitration)
8	Air Pollution Control Measure	-	Water Scrubber & Caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Ammonia (NH_3)	mg/Nm^3	07.54	30	IS 11255 (Part 6) : 1999 (Reaffirmed 2009)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3) The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D. Kathrecha — Analysed By

Checked By

Authorized Signatory

24/04/2023

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	ULR-TC765323000003794P	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2	Sample ID	PSE/2023/400362	3	Client Representative	Mr Ratnadeep Patel
4	Sampling Date	17.04.2023	5	Sample Location	Process Stack 3 (Denitrosation)
6	Sampling start Time	04:15 PM	7	Sampling Duration	30 Min
8	Analysis Commenced On	18.04.2023	9	Analysis Completed On	24.04.2023
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team
13	Test Requirement	Air Analysis of Process Stack Emission of Process Stack 3 (Denitrosation)			
15	Description of Sample	Sampling Bottle: Sealed		Filter Paper: NA	Bladder: NA
16	Environment Condition During Sampling	25 ± 3 °C			
17	Environment Condition During Testing	25 ± 3 °C			

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack 3 (Denitrosation)
2	Height	m	25
4	Diameter	mm	150
5	Temperature	°C	33.2
6	Velocity	m/s	6.24
7	Stack attached to	-	Process Stack 3 (Denitrosation)
8	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	HCl	mg/Nm³	02.67	20	CPCB/LATS/80/2013-14
2	Oxides of Sulphur (SO_2)	mg/Nm³	05.44	40	IS 11255 (Part 2) : 1985 (Reaffirmed 2014)

[ND – Not Detect, BDL – Below Detection Limit]

Note:
1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D. Kothiya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	ULR-TC765323000003795P	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	PSE/2023/400363	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	17.04.2023	5	Sample Location	Process Vent - 4			
6	Sampling start Time	04:45 PM	7	Sampling Duration	30 Min			
8	Analysis Commenced On	18.04.2023	9	Analysis Completed On	24.04.2023			
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team			
13	Test Requirement	Air Analysis of Process Stack Emission of Process Vent – 4						
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA	
16	Environment Condition During Sampling	25 ± 3 °C						
17	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Vent – 4
2	Height	m	15
4	Diameter	mm	150
5	Temperature	°C	34.62
6	Velocity	m/s	5.57
7	Stack attached to	-	Process Vent - 4
8	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	HCl	mg/Nm³	05.17	20	CPCB/LATS/80/2013-14

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1) Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D. Kotheriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225823000014033	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA					
2	Sample ID	PSE/2023/401583	3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	25.12.2023	5	Sample Location	Process Stack 1 (Methylation)		
6	Sampling start Time	03:20 PM	7	Sampling Duration	30 Min		
8	Analysis Commenced On	26.12.2023	9	Analysis Completed On	30.12.2023		
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team		
13	Test Requirement	Air Analysis of Process Stack Emission of Process Stack 1 (Methylation)					
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA
16	Environment Condition During Sampling	25 ± 3 °C					
17	Environment Condition During Testing	25 ± 3 °C					

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack 1 (Methylation)
2	Height	m	25
4	Diameter	mm	150
5	Temperature	°C	37.5
6	Velocity	m/s	5.89
7	Stack attached to	-	Process Stack 1 (Methylation)
8	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	H_2S	mg/Nm^3	BDL	5	IS 11255 (Part 4) : 2006

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225823000014034	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA					
2	Sample ID	PSE/2023/401584	3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	25.12.2023	5	Sample Location	Process Stack – 2 (Nitration)		
6	Sampling start Time	03:50 PM	Q	Sampling Duration	30 Min		
8	Analysis Commenced On	26.12.2023	9	Analysis Completed On	30.12.2023		
10	Sampling Procedure	IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team		
13	Test Requirement	Air Analysis of Process Stack Emission of Process Stack – 2 (Nitration)					
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA
16	Environment Condition During Sampling	25 ± 3 °C					
17	Environment Condition During Testing	25 ± 3 °C					

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack – 2 (Nitration)
2	Height	m	25
4	Diameter	mm	150
5	Temperature	°C	32.5
6	Velocity	m/s	5.47
7	Stack attached to	-	Process Stack – 2 (Nitration)
8	Air Pollution Control Measure	-	Water Scrubber & Caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Ammonia (NH_3)	mg/Nm^3	5.98	30	IS 11255 (Part 6) : 1999 (Reaffirmed 2009)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225823000014035	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA					
2	Sample ID	PSE/2023/401585	3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	25.12.2023	5	Sample Location	Process Stack 3 (Denitrosation)		
6	Sampling start Time	04:20 PM	7	Sampling Duration	30 Min		
8	Analysis Commenced On	26.12.2023	9	Analysis Completed On	30.12.2023		
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team		
13	Test Requirement	Air Analysis of Process Stack Emission of Process Stack 3 (Denitrosation)					
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA
16	Environment Condition During Sampling	25 ± 3 °C					
17	Environment Condition During Testing	25 ± 3 °C					

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack 3 (Denitrosation)
2	Height	m	25
4	Diameter	mm	150
5	Temperature	°C	34.8
6	Velocity	m/s	6.01
7	Stack attached to	-	Process Stack 3 (Denitrosation)
8	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	HCl	mg/Nm^3	4.17	20	CPCB/LATS/80/2013-14
2	Oxides of Sulphur (SO_2)	mg/Nm^3	7.84	40	IS 11255 (Part 2) : 1985 (Reaffirmed 2014)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiriya
Analysed By

Checked By

30/12/23
Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225823000014036	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA					
2	Sample ID	PSE/2023/401586	3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	25.12.2023	5	Sample Location	Process Vent - 4		
6	Sampling start Time	04:50 PM	7	Sampling Duration	30 Min		
8	Analysis Commenced On	26.12.2023	9	Analysis Completed On	30.12.2023		
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3) : 2008	11	Sample Collected By	EET Team		
13	Test Requirement	Air Analysis of Process Stack Emission of Process Vent – 4					
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA
16	Environment Condition During Sampling	25 ± 3 °C					
17	Environment Condition During Testing	25 ± 3 °C					

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Vent – 4
2	Height	m	15
4	Diameter	mm	150
5	Temperature	°C	35.8
6	Velocity	m/s	5.70
7	Stack attached to	-	Process Vent - 4
8	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	HCl	mg/Nm^3	5.63	20	CPCB/LATS/80/2013-14

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

Eco Earth Technologies

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225824000002882	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	PSE/2024/400337	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	07.03.2024	5	Sample Location	Process Stack 1 (Methylation)			
6	Sampling start Time	02:00 PM	7	Sampling Duration	30 Min			
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024			
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3): 2008	11	Sample Collected By	EET Team			
12	Test Requirement	Air Analysis of Process Stack Emission of Process Stack 1 (Methylation)						
13	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA	
14	Environment Condition During Sampling	25 ± 3 °C						
15	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack 1 (Methylation)
2	Height	m	25
3	Diameter	mm	150
4	Temperature	°C	33.4
5	Velocity	m/s	6.21
6	Stack attached to	-	Process Stack 1 (Methylation)
7	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	H_2S	mg/Nm^3	BDL	5	IS 11255 (Part 4) : 2006

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225824000002883	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	PSE/2024/400338	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	07.03.2024	5	Sample Location	Process Stack – 2 (Nitration)			
6	Sampling start Time	02:30 PM	Q	Sampling Duration	30 Min			
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024			
10	Sampling Procedure	IS 11255 (Part 3): 2008	11	Sample Collected By	EET Team			
12	Test Requirement	Air Analysis of Process Stack Emission of Process Stack – 2 (Nitration)						
13	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA	
14	Environment Condition During Sampling	25 ± 3 °C						
15	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack – 2 (Nitration)
2	Height	m	25
3	Diameter	mm	150
4	Temperature	°C	29.4
5	Velocity	m/s	6.35
6	Stack attached to	-	Process Stack – 2 (Nitration)
7	Air Pollution Control Measure	-	Water Scrubber & Caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Ammonia (NH_3)	mg/Nm^3	3.08	30	IS 11255 (Part 6) : 1999 (Reaffirmed 2009)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225824000002884	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA					
2	Sample ID	PSE/2024/400339	3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	07.03.2024	5	Sample Location	Process Stack 3 (Denitrosation)		
6	Sampling start Time	03:00 PM	7	Sampling Duration	30 Min		
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024		
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3): 2008	11	Sample Collected By	EET Team		
12	Test Requirement	Air Analysis of Process Stack Emission of Process Stack 3 (Denitrosation)					
13	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA
14	Environment Condition During Sampling	25 ± 3 °C					
15	Environment Condition During Testing	25 ± 3 °C					

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Stack 3 (Denitrosation)
2	Height	m	25
3	Diameter	mm	150
4	Temperature	°C	34.6
5	Velocity	m/s	6.26
6	Stack attached to	-	Process Stack 3 (Denitrosation)
7	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	HCl	mg/Nm^3	1.93	20	CPCB/LATS/80/2013-14
2	Oxides of Sulphur (SO_2)	mg/Nm^3	3.85	40	IS 11255 (Part 2): 1985 (Reaffirmed 2014)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

Eco Earth Technologies

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Process Stack Emission

Report No	EET225824000002885	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	PSE/2024/400340	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	07.03.2024	5	Sample Location	Process Vent - 4			
6	Sampling start Time	03:30 PM	7	Sampling Duration	30 Min			
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024			
10	Sampling Procedure	CPCB/LATS/80/2013-14 & IS 11255 (Part 3): 2008	11	Sample Collected By	EET Team			
12	Test Requirement	Air Analysis of Process Stack Emission of Process Vent – 4						
13	Description of Sample	Sampling Bottle	Sealed	Filter Paper	NA	Bladder	NA	
14	Environment Condition During Sampling	25 ± 3 °C						
15	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Process Vent – 4
2	Height	m	15
3	Diameter	mm	150
4	Temperature	°C	30.4
5	Velocity	m/s	6.59
6	Stack attached to	-	Process Vent - 4
7	Air Pollution Control Measure	-	Water Scrubber & caustic Scrubber

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	HCl	mg/Nm^3	3.63	20	CPCB/LATS/80/2013-14

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.P.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	ULR-TC765323000003799F	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	**Sample ID**	STM/2023/300449		3	**Client Representative**	Mr Ratnadeep Patel		
4	**Sampling Date**	17.04.2023		5	**Sample Location**	Boiler (8 TPH)		
6	**Sampling start Time**	02:00 PM		7	**Sampling Duration**	30 Min		
8	**Analysis Commenced On**	18.04.2023		9	**Analysis Completed On**	24.04.2023		
10	**Sampling Procedure**	IS 11255 (Part 3):2008		11	**Sample Collected By**	EET Team		
13	**Test Requirement**	Air Analysis of Flue Gas Stack Emission of Boiler (8 TPH)						
15	**Description of Sample**	**Sampling Bottle**	Sealed	**Filter Paper**	Sealed	**Bladder**	Packed	
16	**Environment Condition During Sampling**	25 ± 3 °C						
17	**Environment Condition During Testing**	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Boiler (8 TPH)
2	Height	m	30
3	Diameter	m	1.0
4	Temperature	°C	65.1
5	Velocity	m/s	7.21
6	Types of Fuel	-	Bio Briquette
7	Quantity of Fuel	-	-
8	Stack attached to	-	Boiler (8 TPH)
9	Air Pollution Control Measure	-	Bag Filter

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	62.34	150	IS 11255 (Part 1) : 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	15.69	100	IS 11255 (Part2) : 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_x)	ppm	17.04	50	IS 11255 (Part 7) : 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	ULR-TC765323000003800F	Date of Report	24.04.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	STM/2023/300450	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	17.04.2023	5	Sample Location	D G Set (625 KVA)			
6	Sampling start Time	02:35 PM	7	Sampling Duration	30 Min			
8	Analysis Commenced On	18.04.2023	9	Analysis Completed On	24.04.2023			
10	Sampling Procedure	IS 11255 (Part 3):2008	11	Sample Collected By	EET Team			
13	Test Requirement	Air Analysis of Flue Gas Stack Emission of D G Set (625 KVA)						
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	Sealed	Bladder	Packed	
16	Environment Condition During Sampling	25 ± 3 °C						
17	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	D G Set (625 KVA)
2	Height	m	15
4	Diameter	m	0.5
5	Temperature	°C	113.6
6	Velocity	m/s	6.70
7	Types of Fuel	-	Diesel
8	Quantity of Fuel	-	-
7	Stack attached to	-	D G Set (625 KVA)
8	Air Pollution Control Measure	-	Not Applicable

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	26.95	150	IS 11255 (Part 1) : 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	13.04	100	IS 11255 (Part2) : 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_x)	ppm	29.68	50	IS 11255 (Part 7) : 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A. D. Kathiriya
Analysed By

Checked By

24/04/2023
Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	EET225823000014029	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	STM/2023/301662		3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	25.12.2023		5	Sample Location	Boiler (8 TPH)		
6	Sampling start Time	02:00 PM		7	Sampling Duration	30 Min		
8	Analysis Commenced On	26.12.2023		9	Analysis Completed On	30.12.2023		
10	Sampling Procedure	IS 11255 (Part 3):2008		11	Sample Collected By	EET Team		
13	Test Requirement	Air Analysis of Flue Gas Stack Emission of Boiler (8 TPH)						
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	Sealed	Bladder	Packed	
16	Environment Condition During Sampling	25 ± 3 °C						
17	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Boiler (8 TPH)
2	Height	m	30
3	Diameter	m	1.0
4	Temperature	°C	119.6
5	Velocity	m/s	7.58
6	Types of Fuel	-	Bio Briquette
7	Quantity of Fuel	-	-
8	Stack attached to	-	Boiler (8 TPH)
9	Air Pollution Control Measure	-	Bag Filter

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	58.34	150	IS 11255 (Part 1) : 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	22.67	100	IS 11255 (Part2) : 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_X)	ppm	16.51	50	IS 11255 (Part 7) : 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

Eco Earth Technologies

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	EET225823000014030	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA							
2	Sample ID	STM/2023/301663		3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	25.12.2023		5	Sample Location	D G Set (625 KVA)			
6	Sampling start Time	02:30 PM		7	Sampling Duration	30 Min			
8	Analysis Commenced On	26.12.2023		9	Analysis Completed On	30.12.2023			
10	Sampling Procedure	IS 11255 (Part 3):2008		11	Sample Collected By	EET Team			
13	Test Requirement	Air Analysis of Flue Gas Stack Emission of D G Set (625 KVA)							
15	Description of Sample	Sampling Bottle	Sealed		Filter Paper	Sealed	Bladder	Packed	
16	Environment Condition During Sampling	25 ± 3 °C							
17	Environment Condition During Testing	25 ± 3 °C							

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	D G Set (625 KVA)
2	Height	m	15
4	Diameter	m	0.5
5	Temperature	°C	114.2
6	Velocity	m/s	6.85
7	Types of Fuel	-	Diesel
8	Quantity of Fuel	-	-
7	Stack attached to	-	D G Set (625 KVA)
8	Air Pollution Control Measure	-	Not Applicable

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	22.61	150	IS 11255 (Part 1) : 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	14.20	100	IS 11255 (Part2) : 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_X)	ppm	31.72	50	IS 11255 (Part 7) : 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	EET225823000014031	Date of Report	30.12.2023

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA							
2	Sample ID	STM/2023/301664		3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	25.12.2023		5	Sample Location	D G Set (1250 KVA)			
6	Sampling start Time	03:00 PM		7	Sampling Duration	30 Min			
8	Analysis Commenced On	26.12.2023		9	Analysis Completed On	30.12.2023			
10	Sampling Procedure	IS 11255 (Part 3):2008		11	Sample Collected By	EET Team			
13	Test Requirement	Air Analysis of Flue Gas Stack Emission of D G Set (1250 KVA)							
15	Description of Sample	Sampling Bottle	Sealed		Filter Paper	Sealed	Bladder	Packed	
16	Environment Condition During Sampling	25 ± 3 °C							
17	Environment Condition During Testing	25 ± 3 °C							

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	D G Set (1250 KVA)
2	Height	m	15
4	Diameter	m	0.5
5	Temperature	°C	119.6
6	Velocity	m/s	7.01
7	Types of Fuel	-	Diesel
8	Quantity of Fuel	-	-
7	Stack attached to	-	D G Set (1250 KVA)
8	Air Pollution Control Measure	-	Not Applicable

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	25.74	150	IS 11255 (Part 1) : 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	16.11	100	IS 11255 (Part2) : 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_X)	ppm	33.69	50	IS 11255 (Part 7) : 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiriya
Analysed By

Checked By

30/12/23
Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	EET225824000002897	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA					
2	Sample ID	STM/2024/300346	3	Client Representative	Mr Ratnadeep Patel		
4	Sampling Date	07.03.2024	5	Sample Location	Boiler (8 TPH)		
6	Sampling start Time	12:30 PM	7	Sampling Duration	30 Min		
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024		
10	Sampling Procedure	IS 11255 (Part 3):2008	11	Sample Collected By	EET Team		
13	Test Requirement	Air Analysis of Flue Gas Stack Emission of Boiler (8 TPH)					
15	Description of Sample	Sampling Bottle	Sealed	Filter Paper	Sealed	Bladder	Packed
16	Environment Condition During Sampling	25 ± 3 °C					
17	Environment Condition During Testing	25 ± 3 °C					

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	Boiler (8 TPH)
2	Height	m	30
3	Diameter	m	1.0
4	Temperature	°C	118.4
5	Velocity	m/s	6.25
6	Types of Fuel	-	Bio Briquette
7	Quantity of Fuel	-	-
8	Stack attached to	-	Boiler (8 TPH)
9	Air Pollution Control Measure	-	Bag Filter

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	56.34	150	IS 11255 (Part 1): 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	30.87	100	IS 11255 (Part2): 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_X)	ppm	19.62	50	IS 11255 (Part 7): 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D. Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	EET225824000002898	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	STM/2024/300347	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	07.03.2024	5	Sample Location	D G Set (625 KVA)			
6	Sampling start Time	01:00 PM	7	Sampling Duration	30 Min			
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024			
10	Sampling Procedure	IS 11255 (Part 3):2008	11	Sample Collected By	EET Team			
12	Test Requirement	Air Analysis of Flue Gas Stack Emission of D G Set (625 KVA)						
13	Description of Sample	Sampling Bottle	Sealed	Filter Paper	Sealed	Bladder	Packed	
14	Environment Condition During Sampling	25 ± 3 °C						
15	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	D G Set (625 KVA)
2	Height	m	15
3	Diameter	m	0.5
4	Temperature	°C	117.4
5	Velocity	m/s	6.34
6	Types of Fuel	-	Diesel
7	Quantity of Fuel	-	-
8	Stack attached to	-	D G Set (625 KVA)
9	Air Pollution Control Measure	-	Not Applicable

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	25.73	150	IS 11255 (Part 1): 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	16.26	100	IS 11255 (Part2): 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_X)	ppm	32.83	50	IS 11255 (Part 7): 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A. D. Kothiya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

Eco Earth Technologies

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Flue Gas Stack Emission

Report No	EET225824000002899	Date of Report	12.03.2024

SAMPLE DETAILS

1	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA						
2	Sample ID	STM/2024/300348	3	Client Representative	Mr Ratnadeep Patel			
4	Sampling Date	07.03.2024	5	Sample Location	D G Set (1250 KVA)			
6	Sampling start Time	01:30 PM	7	Sampling Duration	30 Min			
8	Analysis Commenced On	08.03.2024	9	Analysis Completed On	12.03.2024			
10	Sampling Procedure	IS 11255 (Part 3):2008	11	Sample Collected By	EET Team			
12	Test Requirement	Air Analysis of Flue Gas Stack Emission of D G Set (1250 KVA)						
13	Description of Sample	Sampling Bottle	Sealed	Filter Paper	Sealed	Bladder	Packed	
14	Environment Condition During Sampling	25 ± 3 °C						
15	Environment Condition During Testing	25 ± 3 °C						

STACK DETAILS

Sr. No.	Parameter	Unit (SI)	Description
1	Source	-	D G Set (1250 KVA)
2	Height	m	15
3	Diameter	m	0.5
4	Temperature	°C	112.6
5	Velocity	m/s	6.34
6	Types of Fuel	-	Diesel
7	Quantity of Fuel	-	-
8	Stack attached to	-	D G Set (1250 KVA)
9	Air Pollution Control Measure	-	Not Applicable

TEST RESULT

Sr. No.	Parameter	Unit (SI)	Result	Permissible Limit/ GPCB Norms	Test Method
1	Suspended Particulate Matter	mg/Nm^3	27.34	150	IS 11255 (Part 1): 1985 (Reaffirmed 2014)
2	Sulphur Dioxide (SO_2)	ppm	14.26	100	IS 11255 (Part2): 1985 (Reaffirmed 2014)
3	Oxides of Nitrogen (NO_X)	ppm	32.01	50	IS 11255 (Part 7): 2005 (Reaffirmed 2012)

[ND – Not Detect, BDL – Below Detection Limit]

Note:
1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

Work Place Monitoring Report

FORM NO: 37

(Prescribe under Rule 12-B)

Register containing particulars of monitoring of working environment required under section 7-A (a) (e)

Company name and address	**M/S RALLIS INDIA LIMITED** **PLOT NO. Z-110, SEZ – II, DAHEJ 392130** **TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA**
Report No	EET225823000003737
Date of Sampling	17.04.2023
Date of Receipt	17.04.2023
Date of Analysis start	18.04.2023
Date of Completion	24.04.2023

Sr. No	Location /Operation Mentioned	Identified Contaminant	Sampling Instrument Used	Air bone Contamination		Average	TWA Concentration (as given in second scheduled)	Reference Method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking sample	Name (In block Letter)
				No of Samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Metribuzin Plant 2 Area	SPM	Personal Handy Sampler	1	4.43 mg/Nm³	4.43 mg/Nm³	15 mg/Nm³	NIOSH 0500	6 – 7	During Process		MR DAXESH PATEL
		SOx	Personal Handy Sampler	1	2.20 mg/Nm³	2.20 mg/Nm³	13 mg/Nm³	OSHA 1011	6 – 7	During Process		MR DAXESH PATEL
		NOx	Personal Handy Sampler	1	1.86 ppm	1.86 ppm	50 ppm	OSHA ID-116	6 – 7	During Process		MR DAXESH PATEL
		HCl	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	6 – 7	During Process		MR DAXESH PATEL
		HC	Bladder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	6 – 7	During Process		MR DAXESH PATEL

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

		$AlCl_3$	Personal Handy Sampler	1	BDL	BDL	-	OSHA ID – 121	6 – 7	During Process		MR DAXESH PATEL
		Valeryl	Personal Handy Sampler	1	6.79 mg/Nm³	6.79 mg/Nm³	175 mg/Nm³	OSHA 85	6 – 7	During Process		MR DAXESH PATEL
		KOH (Potassium Hydroxide)	Personal Handy Sampler	1	BDL	BDL	2 mg/Nm³	NIOSH 7401	6 – 7	During Process		MR DAXESH PATEL
		DMF (Dimethylformide)	Personal Handy Sampler	1	BDL	BDL	10 ppm	NIOSH 2004	6 – 7	During Process		MR DAXESH PATEL
		Methanol	Personal Handy Sampler	1	42.37 ppm	42.37 ppm	200 ppm	OSHA 5001	6 – 7	During Process		MR DAXESH PATEL
2	Pulverization Area	SPM	Personal Handy Sampler	1	3.62 mg/Nm³	3.62 mg/Nm³	15 mg/Nm³	NIOSH 0500	5 – 8	During Process		MR ROSHAN PARMAR
		SOx	Personal Handy Sampler	1	2.88 mg/Nm³	2.88 mg/Nm³	13 mg/Nm³	OSHA 1011	5 – 8	During Process		MR ROSHAN PARMAR
		NOx	Personal Handy Sampler	1	2.01 ppm	2.01 ppm	50 ppm	OSHA ID-116	5 – 8	During Process		MR ROSHAN PARMAR
		HCl	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	5 – 8	During Process		MR ROSHAN PARMAR
		HC	Balder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	5 – 8	During Process		MR ROSHAN PARMAR
		Hydrazine	Personal Handy Sampler	1	BDL	BDL	1 ppm	OSHA 20	5 – 8	During Process		MR ROSHAN PARMAR
		Carbon	Personal Handy Sampler	1	BDL	BDL	3.5 mg/Nm³	OSHA ID - 196	5 – 8	During Process		MR ROSHAN PARMAR

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

		Acetic Acid	Personal Handy Sampler	1	1.46 ppm	1.46 ppm	10 ppm	OSHA PV 2119	5 – 8	During Process		MR ROSHAN PARMAR
		Sulphuric Acid	Personal Handy Sampler	1	BDL	BDL	1 mg/Nm³	OSHA 113	5 – 8	During Process		MR ROSHAN PARMAR
		Methanol	Personal Handy Sampler	1	60.21 ppm	60.21 ppm	200 ppm	OSHA 5001	5 – 8	During Process		MR ROSHAN PARMAR
		Caustic Soda	Personal Handy Sampler	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	5 – 8	During Process		MR ROSHAN PARMAR
		Toluene	Personal Handy Sampler	1	51.69 ppm	51.69 ppm	500 ppm	OSHA 111	5 – 8	During Process		MR ROSHAN PARMAR
3	Boiler Area	SPM	Personal Handy Sampler	1	2.84 mg/Nm³	2.84 mg/Nm³	15 mg/Nm³	NIOSH 0500	4 – 6	During Process		MR DAXESH PATEL
		SOX	Personal Handy Sampler	1	3.07 mg/Nm³	3.07 mg/Nm³	13 mg/Nm³	OSHA 1011	4 – 6	During Process		MR DAXESH PATEL
		NOX	Personal Handy Sampler	1	2.65 ppm	2.65 ppm	50 ppm	OSHA ID-116	4 – 6	During Process		MR DAXESH PATEL
		HCL	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	4 – 6	During Process		MR DAXESH PATEL
		HC	Bladder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	4 – 6	During Process		MR DAXESH PATEL

[ND – Not Detect, BDL – Below Detection Limit]

A.D. Kathrani
Analyzed By

Checked By

For, Eco Earth Technologies
Eco Earth Technologies Ankleshwar
4/10/2023
Authorized Signatory

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

Work Place Monitoring Report

FORM NO: 37

(Prescribe under Rule 12-B)

Register containing particulars of monitoring of working environment required under section 7-A (a) (e)

Company name and address	**M/S RALLIS INDIA LIMITED** **PLOT NO. Z-110, SEZ – II, DAHEJ 392130** **TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA**
Report No	EET225823000014235
Date of Sampling	**25.12.2023**
Date of Receipt	**25.12.2023**
Date of Analysis start	**26.12.2023**
Date of Completion	**30.12.2023**

Sr. No	Location /Operation Mentioned	Identified Contaminant	Sampling Instrument Used	Air bone Contamination		Average	TWA Concentration (as given in second scheduled)	Reference Method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking sample	Name (In block Letter)
				No of Samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Metribuzin Plant 2 Area	SPM	Personal Handy Sampler	1	3.02 mg/Nm³	3.02 mg/Nm³	15 mg/Nm³	NIOSH 0500	7 – 12	During Process	Dvs.	MR DEVENDRA SOLANKI
		SOx	Personal Handy Sampler	1	1.95 mg/Nm³	1.95 mg/Nm³	13 mg/Nm³	OSHA 1011	7 – 12	During Process	Dvs.	MR DEVENDRA SOLANKI
		NOx	Personal Handy Sampler	1	1.86 ppm	1.86 ppm	50 ppm	OSHA ID-116	7 – 12	During Process	Dvs.	MR DEVENDRA SOLANKI
		HCl	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	7 – 12	During Process	Dvs.	MR DEVENDRA SOLANKI
		HC	Bladder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	7 – 12	During Process	Dvs.	MR DEVENDRA SOLANKI

Eco Earth Technologies Ankleshwar

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

		$AlCl_3$	Personal Handy Sampler	1	BDL	BDL	-	OSHA ID – 121	7 – 12	During Process		MR DEVENDRA SOLANKI
		Valeryl	Personal Handy Sampler	1	3.11 mg/Nm³	3.11 mg/Nm³	175 mg/Nm³	OSHA 85	7 – 12	During Process		MR DEVENDRA SOLANKI
		KOH (Potassium Hydroxide)	Personal Handy Sampler	1	BDL	BDL	2 mg/Nm³	NIOSH 7401	7 – 12	During Process		MR DEVENDRA SOLANKI
		DMF (Dimethylformide)	Personal Handy Sampler	1	BDL	BDL	10 ppm	NIOSH 2004	7 – 12	During Process		MR DEVENDRA SOLANKI
		Methanol	Personal Handy Sampler	1	46.94 ppm	46.94 ppm	200 ppm	OSHA 5001	7 – 12	During Process		MR DEVENDRA SOLANKI
2	Pulverization Area	SPM	Personal Handy Sampler	1	2.17 mg/Nm³	2.17 mg/Nm³	15 mg/Nm³	NIOSH 0500	6 – 9	During Process		MR VIRENDRA SOLANKI
		SOx	Personal Handy Sampler	1	1.20 mg/Nm³	1.20 mg/Nm³	13 mg/Nm³	OSHA 1011	6 – 9	During Process		MR VIRENDRA SOLANKI
		NOx	Personal Handy Sampler	1	1.85 ppm	1.85 ppm	50 ppm	OSHA ID-116	6 – 9	During Process		MR VIRENDRA SOLANKI
		HCl	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	6 – 9	During Process		MR VIRENDRA SOLANKI
		HC	Balder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	6 – 9	During Process		MR VIRENDRA SOLANKI
		Hydrazine	Personal Handy Sampler	1	BDL	BDL	1 ppm	OSHA 20	6 – 9	During Process		MR VIRENDRA SOLANKI
		Carbon	Personal Handy Sampler	1	BDL	BDL	3.5 mg/Nm³	OSHA ID - 196	6 – 9	During Process		MR VIRENDRA SOLANKI

Eco Earth Technologies Ankleshwar

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

		Acetic Acid	Personal Handy Sampler	1	1.16 ppm	1.16 ppm	10 ppm	OSHA PV 2119	6 – 9	During Process	Virv	MR VIRENDRA SOLANKI
		Sulphuric Acid	Personal Handy Sampler	1	BDL	BDL	1 mg/Nm^3	OSHA 113	6 – 9	During Process	Virv	MR VIRENDRA SOLANKI
		Methanol	Personal Handy Sampler	1	46.70 ppm	46.70 ppm	200 ppm	OSHA 5001	6 – 9	During Process	Virv	MR VIRENDRA SOLANKI
		Caustic Soda	Personal Handy Sampler	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	6 – 9	During Process	Virv	MR VIRENDRA SOLANKI
		Toluene	Personal Handy Sampler	1	59.41 ppm	59.41 ppm	500 ppm	OSHA 111	6 – 9	During Process	Virv.	MR VIRENDRA SOLANKI
3	Boiler Area	SPM	Personal Handy Sampler	1	2.87 mg/Nm^3	2.87 mg/Nm^3	15 mg/Nm^3	NIOSH 0500	7 – 8	During Process	Devs.	MR DEVENDRA SOLANKI
		SOX	Personal Handy Sampler	1	1.89 mg/Nm^3	1.89 mg/Nm^3	13 mg/Nm^3	OSHA 1011	7 – 8	During Process	Devs.	MR DEVENDRA SOLANKI
		NOX	Personal Handy Sampler	1	1.27 ppm	1.27 ppm	50 ppm	OSHA ID-116	7 – 8	During Process	Devs	MR DEVENDRA SOLANKI
		HCL	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	7 – 8	During Process	Devs	MR DEVENDRA SOLANKI
		HC	Bladder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	7 – 8	During Process	Devs	MR DEVENDRA SOLANKI

[ND – Not Detect, BDL – Below Detection Limit]

A.D. Kathiriya
Analyzed By

Checked By

[End of The Test Report]

For, Eco Earth Technologies

20/12/23

Authorized Signatory

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

Work Place Monitoring Report

FORM NO: 37

(Prescribe under Rule 12-B)

Register containing particulars of monitoring of working environment required under section 7-A (a) (e)

Company name and address	**M/S RALLIS INDIA LIMITED** **PLOT NO. Z-110, SEZ – II, DAHEJ 392130** **TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA**
Report No	EET225824000002763
Date of Sampling	**07.03.2024**
Date of Receipt	**08.02.2024**
Date of Analysis start	**08.03.2024**
Date of Completion	**12.03.2024**

Sr. No	Location /Operation Mentioned	Identified Contaminant	Sampling Instrument Used	Air bone Contamination		Average	TWA Concentration (as given in second scheduled)	Reference Method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking sample	Name (In block Letter)
				No of Samples	Range							
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Metribuzin Plant 2 Area	SPM	Personal Handy Sampler	1	7.14 mg/Nm³	7.14 mg/Nm³	15 mg/Nm³	NIOSH 0500	6 – 8	During Process		MR DAXESH PATEL
		SOx	Personal Handy Sampler	1	4.86 mg/Nm³	4.86 mg/Nm³	13 mg/Nm³	OSHA 1011	6 – 8	During Process		MR DAXESH PATEL
		NOx	Personal Handy Sampler	1	3.68 ppm	3.68 ppm	50 ppm	OSHA ID-116	6 – 8	During Process		MR DAXESH PATEL
		HCl	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	6 – 8	During Process		MR DAXESH PATEL
		HC	Bladder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	6 – 8	During Process		MR DAXESH PATEL

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

		$AlCl_3$	Personal Handy Sampler	1	BDL	BDL	-	OSHA ID – 121	6 – 8	During Process		MR DAXESH PATEL
		Valeryl	Personal Handy Sampler	1	3.82 mg/Nm³	3.82 mg/Nm³	175 mg/Nm³	OSHA 85	6 – 8	During Process		MR DAXESH PATEL
		KOH (Potassium Hydroxide)	Personal Handy Sampler	1	BDL	BDL	2 mg/Nm³	NIOSH 7401	6 – 8	During Process		MR DAXESH PATEL
		DMF (Dimethylformide)	Personal Handy Sampler	1	BDL	BDL	10 ppm	NIOSH 2004	6 – 8	During Process		MR DAXESH PATEL
		Methanol	Personal Handy Sampler	1	69.81 ppm	69.81 ppm	200 ppm	OSHA 5001	6 – 8	During Process		MR DAXESH PATEL
2	Pulverization Area	SPM	Personal Handy Sampler	1	6.39 mg/Nm³	6.39 mg/Nm³	15 mg/Nm³	NIOSH 0500	7 - 10	During Process		MR VINOD BARIYA
		SO_x	Personal Handy Sampler	1	4.27 mg/Nm³	4.27 mg/Nm³	13 mg/Nm³	OSHA 1011	7 - 10	During Process		MR VINOD BARIYA
		NO_x	Personal Handy Sampler	1	3.64 ppm	3.64 ppm	50 ppm	OSHA ID-116	7 - 10	During Process		MR VINOD BARIYA
		HCl	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	7 - 10	During Process		MR VINOD BARIYA
		HC	Balder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	7 - 10	During Process		MR VINOD BARIYA
		Hydrazine	Personal Handy Sampler	1	BDL	BDL	1 ppm	OSHA 20	7 - 10	During Process		MR VINOD BARIYA
		Carbon	Personal Handy Sampler	1	BDL	BDL	3.5 mg/Nm³	OSHA ID - 196	7 - 10	During Process		MR VINOD BARIYA

ECO EARTH TECHNOLOGIES

NABL ACCREDITED LABORATORY (T-4196)
AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED COMPANY
(GPCB SCHEDULED – II ENVIRONMENTAL AUDITOR)
OFFICE & LAB ADDRESS : PLOT NO.: 3202/A/2/1, T-1 3RD FLOOR,GIDC MULTILEVEL SHED,
NEAR ADVANCE PAINT,GIDC IND ESTATE, ANKLESHWAR 393002, DIST:BHARUCH, GUJARAT
CONTACT NO: 094091333000 / 9601758907
E-MAIL ID : ECOEARTH.TECHNOLOGIES@GMAIL.COM, WEB : WWW.ECOEARTHTECHNOLOGIES@GMAIL.COM

		Acetic Acid	Personal Handy Sampler	1	1.86 ppm	1.86 ppm	10 ppm	OSHA PV 2119	7 - 10	During Process	Vinod.	MR VINOD BARIYA
		Sulphuric Acid	Personal Handy Sampler	1	BDL	BDL	1 mg/Nm³	OSHA 113	7 - 10	During Process		MR VINOD BARIYA
		Methanol	Personal Handy Sampler	1	61.28 ppm	61.28 ppm	200 ppm	OSHA 5001	7 - 10	During Process		MR VINOD BARIYA
		Caustic Soda	Personal Handy Sampler	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	7 - 10	During Process		MR VINOD BARIYA
		Toluene	Personal Handy Sampler	1	50.87 ppm	50.87 ppm	500 ppm	OSHA 111	7 - 10	During Process		MR VINOD BARIYA
3	Boiler Area	SPM	Personal Handy Sampler	1	5.87 mg/Nm³	5.87 mg/Nm³	15 mg/Nm³	NIOSH 0500	6 – 8	During Process	Dpatel.	MR DAXESH PATEL
		SOX	Personal Handy Sampler	1	5.27 mg/Nm³	5.27 mg/Nm³	13 mg/Nm³	OSHA 1011	6 – 8	During Process		MR DAXESH PATEL
		NOX	Personal Handy Sampler	1	4.03 ppm	4.03 ppm	50 ppm	OSHA ID-116	6 – 8	During Process		MR DAXESH PATEL
		HCL	Personal Handy Sampler	1	BDL	BDL	5 ppm	Method of Air Sampling and Analysis -2nd Edition	6 – 8	During Process		MR DAXESH PATEL
		HC	Bladder	1	BDL	BDL	-	Method of Air Sampling and Analysis -2nd Edition	6 – 8	During Process		MR DAXESH PATEL

[ND – Not Detect, BDL – Below Detection Limit]

For, Eco Earth Technologies

A.D.Kathiriya
Analyzed By

Checked By

Authorized Signatory

[End of The Test Report]

Z-110

GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

GPCB

By R.P.A.D.

CONSOLIDATED CONSENT AND AUTHORIZATION(CC & A)
CCA NO: AWH-113914

NO: GPCB/BRCH/CCA- 25(9)/ID-32966/_____ **DT:____/09/2021**

In exercise of the power conferred underSection-25of 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 & Other Wastes (Management and Transboundary Movement) Rules-2016, framed under the E(P)Act-1986.

And whereas Board has received consolidated application dated **15/04/2021**and inward no. **192475** for the consolidated consent and authorization (CC & A) of this Board under the provisions / rules of the aforesaid Acts, Consolidated Consent & Authorization is hereby granted as under.

CONSOLIDATED CONSENT AND AUTHORISATION:
(Under the provisions / rules of the aforesaid Environmental Acts)

To,
M/s.Rallis India Limited,
PLOT NO: Z-110,
Dahej SEZ-2, Taluka: Vagra
Dist: BHARUCH- 392130

1. **Consent Order No. : AWH-113914 date of Issue 26/07/2021.**
2. The consent under Water Act-1974 for conveying the industrial effluent discharge to GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal system upto the sea, The consent under Air Act-1981 & Authorization under Environment (Protection) Act, 1986 shall be **valid up to 15/04/2026**to operate industrial plant to manufacture following products:

Sr. No.	Name of Product	Quantity (MT/Annum)
1	METRIBUZIN	4000
2	PENDIMETHYLENE	5000
3	HEXACONAZOLE	500
4	PROPICONAZOLE	100
5	TEBUCONAZOLE	500
6	METCONAZOLE	1000
7	METALAXYL	200
8	METALAXYL-M	200
9	ALLYL ALCOHAL	2750
10	ATORVASTRATIN	5
11	PENTOXAZONE	50
12	FLUMETRAIN	25
13	GY-250 (BISPHENOL-A-EPOXY RESIN)	100

Outward No:601404 21/09/21

14	PROBENAZOLE	50
15	VALSARTAN	10
16	PEKK	500
17	DIFENOCONAZOLE	500
18	DIMTHOMORPH	500
19	MYCLOBUTANIL	100
20	PROPINEB	100
21	THIAMETHOXAZAM	100
22	EPOXYCONAZOLE	300
23	AZOXYSTROBIN	100
24	BISPYRIBAC SOD.	300
25	CARTOP HYDROCHLORIDE	1000
26	AZIMSULFURON	100
27	KRESOXIM METHYL	100
28	TRIFLOXYSTORBIN	200
29	IMIBENCONAZOLE	200
30	TRICYCLOZOLE	200
30	AROMATIC KETONE	200
31	(2- 4-PHENYLBENZOYL) BENZOIC ACID	130
33	KM 119	150
34	BENFURESATE	200
35	BENZOFENAP	200
36	TRIAZOLINONE	1000
37	QUIZALOFOP	100
38	FLUMIOXAZINE	100
39	THIOPHANAT METHYL	700
40	IPROVALICARB	150
41	FENOXAPROP-P -ETHYL	100
42	IMIDACHLOROPID	200
43	PINACOLONE	1990
44	AMICARBAZONE	1000
45	6 FMI	100
46	DIMOXYSTROBIN	10
47	ORYSASTROBIN	10
48	ATRAZINE	1200
49	FLUOXASTROBIN	100
50	FENOXYCARB	100
51	CYPROCONAZOLE	100
52	DIAFENTHIURON	100
53	FIPRONIL	100
54	THIAMETHOXAM – M	100
55	METSULFURON	100
56	CLODINAFOP	100
57	CHLORIMURON	100
58	PYRAZOSULFURON	100

Outward No:601404,21/09/2021

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, Sector 10-A,
Gandhinagar 382 010. Gujarat. INDIA.
Phone : (O) +91-79 2323 2152, Fax : +91-79 2322 2784
E-mail : ms-gpcb@gujarat.gov.in
Website : www.gpcb.gov.in

59	PROPAQUIZAFOP	100
60	3-AMINO PENTANE	2000
61	BIS-STEARYLFORMAL (BSF)	100
62	PYRAFTALID	250
63	PROPARGYL-ABO	500
64	MOAT (N METHOXY-1-(2,4,6-TRICHLOROPHENYL PROPAN)-2-AMINE	500
65	CAPROLACTAM DISULPHIDE	400
66	COLOGNE	1500
67	CYCLOPROPYLACETYLENE	1200
68	4-CHLORO-2-(TRIFLUOROACETYL) ANILINE HYDROCHLORIDE	1200
69	GUANINE	1500
70	N,O-DIMETHYL-N'-NITROSOUREA	600
71	TETRACHLOROVINPHOS	600
72	AMITROL	1000
73	ACLONIFEN	500
74	PILOT PLANT (R&D PRODCUTS ONLY)	10
	TOTAL	38940
1	PESTICIDE FORMULATION (SOLID)	5000
2	PESTICIDE FORMULATION (LIQUID)	5000

Specific conditions:

a) Unit shall not carry out any construction activities and production which attracts Unit shall comply with all the conditions stipulated by SEIAA / MoEF in the order of Environment Clearance issued vide letter no. F No.J -11011/779/2008-IA II (I) dated 17.03.2009.

a) Unit shall use fresh raw material only.

b) Unit shall strictly adhere to notarized undertaking given dated 22/03/2021 regarding not to manufacture banned pesticide.

c) Unit shall strictly adhere to notarized undertaking given dated 02/07/2021.

d) Unit shall sell out their hazardous waste to authorized endusers who is having authorization with valid CCA and rule 9 permission to receive this waste. Unit shall make MoU with such authorized endusers and submit MoU.

e) All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.

f) Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.

g) Unit shall strictly follow the Solid Fuel guideline framed by Board and shall install APCM as per guideline.

h) Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.

i) Unit shall not use furnace oil

3. CONDITION UNDER THE WATER ACT:

Outward No: 60344 Dt: 21/09/2021

3.1 The quantity of total water consumption shall not exceed **1905 KL/Day** as per below break up as mentioned in form D submitted for consent application under the Water Act- 1974.

a) Industrial: 1725 KL/Day
b) Domestic: 130 KL/Day
c) Gardening: 50 KL/Day

3.2 The quantity of total waste water generation shall not exceed **1291.25 KL/Day** as per below break up as mentioned in form D submitted for consent application under the Water Act- 1974.

a) Industrial: 1166.25 KL/Day
b) Domestic: 125 KL/Day

3.3 Mode of disposal of wastewater:

i. 350 KL/day concentrated / high salt stream containing heavy inorganic & organic load stream of industrial effluent from process shall be sent to the evaporation system (MEE) after primary treatment. Condensate from MEE shall be reused back in cooling tower.

ii. 816.25 KL/day bio-degradable industrial effluent along with 125 KL/day domestic waste water (sewage) will be sent to ETP. The treated (industrial + sewage) effluent shall be disposed to GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal system upto sea for final disposal at NIO designated point after meeting the standards prescribed in sr no. 3.4.

3.4 The quality of industrial effluent shall conform to the following standards (as per GPCB norms, whichever is applicable) (For discharge into GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal system upto the sea for final disposal at NIO designated point)

Sr. No.	PARAMETERS	PERMISSIBLE LIMIT
1	pH	6 to 9
2	Temperature	Shall not exceed more than 5 °C above ambient water temperature
3	Total Suspended Solids	100 mg/l
4	Oil and Grease	10 mg/l
5	Phenolic Compounds	5 mg/l
6	Cyanide (as CN)	0.2 mg/l
7	Fluorides (as F)	15 mg/l
8	Sulphides	5.0 mg/l
9	Total Residual Chlorine	1.0 mg/l
10	Ammonical Nitrogen	50 mg/l
11	Total Kjeldahl Nitrogen (TKN)	50 mg/l
12	Nitrate Nitrogen	50 mg/l
13	Biochemical Oxygen demand [3 day at 27°C]	100 mg/l
14	Chemical Oxygen Demand	250 mg/l

Outward No:601404, 22/09/2021

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

15	Arsenic (as AS)	0.2 mg/l
16	Mercury (as Hg)	0.01 mg/l
17	Lead (as Pb)	0.1 mg/l
18	Cadmium (as Cd)	0.05 mg/l
19	Trivalent Chromium	2.0 mg/l
20	Hexavalent Chromium (as Cr± 6)	0.1 mg/l
21	Copper (as Cu)	3.0 mg/l
22	Zinc (as Zn)	15 mg/l
23	Selenium (as Se)	0.05 mg/l
24	Nickel (as Ni)	3.0 mg/l
25	Manganese (as Mn)	2 mg/l
26	Iron (as Fe)	3 mg/l
27	Vanadium (as V)	0.2 mg/l
28	Bio assay test	90% survival of fish after 96 hours in 100% effluent

3.5 The effluent conforming to the above standards shall be discharged into GIDC SewerLine- DahejVilayat Pipeline/ Common Disposal system upto the sea for final disposal at NIO designated point.

3.6 Unit shall be a member of Dahej CETP as & when come up and send their treated effluent, if required.

3.7 Unit shall be required to make storage facilities to store the effluent for at least 48 hours by providing acid proof brick lined impervious tanks/HDPE tanks.

3.8 Unit shall implement & follow communication plan so that respected work can be done in minimum response time in case of emergencies.

3.9 Unit shall install continuous / online monitoring system and shall transmit online data so generated simultaneously to GPCB and CPCB as well for the parameters such as pH, TOC, TSS, other sector specific parameters etc. with recorder & magnetic flow meters for flow measurement of treated wastewater as per CPCB guideline.

3.10 Unit shall have only one authorized outlet over the ground with full access from outside the premises. Also name of unit and technical details shall be prominently written / printed on mouth of pipeline opening in GIDC U/G drain & shall be made visible to inspecting staff.

3.11 In case of shut-down of plant for more than three (3) days for any reason, member unit shall intimate to GIDC/ Pipeline Project authority & GPCB well in advance for the better operation & management of pipeline.

3.12 Unit shall make fixed arrangement for discharge of the effluent from their Final collection tanks to the underground drainage network of GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal system. Unit shall not keep any by-pass line or system or

Outward No:6014, 21/05/2021

loose or flexible pipe line for discharge of the effluent into underground drainage network of Pipeline.

3.13 Magnetic flow meters shall be installed at the inlet & outlet of effluent collection tanks/ETP to measure the quantity of effluent discharged into the underground drainage network of GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal system.

3.14 Unit shall affix of water meters as per Section 4 (1) of the water (Prevention and Control of Pollution) Cess Act – 1977 for the purpose of measuring and recording the quantity of water consumed at such places as may be required, within 15 days and it shall be presumed that the quantity indicated by the meter has been consumed by the unit until the contrary is proved.

3.15 Unit shall provide adequate / safe effluent sampling facility for the effluent being stored in final collection / discharge tank of ETP or being discharged into GIDC Sewer Line-DahejVilayat Pipeline/ Common Disposal system upto the sea for final disposal at NIO designated point.

3.16 Unit shall put up at the entrance a board displaying the name of unit, particulars of the products/ process, the name of proprietor/partners /directors of the unit, GIDC Pipeline Project membership number & date of joining of GIDC Pipeline Project membership, the electricity consumer number as on the record of DGVCL.

3.17 Unit shall have to display on-line data outside the main factory gate with regard to and nature of hazardous chemicals being handled in the plant, including waste water and air emission and solid hazardous waste generated within the factory premises, if applicable as per CPCB norms.

3.18 Unit shall either stop or curtail its production activities if the effluent is not conforming to the standards of GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal systemspecified by GPCB.

3.19 The authorized representative of GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal system project shall have right of entry at any time for the purpose of inspection and monitoring the effluent collection facilities/ETP (if required) of Unit.

3.20 Unit shall have to keep accurate records of quality & quantity of effluent discharged to GIDC Sewer Line- DahejVilayat Pipeline/ Common Disposal systemon day-to-day basis. Separate logbook shall be maintained for recording the data & shall be made available for inspection as & when asked.

3.21 Unit 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 each month to GPCB on or before fifth day of the succeeding month.

Outward No:601404,21/09/021

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

3.22 In case of incinerators or MEE, the flow measuring devices for mother liquor/ toxic effluent/ Non-biodegradable effluent, light diesel oil, Furnace oil, etc. i.e. fuel used for combustion, air used for combustion shall be separately provided. Incinerator temperature recording devices as well as gaseous flow measuring devices for scrubber shall also be provided. These data of temperature & flow should be recorded every day & submitted to GPCB on monthly basis.

3.23 Disposal system for storm water shall be provided separately. In no circumstances storm water shall be mixed with the industrial effluent.

3.24 Leachate from the hazardous solid waste, if any shall also be connected into a collection tank through leachate collection facilities and shall be treated along with industrial effluent and final treated effluent shall be discharged to the GIDC SewerLine-DahejVilayat Pipeline/ Common Disposal system.

3.25 If the GIDC SewerLine- DahejVilayat Pipeline/ Common Disposal systemProject authority terminates the membership of Pipeline Project, the member unit shall have to close down the manufacturing activities/industrial operation of the process plant immediately until the membership is resumed.

3.26 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environment 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 issued. These Cells also coordinate the exercise of environmental audit and preparation of environmental statements.

3.27 The Environmental audit shall be carryout yearly, if applicable. The environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.

3.28 Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 5 meters width is developed.

3.29 In case of change of ownership/ management the name and address of the new ownership/ partners/ directors/ proprietor should immediately be intimate to the Board. Also any change in equipment or working conditions as mentioned in the consents form/ order should immediately be intimated to this Board.

3.30 The Board reserves the right to review and/or revoke the consent and / or make modifications in the conditions which it seems fit in accordance with provisions of Water Act-1974.

4. CONDITIONS UNDER THE AIR ACT:

Outward No:6010104, Dt:10/2014

4.1 The following shall be used as fuel:

SR NO	FUEL	Existing	Proposed	Total
1	Natural Gas	100 NM3/day	--	100 NM3/day
2	HSD	5 T/day	30 T/day	35 T/day
3	Briquette	20 T/day	20 T/day	40 T/day
4	FO	50 T/day	(-)50 T/Day	--

Note: Unit shall not use furnace oil

4.1.1 The flue gas emission through stack shall conform to the following standards:

Sr no	Stack attached to	Stack height (m)	APCM	Parameter	Permissible limit
1	Boiler-1 (3.45 TPH)	30 common stack	--	PM SO_2 NO_X	150 mg/NM3 100 ppm 50 ppm
2	Boiler-2 (3.45 TPH) (standby)		--		
3	Boiler-3 (8 TPH)	30	Bag Filters, Wet Scrubber, Cyclone, Spark arrestor etc		
4	DG Sets - 02 Nos (Cap. 1250 KVA + 625 KVA)	15	--	--	

4.2 The Process emission through various stacks/ vent of reactors, process, vessel shall conform to the following standards:

Sr no	Stack attached to	Stack height (m)	APCM	Parameter	Permissible limit
1	Process Vent - 1	15	Water Scrubber+ Caustic Scrubber	H2S	5 mg/NM3
2	Process Vent -2	15	Water Scrubber + Acid Scrubber	NH3	30 mg/NM3
3	Process Vent - 3	15	Water Scrubber + Caustic Scrubber	HCl SO2	20 mg/NM3 40 mg/NM3
4	Process Vent - 4	15	Water Scrubber + Caustic Scrubber	HCl	20 mg/NM3
5	Process Vent - 5	15	Water Scrubber + Caustic Scrubber	HCl SO2	20 mg/NM3 40 mg/NM3
6	Process Vent - 6	15	Water Scrubber + Caustic Scrubber	H2S	5 mg/NM3
7	Process Vent - 7	15	Water Scrubber + Caustic Scrubber	HCl SO2 Cl2	20 mg/NM3 40 mg/NM3 9 mg/NM3
8	Process Vent - 8	15	Water Scrubber + Caustic Scrubber	HCl SO2 Cl2	20 mg/NM3 40 mg/NM3 9 mg/NM3

Outward No:601404,21/09/2021

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

4.3 The concentration of the following parameters in the ambient air within the premises of the unit shall not exceed the limits specified hereunder.

Sr. No.	Parameters	Permissible Limit (microgram /m³)	
		Annual	24 Hours Average
1.	Particulate Matter (PM_{10})	60	100
2.	Particulate Matter ($PM_{2.5}$)	40	60
3.	Oxides of Sulphur (SO_x)	50	80
4.	Oxides of Nitrogen (NO_x)	40	80

- **Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.**
- **24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.**

4.4 Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified as above.

4.5 The consent to operate the industrial plant shall lapse if at any time the parameters of the gaseous emission are not within the tolerance limits specified as above.

4.6 Unit 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 Unit 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 6a.m. and10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

4.8 All efforts shall be made to control VOC emissions and odor problem, if any.

4.9 Total control of odor nuisance from the plant premises, shall be achieved & maintained by the unit continuously

4.10 Unit shall install continuous / online monitoring system in the stacks and shall transmit online data so generated simultaneously to GPCB and CPCB as well for the parameters such as PM, SO2, NOx, NH3, HCl, other sector specific parameters etc., if applicable as per CPCB guideline.

5 GENERAL CONDITIONS: -

5.1 In case of change of ownership/ management the name and address of the new ownership/ partners/ directors/ proprietor should immediately be intimate to the Board. Also any change in equipment or working conditions as mentioned in the consents form/ order should immediately be intimated to this Board.

5.2 Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of **5** meters width is developed.

Outward No:6014[illegible]/2021

5.3 Unit shall put up at the entrance a board displaying 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 DGVCL.

6. AUTHORISATION FOR THE MANAGEMENT & HANDLING OF HAZARDOUS WASTES Form-2 (See rule 6(2)).

6.1 Number of authorization: **AWH-113914 date of Issue 26/07/2021.**

6.2 **M/s.Rallis India Limited**is hereby granted an authorizationtooperatefacilityfor following hazardous wastes on the premises situated at **PLOT NO: Z-110, Dahej SEZ-2, Taluka: Vagra, DIST: BHARUCH.**

Sr. No.	Name of Haz. Waste	Category Number	Quantity in MT/Year	Facility
1	Used/ Spent Oil	5.1	5	Collection, Storage, Transportation & Disposal by reuse/selling to registered re-refiner.
2	Process Waste	29.1	4000	Collection, Storage, Transportation & Disposal to Common incineration at BEIL/SEPPL or co-processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
3	ETP Sludge	35.3	7500	Collection, Storage, Transportation & Disposal to Common TSDF at BEIL/SEPPL or co-processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
4	Date-expired and off - specification pesticides	29.3	10	Collection, Storage, Transportation & Disposal to Common incineration at BEIL/SEPPL or co-processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
5	Discarded Containers	33.1	35000 Nos	Collection, Storage, Decontamination, Transportation , Disposal by selling to authorized decontamination facility or common facility of BEIL, Dahej
6	Discarded bags/ liners	33.1	20	Collection, Storage, Decontamination, Transportation , Disposal by selling to authorized decontamination facility or common facility of BEIL, Dahej
7	Distillation residue from contaminate organic solvents	36.1	100	Collection, Storage, Transportation & Disposal to Common incineration at BEIL/SEPPL or co-processing at Ultra Tech Cement limited, Shree Cement or pre-processing at RSPL, GSPL
8	Spent Sulfuric Acid about (30%)	29.6	12000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
9	Spent Acid	29.6	3000	Collection, Storage, Transportation & Disposal

Outward No:601404, 21/09/2021

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

	(35%)			by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
10	NaSH Solution (20%)	B37	718	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
11	Sodium Sulfate	B36	3000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
12	Sodium Sulphite	B15/ B23/ B36	800	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
13	Sodium Bi Sulphate	B23	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
14	Ammonium Chloride	A10/ B15	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
15	Ammonium Sulphate	A10/ B15	500	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
16	HCl Solution	29.6/ B15	1650	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
17	AlCl3 Solution	B10	2820	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
18	Recovered Solvent	29.4/ B28	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having

Outward No:601404, 21/09/2021

				authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
19	Ammonium Acetate	A10/ B15	400	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
20	Spent KOH	B32	100	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
21	Spent Acetic Acid	29.6/ B15	700	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
22	Sodium Iodide	B18	300	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
23	Potassium Sulphate	B36	300	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
24	Potassium chloride	B36	1260	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
25	Sodium Chloride	B36	1000	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
26	Sodium Phosphate	B35	1200	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.
27	Phosphoric Acid	29.6/ B15	950	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9

Outward No:601404, 21/09/2021

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

				permission to receive this waste after making MOU.
28	Sodium Nitrate	B36	920	Collection, Storage, Transportation & Disposal by sell out to authorized users who are having authorization with valid CCA and Rule-9 permission to receive this waste after making MOU.

6.3 The authorization is granted to operate a facility as above.
6.4 The authorization shall be in force for a period up to **15/04/2026**.
6.5 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.

7. **TERMS AND CONDITIONS OF AUTHORISATION:**

7.1 The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
7.2 The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the Gujarat Pollution Control Board.
7.3 The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
7.4 Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
7.5 The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, 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 authorised 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 Waste and Penalty"
7.7 It is the duty of the authorised person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
7.8 The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
7.9 The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
7.10 The hazardous and other waste 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.
7.11 The importer or exporter shall bear the cost of import or export and mitigation of damages if any.
7.12 An application for the renewal of an authorization shall be made as laid down under Hazardous & Other Wastes (Management and Transboundary Movement) Rules-2016.
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 Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

Outward No: 601841/169/2021

7.15 Unit shall have to display the relevant information with regard to hazardous waste as indicated in the Court's order in W.P. No. 657 of 1995 dated 14th October 2003.

7.16 Unit shall have to display on-line data outside the main factory gate with regard to and nature of hazardous chemicals being handled in the plant, including waste water and air emission and solid hazardous waste generated within the factory premises.

7.17 Unit shall have to manage used or spent oil; empty or discarded barrels / containers / liners contaminated with hazardous chemicals / wastes, process waste as per Hazardous & Other Wastes (Management and Transboundary Movement) Rules-2016, framed under the E(P)Act-1986 and shall apply Authorization for all applicable waste.

For and on behalf of
GUJARAT POLLUTION CONTROL BOARD

(P.B.PATEL)
DY. ENVIRONMENT ENGINEER

Outward No:601404,21/09/2021

Lab ✓	ECG ✓	Spiro ✓	USG ✓
EYE ✓	Audio ✓	Phy ✓	

(M)

Baroda Heart & Multispeciality Hospital

BHMSH

Panchbatti, Station Road, Bharuch
Ph.:260551, 260552,260553 Fax No. (02642) 260553

PERSONAL HEALTH RECORD

Reg. No.	10

Rallis India Limited | **S/O : Dr. Namrata Patil**

EC No:	GHJ2240	DEPARTMENT	Production	Date: 09/01/2024
NAME :	Raj Bhimani			AGE : 24 / M

Personal History:-

Appetite	Adequate /	Smoking	YES / (NO)	Tobacco	YES / (NO)
Sleep	Good /	Alcohol	YES / (NO)		
Bladder	Regular /	Life Style	✓ Active / ~~N/A~~		
Bowels	Regular /	Diet	(VEG) / MIX		
Drug History	NA				
Past History	NA				
Family History	NAD				
Complain:	No any such complain				

General Examination:-

Height:	164	CM	Blood Pressure:	100/70	/ mm of HG	BMI	17.2.
Weight:	50.6	KG	Pulse:	92.	/Min	Value	Underweight

Vision Test:-

Acuity of Vision		RIGHT EYE	LEFT EYE	Colour Vision
Without Glass	Far Vision	6/12	6/12	Normal
	Near Vision	N6	N6	
With Glass	Far Vision	6/6	6/6	
	Near Vision	N6	N6	

Other Examination:-

ECG ✓	NSR,WNL /
Audiometry Test ✓	Normal /
Pulmonary Function Test ✓	Normal /
USG ✓	NAD /
Advise	Normal

Stamp/Signature MD Physician	Baroda Heart & Multi Speciality Hospital DR. SMIT VASAVA P.G.C.I.H. G-037

675 09/01/24 10:58

HR : 92 bpm BP : ____ / ____ mmHg

Room :
ID :000
Name :
Gender :
Height :000 (cm) Age :000 (Yrs) Weight:000(Kg)

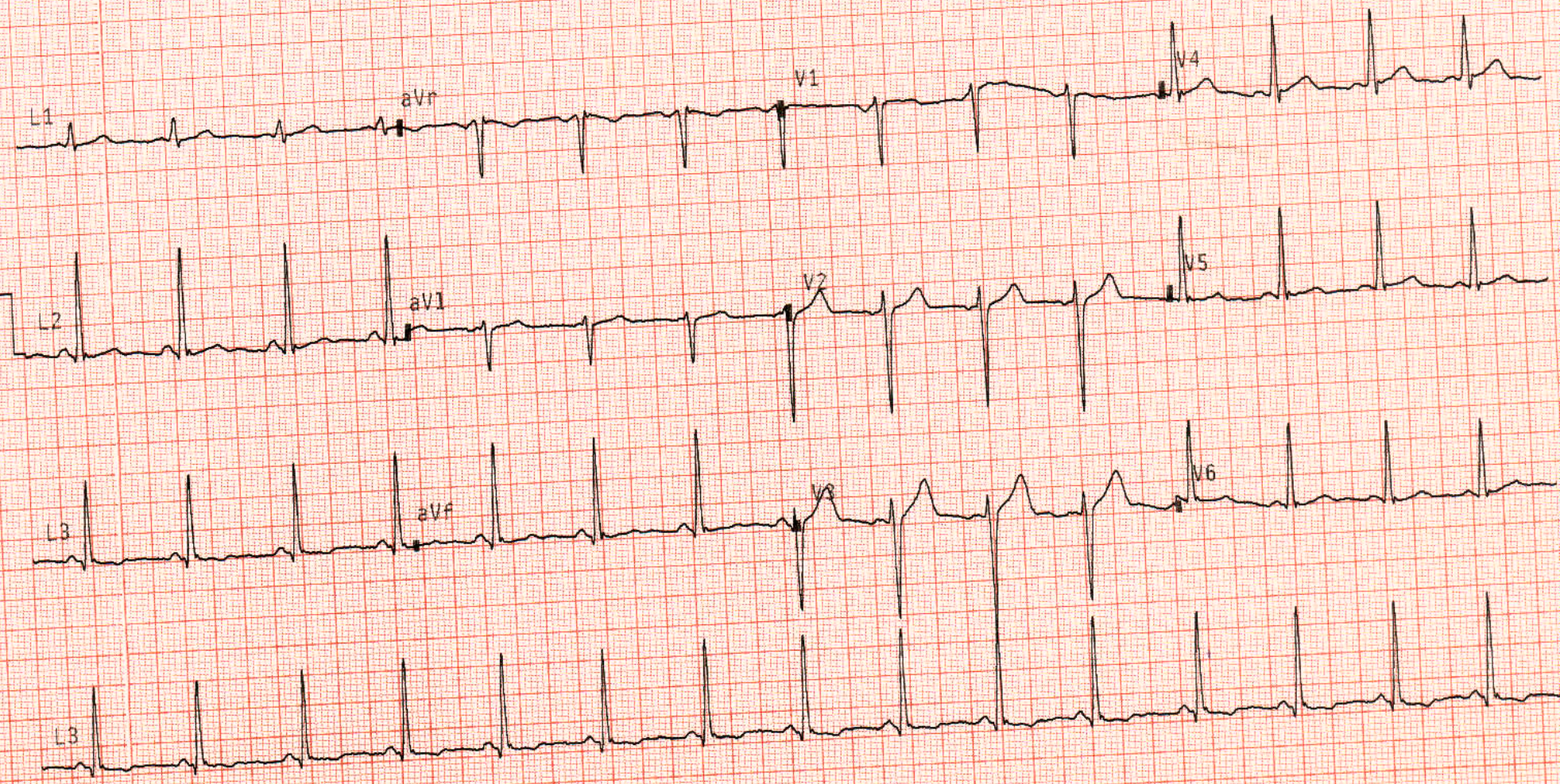
Axes (deg)
P : 5
QRS: 86
T : 46

Intervals (msec)
PR:138, QRS: 78
QT:323, QTc:400
ST: 34

Interpretation : (Minnesota Code)
ECG within Normal Limits.

NIK RAJ BHAMMANI | Age - 24 y/m

9/1/24.



* Unconfirmed report. Kindly correlate clini

Muskan
PATHOLOGY LABORATORY

1st Floor, Adarsh Market,Above TVS Show Room, Panch Batti, BHARUCH-392 001.

Dr. Suresh D. Rao M.D. (Path.)
Reg. NO. G - 10325
(Lab.) 263290 EMERGENCY ON CALL

- Time: Mon. to Sat.:8.00 a.m to 8.00 p.m Sun.:9.00 a.m to 1.00 p.m
- Haematology is being done on fully automatic 5-part Cell Counter MEK-7300
- Biochemistry is being done on fully auto chemistry analyser SELECTRA PROXS
- Hormonal Assay is done on • Maglumi - 600 • Computerised Reporting

CLINICAL PATHOLOGY , CYTOLOGY , HISTOPATHOLOGY & MICROBIOLOGY CENTER

Name : RAJ BHIMANI
Ref By : C/O BHMSH

Age/Sex : 24 Yrs./M
Date : 09/01/2024
Report ID. : 110

HAEMOGRAM

TEST		RESULT	UNIT	METHOD	REFERENCE INTERVAL
BLOOD COUNTS & INDICES					
Haemoglobin	:	16.00	gm%		13.5 - 17.0 gm%
Total RBC	:	4.90	mill/cmm		4.6 - 6.2 mill/cmm
PCV	:	48.00	%		40 - 54 %
MCV	:	**97.96**	fL		80 - 96 fL
MCH	:	**32.65**	pg		27 - 31 pg
MCHC	:	33.33	%		32 - 36 %
Total WBC	:	6,600	/cmm		4,000 - 11,000/cmm
Platelet Count	:	2,97,000	/cmm		1.5 - 4.0 Lac/cmm.
DIFFERENTIAL LEUCOCYTES COUNT					
Neutrophils	:	**72**	%		55 - 70 %
Lymphocytes	:	24	%		20 - 40 %
Eosinophils	:	02	%		01 - 06 %
Monocytes	:	02	%		02 - 08 %
NEUTROPHIL : LYMPHOCYTE					
Ratio	:	3.00			
ERYTHROCYTES SEDIMENTATION RATE					
ESR After 1st Hour	:	6	mm	Westergren	01 - 07 mm
Blood Group	:	" A "			
Rh Factor (Anti D.)	:	" POSITIVE "			

By 5 Part Hematology Analyzer : MEK - 7300 K

End Of Report

Thanks For Reference

Dr. Suresh D Rao
M.D.(Path)

Muskan
PATHOLOGY LABORATORY

1st Floor, Adarsh Market,Above TVS Show Room, Panch Batti, BHARUCH-392 001.

Dr. Suresh D. Rao M.D. (Path.)
Reg. NO. G - 10325
(Lab.) 263290 EMERGENCY ON CALL

- Time: Mon. to Sat.:8.00 a.m to 8.00 p.m Sun.:9.00 a.m to 1.00 p.m
- Haematology is being done on fully automatic 5-part Cell Counter MEK-7300
- Biochemistry is being done on fully auto chemistry analyser SELECTRA PROXS
- Hormonal Assay is done on • Maglumi - 600 • Computerised Reporting

CLINICAL PATHOLOGY , CYTOLOGY , HISTOPATHOLOGY & MICROBIOLOGY CENTER

Name : RAJ BHIMANI
Ref By : C/O BHMSH

Age/Sex : 24 Yrs./M
Date : 09/01/2024
Report ID. : 110

BIO-CHEMISTRY

TEST		RESULT	UNIT	REFERENCE INTERVAL
Blood Urea	:	29.00	mg/dl	10 - 50 mg/dl
Creatinine	:	0.89	mg/dl	0.3-1.4 mg/dl
S. Cholesterol	:	170.00	mg/dl	Upto 200 mg/dl
Random Blood Glucose (RBS)	:	74	mg/dl	Upto 127 mg/dl

By Fully Auto Biochemistry Analyzer : Selectra PRO XS

BIO-CHEM PROFILE

RBC-Cholinesterase	:	1326	U/L	900 - 1400 U/L

Hb A1C REPORT

Hb A1C	:	5.4	%	Non Diabetic : 4.3 - 6.3 % Good Control : 6.4 - 7.5 % Moderate Control : 7.5 - 9.0 % Poor Control : 9.0 % & Above
Avg. Blood Glucose Level	:	109	mg/dl	

MALE REPRODUCTIVE HORMONES ASSAY

Testosterone	:	269.00	ng/dL	175.00 - 781.00 ng/dL

Done on Fully Automated Fluorescent Enzyme Immunoassay: MINI VIDAS

End Of Report

Thanks For Reference

Dr. Suresh D Rao
M.D.(Path)

Muskan
PATHOLOGY LABORATORY

1st Floor, Adarsh Market,Above TVS Show Room, Panch Batti, BHARUCH-392 001.

Dr. Suresh D. Rao M.D. (Path.)
Reg. NO. G - 10325
(Lab.) 263290 EMERGENCY ON CALL

- Time: Mon. to Sat.:8.00 a.m to 8.00 p.m Sun.:9.00 a.m to 1.00 p.m
- Haematology is being done on fully automatic 5-part Cell Counter MEK-7300
- Biochemistry is being done on fully auto chemistry analyser SELECTRA PROXS
- Hormonal Assay is done on • Maglumi - 600 • Computerised Reporting

CLINICAL PATHOLOGY , CYTOLOGY , HISTOPATHOLOGY & MICROBIOLOGY CENTER

Name : RAJ BHIMANI
Ref By : C/O BHMSH

Age/Sex : 24 Yrs./M
Date : 09/01/2024
Report ID. : 110

LIVER FUNCTION TEST

TEST	RESULT	UNIT	REFERENCE INTERVAL
S. BILIRUBIN			
Total	: 0.63	mg/dl	0 - 1.0 mg/dl
Direct	: 0.30	mg/dl	up to 0.3 mg/dl
Indirect	: 0.30	mg/dl	0.1 - 1.0 mg/dl
S. Alk. Phosphatase	: 134	U/L	Adult : up to 290 U/L Children: up to 1200 U/L
S.G.P.T.	: 24	U/L	10 - 40 U/L
S.G.O.T.	: 29	IU/L	up to 40 IU/L
SERUM PROTEIN			
Total Protein	: 7.90	g/dl	6.6 - 8.3 g/dl
Albumin	: 4.40	g/dl	3.5 - 5.0 g/dl
Globulin	: 3.50	g/dl	2.3 - 3.5 g/dl
A.G. Ratio	: 1.3		2.5 - 1.2 : 1

By Fully Auto Biochemistry Analyzer : Selectra PRO XS

End Of Report

Thanks For Reference

Dr. Suresh D Rao
M.D.(Path)

Muskan
PATHOLOGY LABORATORY

1st Floor, Adarsh Market,Above TVS Show Room, Panch Batti, BHARUCH-392 001.

Dr. Suresh D. Rao M.D. (Path.)
Reg. NO. G - 10325
(Lab.) 263290 EMERGENCY ON CALL

- Time: Mon. to Sat.:8.00 a.m to 8.00 p.m Sun.:9.00 a.m to 1.00 p.m
- Haematology is being done on fully automatic 5-part Cell Counter MEK-7300
- Biochemistry is being done on fully auto chemistry analyser SELECTRA PROXS
- Hormonal Assay is done on • Maglumi - 600 • Computerised Reporting

CLINICAL PATHOLOGY , CYTOLOGY , HISTOPATHOLOGY & MICROBIOLOGY CENTER

Name : RAJ BHIMANI
Ref By : C/O BHMSH

Age/Sex : 24 Yrs./M
Date : 09/01/2024
Report ID. : 110

EXAMINATION OF URINE

TEST		RESULT	UNIT
Sample	:	RANDOM	
PHYSICAL EXAMINATION			
Quantity	:	35	ml
Colour	:	PALE YELLOW	
Transperancy	:	CLEAR	
Specific Gravity	:	1.015	
pH	:	ALKALINE	
CHEMICAL EXAMINATION			
Albumin	:	ABSENT	
Sugar	:	ABSENT	
Acetone	:	ABSENT	
Bile Salts	:	ABSENT	
Bile Pigments	:	ABSENT	
Urobilinogen	:	NORMAL	
Blood	:	ABSENT	
MICROSCOPIC EXAMINATION			
Pus Cells / h.p.f.	:	OCCASIONAL	
R.B.C. / h.p.f.	:	2-4	
	:	(Intact)	
Epithelial / h.p.f.	:	2-4	
Crystals / h.p.f.	:	ABSENT	
Amorphous Material	:	ABSENT	
Cast	:	ABSENT	
Bacteria	:	--	
Trichomonas	:	ABSENT	
Spermatozoa	:	ABSENT	

End Of Report

Thanks For Reference

Dr. Suresh D Rao
M.D.(Path)

MATESHREE ENT. HOSPITAL

AUDIOGRAM

DR. GAURANG JOSHI
D.L.O.M.S. (ENT)
CIH
C-15, Capital Business Centre,
Opp. Central Bank of India,
Panch Batti, Bharuch-392 001.
Phone : (H) 269880

Code No. : 10 Date : 9/1/24

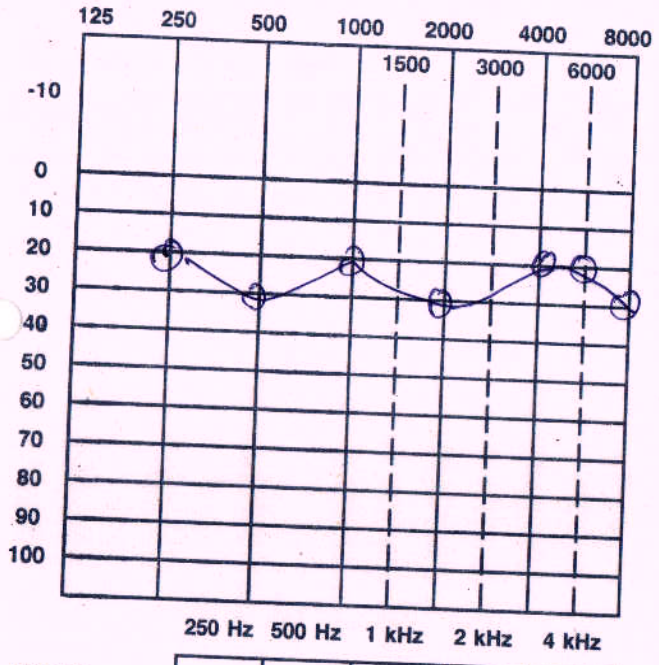
Audiogram of Raj Bhimani

Age 24 Yrs. Sex M Ref. by

Occupation So

Address 169

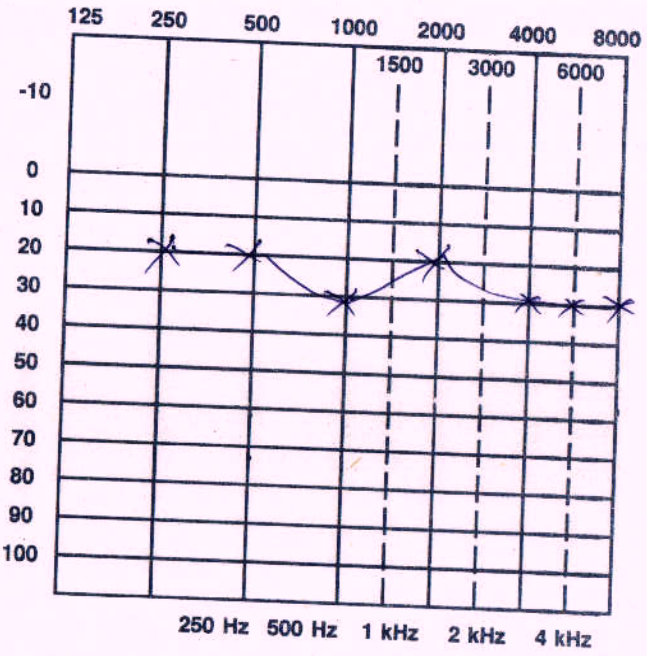
RIGHT



WEBER
Lateralized to

	A.C.	B.C.	A.C. MASK	B.C. MASK	NOT HEARD
R	O	<	△	]	O↓
L	X	>	□	[	X↓

LEFT



Clinical Findings

Comments B/L Normal

Dr. Gaurang Joshi
D.L.O.M.S. (ENT)
Reg. No. 2007
Mateshree ENT Hospital
C-15, Capital Business Center,
Panchbatti, BHARUCH-392001
Ph.: (R)02642-269880

DR. GAURANG JOSHI
D.L.O.M.S. (ENT) CIH

KRISHNA OCCUPATIONAL HEALTH CENTER

C- 15, CAPITAL BUSINESS CENTER ,PANCH BATTI,BHARUCH.

Sr. No. : R10 **Date :** 09-Jan-2024

ID	: 47808	**Height**	: 169 cms	**Ethnic Group**	: Indian
Name	: RAJ BHIMANI	**Weight**	: 50 kgs	**Predicted**	: Indian
Age & Sex	: 24 yrs old MALE	**BSA**	: 1.53 sqr mtr.		

Smoker :No

History :

Medication :

Analysis :Normal

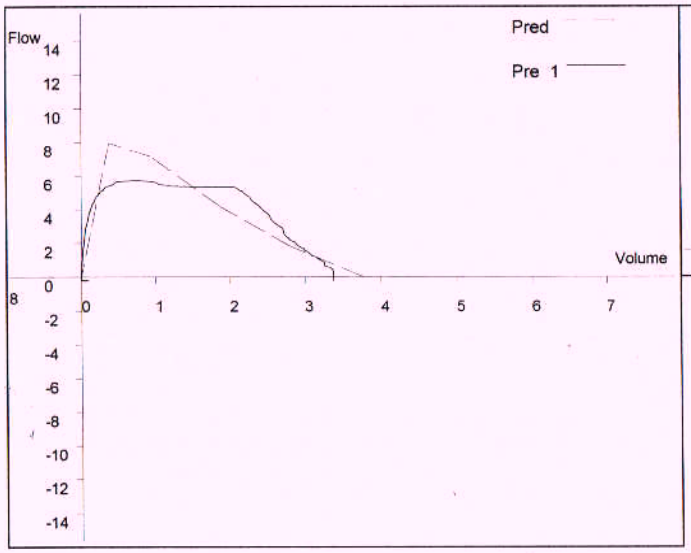
Comment :

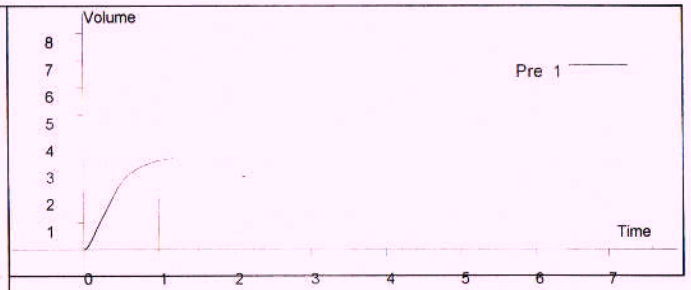
Operator :Administrator

Spirometry Test Parameters

Abbr.	Unit	Pred.	Pre-Medication Obs.	Pre-Medication %Pred.	Post-Medication Obs.	Post-Medication %Pred.
Best FVC	l	3.77	3.38	090	0.00	000
Best FEV1	l	3.11	3.30	106	0.00	000
Best PEF	l/s	7.95	5.71	072	0.00	000

Abbr.	Unit	Pred.	Pre-Med. Obs.	Pre-Med. %Pred.	imp
FVC	l	**3.77**	**3.38**	**90.00**	---
FEV_1	l	3.11	3.30	106.00	---
FEV_1/FVC	%	82.49	97.68	118.00	---
PEF	l/s	7.95	5.71	72.00	---
PEFT	l/s	---	1.20	---	---
FMFT	s	---	60.00	---	---





Dr. GAURANG JOSHI
MS., M.B., C.I.H.

Referring Doctor : (GAURANG JOSHI (M.B.C.I.H.))

(c) Mediline Equipment Ver:1.5.0

Baroda Heart & Multi Speciality Hospital

Div of Shri Ram Krupa Medicare Pvt. Ltd.
CIN : U85110GJ1999PTC036935
An ISO 9001 : 2015 Certified Hospital

CAPITAL BUSINESS CENTRE, PANCHBATTI,
STATION ROAD, BHARUCH.
Tel : 02642 - 260551, 260552
Fax : 02642 - 260553
Email : barodahearthospital@gmail.com
Website : www.bhirc.com

10

NAME OF PATIENT : RAJ BHIMANI
DATE : 23/12/2023

USG OF ABDOMEN & PELVIS

Liver appears normal in size, shape and echotexture.
No evidence of focal SOL or dilation of IHBR seen.
Porta hepatis is appears normal.
Gallbladder appears normal. No calculi seen.
Pancreas appears normal in size and echotexture.
Spleen appear normal in size of and shows normal echotexture.
Aorta appears normal. No para aortic lymphnodes seen.

Right kidney measured 99x46mm.
Cortex and collecting system of right kidney appears normal.
No calculi or obstructive uropathy.

Left kidney measured 85x49mm.
Cortex and collecting system of left kidney appears normal.
No calculi or obstructive uropathy.

Bladder & prostate appears normal. No calculi is seen
Terminal ileum and ceacum appears normal.
Appendix is not seen , due to bowel gas.
No evidence of collection or lump in RIF.
No evidence of free fluid or collection is seen in peritoneal spaces.

COMMENTS : No significant abnormality detected

THANKS FOR REFERENCE.

Dr.PARITOSH.MODI.
CONSUTANT RADIOLOGIST

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Noise Level Monitoring

Report No	ULR-TC765323000003749F	Date of Report	24.04.2023

SAMPLE DETAILS

1.	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2.	Sample ID	NLM/2023/600231	3.	Client Representative	Mr Ratnadeep Patel
4.	Sample Date	17.04.2023	5.	Sample Location	Different location
8.	Analysis Commenced On	17.04.2023	9.	Analysis Completed on	17.04.2023
10.	Sampling Procedure	IS 9989-1981 (Reaffirmed 2018)	11.	Sample Collected by	EET Team
12.	Test Requirement	Ambient Air Noise Monitoring at different location within in premises.			

TEST RESULT

Sr. No.	Location	Unit (SI)	Result				Permissible Limit/ GPCB Norms	
			Day Time		Night Time		Day Time	Night Time
			Result	Time	Result	Time	6 AM to 10 PM	10 PM to 6 AM
1	Near Main Gate	dB(A)	66	12:30 PM	59	10:20 PM	75	70
2	Near Material Gate	dB(A)	70	11:00 AM	57	10:22 PM	75	70
3	Near Admin Building	dB(A)	58	12:40 PM	50	10:30 PM	75	70
4	Near Canteen Area	dB(A)	64	12:50 PM	53	10:35 PM	75	70
5	Near Utility Area	dB(A)	66	12:20 PM	62	10:41 PM	75	70
6	Near Metribuzin Plant	dB(A)	63	12:05 PM	58	10:55 PM	75	70
7	Near Pendimethylene Plant	dB(A)	65	11:50 AM	56	11:04 PM	75	70
8	Near ETP Area	dB(A)	68	11:20 AM	62	11:15 PM	75	70
9	Near Hydrogen Plant	dB(A)	65	11:40 AM	58	11:20 PM	75	70
10	Near MEE Area	dB(A)	68	11:30 AM	64	11:31 PM	75	70
11	Near Boiler	dB(A)	69	12:10 PM	65	11:40 PM	75	70

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

24/04/2023

A.D. Kathrayya
Analysed By

Checked By

Authorized Signatory

Eco Earth Technologies Ankleshwar

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate, Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Noise Level Monitoring

Report No	EET225823000014225	Date of Report	30.12.2023

SAMPLE DETAILS

1.	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2.	Sample ID	NLM/2023/600833	3.	Client Representative	Mr Ratnadeep Patel
4.	Sample Date	25.12.2023	5.	Sample Location	Different location
8.	Analysis Commenced On	25.12.2023	9.	Analysis Completed on	25.12.2023
10.	Sampling Procedure	IS 9989-1981 (Reaffirmed 2018)	11.	Sample Collected by	EET Team
12.	Test Requirement	Ambient Air Noise Monitoring at different location within in premises.			

TEST RESULT

Sr. No.	Location	Unit (SI)	Result				Permissible Limit/ GPCB Norms	
			Day Time		Night Time		Day Time	Night Time
			Result	Time	Result	Time	6 AM to 10 PM	10 PM to 6 AM
1	Near Main Gate	dB(A)	68	01:00 PM	60	10:10 PM	75	70
2	Near Material Gate	dB(A)	71	11:30 AM	58	10:15 PM	75	70
3	Near Admin Building	dB(A)	59	01:10 PM	52	10:20 PM	75	70
4	Near Canteen Area	dB(A)	63	01:20 PM	55	10:25 PM	75	70
5	Near Utility Area	dB(A)	65	12:50 PM	63	10:35 PM	75	70
6	Near Metribuzin Plant	dB(A)	64	12:55 PM	59	10:45 PM	75	70
7	Near Pendimethylene Plant	dB(A)	66	12:45 PM	57	10:50 PM	75	70
8	Near ETP Area	dB(A)	67	11:40 AM	61	11:00 PM	75	70
9	Near Hydrogen Plant	dB(A)	64	12:00 PM	59	11:10 PM	75	70
10	Near MEE Area	dB(A)	67	11:50 AM	65	11:20 PM	75	70
11	Near Boiler	dB(A)	70	12:40 PM	66	11:30 PM	75	70

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1).Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3).The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A D Kathiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ECO EARTH TECHNOLOGIES
(Analytical Laboratory Division)
ISO 9001:2015, ISO 45001:2018 & ISO 14001:2015 Certified Company
(GPCB RECOGNIZED SCHEDULED - II ENVIRONMENTAL AUDITOR)
MoEF&CC /CPCB RECOGNIZED LABORATORY UNDER ENVIRONMENT (PROTECTION) ACT, 1986
Plot No. 3202/A/2/1, T-1, Multilevel Shed, Near Advance Paint, GIDC Ind. Estate,
Ankleshwar - 393 002, Dist. Bharuch, Gujarat, India. : +91 9601758907, 9409133000

Test Report / Certificate

Noise Level Monitoring

Report No	EET225824000002783	Date of Report	15.03.2024

SAMPLE DETAILS

1.	Name & Address of Company	M/S RALLIS INDIA LIMITED PLOT NO. Z-110, SEZ – II, DAHEJ 392130 TAL : VAGRA, DIST :BHARUCH, GUJARAT, INDIA			
2.	Sample ID	NLM/2024/600159	3.	Client Representative	Mr Ratnadeep Patel
4.	Sample Date	07.03.2024	5.	Sample Location	Different location
8.	Analysis Commenced On	07.03.2024	9.	Analysis Completed on	07.03.2024
10.	Sampling Procedure	IS 9989-1981 (Reaffirmed 2018)	11.	Sample Collected by	EET Team
12.	Test Requirement	Ambient Air Noise Monitoring at different location within in premises.			

TEST RESULT

Sr. No.	Location	Unit (SI)	Result				Permissible Limit/ GPCB Norms	
			Day Time		Night Time		Day Time	Night Time
			Result	Time	Result	Time	6 AM to 10 PM	10 PM to 6 AM
1	Near Main Gate	dB(A)	68	11:45 AM	62	09:10 PM	75	70
2	Near Material Gate	dB(A)	71	12:00 PM	56	09:28 PM	75	70
3	Near Admin Building	dB(A)	60	11:28 AM	50	09:56 PM	75	70
4	Near Canteen Area	dB(A)	63	12:32 PM	51	10:08 PM	75	70
5	Near Utility Area	dB(A)	66	11:30 AM	62	10:15 PM	75	70
6	Near Metribuzin Plant	dB(A)	64	12:12 PM	53	10:37 PM	75	70
7	Near Pendimethylene Plant	dB(A)	69	12:20 PM	50	11:00 PM	75	70
8	Near ETP Area	dB(A)	70	01:10 PM	62	11:35 PM	75	70
9	Near Hydrogen Plant	dB(A)	62	01:15 PM	53	11:24 PM	75	70
10	Near MEE Area	dB(A)	65	01:35 PM	63	11:18 PM	75	70
11	Near Boiler	dB(A)	70	01:18 PM	60	10:46 PM	75	70

[ND – Not Detect, BDL – Below Detection Limit]

Note: 1). Reports may be reproduced, if required, but only in full and only with written approval of the laboratory.
2). Re analysis sample will be done, if requested within in 15 days from the date of reporting of sample if the sample are not consumed during analysis.
3). The result reported above relate to the sample identified under sample details.

For, Eco Earth Technologies

A.D.Kothiriya
Analysed By

Checked By

Authorized Signatory

End of the Test Report

ICICI Lombard General Insurance Company Ltd.
ICICI LOMBARD HOUSE , 414, Veer Savarkar Marg,
Near Siddhi Vinayak Temple,Prabhadevi,Mumbai - 400 025.
Attached & forming part of
Policy no.4007/288901342/01/000
UIN: IRDAN115CP0014V01201920

PUBLIC LIABILITY INSURANCE
(UNDER PUBLIC LIABILITY INSURANCE ACT 1991)

PREAMBLE

ICICI Lombard General Insurance Company Limited ("the Company"), having received a Proposal and the premium from the proposer named in the Schedule referred to herein below, and the said Proposal and Declaration together with any statement, report or other document leading to the issue of this Policy and referred to therein having been accepted and agreed to by the Company and the Proposer as the basis of this contract do, by this Policy agree, in consideration of and subject to the due receipt of the subsequent premiums, as set out in the Schedule with all its Parts, and further, subject to the terms and conditions contained in this Policy, as set out in the Schedule with all its Parts that on proof to the satisfaction of the Company of the compensation having become payable as set out in Part I of the Schedule to the title of the said person or persons claiming payment or upon the happening of an event upon which one or more benefits become payable under this Policy, the Sum Insured/ appropriate benefit will be paid by the Company.

POLICY NO : 4007/288901342/01/000

ICICI Lombard General Insurance Company Ltd.
ICICI LOMBARD HOUSE , 414, Veer Savarkar Marg,
Near Siddhi Vinayak Temple,Prabhadevi,Mumbai - 400 025.
Attached & forming part of
Policy no.4007/288901342/01/000
UIN: IRDAN115CP0014V01201920

PART I OF SCHEDULE			
1	Name of the insured	Rallis India Limited	
2	Mailing Address of the insured	23rd Floor, Vios Tower, New Cuffe Parade, Off Eastern Freeway, Wadala Mumbai- 400037	
3	Trade or Business of the insured	Manufacturers and Traders of: a. Pesticides (Insecticides, Herbicides and Fungicides) b. Seeds c. Seed Treatment Chemicals d. Fertilizers e. Polymer PEKK f. Solar Power	
4	Address of Premises insured	Premises Owned / Occupied By The Insured In India	
5	Paid Up Capital	INR 150,000,000	
6	Policy period	April 01 , 2024	March 31 , 2025
		Time: 00:00 hrs	23.59 hrs
7	Turnover	INR 34,000,000,000	
8	Limit of Indemnity Aggregate One Year (AOY) Any One Accident (AOA)	 INR 150,000,000 INR 50,000,000	
9	Compulsory Excess	Nil	
10	Net Premium Tax ERF Amount Stamp duty Total Premium	INR 15,001 INR 2,700 INR 15,001 INR 1 INR 32,703	

11	Co-insurance details	ICICI LOMBARD 57.5 RELIANCE 20 BAJAJ 5 NATIONAL 5 ROYAL SUNDARAM 12.5
12	Special conditions	1. Completely Filled, Signed, Stamped And Dated Proposal Document 2. Communicable Disease Exclusion And Pandemic/Epidemic Exclusion 3. Insured's Declaration: (A) There Are No Claims Till Date (B) Till Date The Insured Is Not Aware Of Any Circumstance Or Loss That Can Lead To A Claim Under The Proposed Policy. 4. War Exclusion
13	Intermediary Details	TATA MOTORS INSURANCE BROKING &amp ADVISORY SERVICES LTD, Telos Risk Management And Ins Broking Services P Ltd 200131492307, 201067852643
14	Territorial & Jurisdiction	India
15	GSTIN Reg. No ILGIC GSTIN Address	-

ICICI Lombard General Insurance Company Ltd.
ICICI LOMBARD HOUSE , 414, Veer Savarkar Marg,
Near Siddhi Vinayak Temple,Prabhadevi,Mumbai - 400 025.
Attached & forming part of
Policy no.4007/288901342/01/000
UIN: IRDAN115CP0014V01201920

For Juridical Person/Non-Individual Customers

Declaration for PEP to be updated in proposal form/ or in any other relevant documents & forms/ Systems

Are you or any of the proposed applicants/beneficial owner a PEP* or Family member/ Close relatives/Associates of PEPs *?

No

"Politically Exposed Persons" (PEPs) are individuals who have been entrusted with prominent public functions by a foreign country, including the heads of States or Governments, senior politicians,

senior government or judicial or military officers, senior executives of state-owned corporations and important political party officials;"

The stamp duty of Rs. 0.50/- (Fifty Paise Only) paid in cash or by demand draft or by pay order,vide Receipt/Challan No.CSD4520241123 dated. 22nd March 2024.

Signed for and on behalf of ICICI Lombard General Insurance Company Limited, at Mumbai on this date May 31, 2024.

Gaurav Arora

Authorised Signatory

GSTIN Reg. No : 27AAACI7904G1ZN

IL GIC GSTIN Address: Ground, First and Second Floor, ICICI Lombard House, 414 Veer Savarkar Marg, Prabhadevi, Mumbai 400025 Maharashtra

Description of services: General Insurance Business

HSN/SAC : 9971

Policy shall stand cancelled ab initio in the event of non-realization of the premium."

"Note- In case of renewal of the policy, policy benefit and terms & conditions of policy including premium may be subject to change."

ENVIRONMENTAL AUDIT REPORT

FOR AUDIT PERIOD

April -2023
To
March-2024

Industry

M/s. SRF Limited

Auditor

SWARRNIM INSTITUTE OF TECHNOLOGY
35, World Business House, Opp. Parimal garden, Ellis bridge, Ahmedabad, Gujarat, 380006

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

PREFACE

We thank **Gujarat Pollution Control Board, Gandhinagar and Honorable High Court of Gujarat** for entrusting us to carry out Schedule – I Environmental Audit.

We thank the Environment team & Plant team personnel of **M/s., SRF Limited** for giving us their kind cooperation and helping us in carrying out the monitoring work.

- Environment Audit of **M/s. SRF Limited** was carried out by making three comprehensive visits and monitoring & analysis including Air, Wastewater, Noise and Solid Waste analysis.
- Grab samples of untreated and treated effluent were taken and analyzed during different seasons.
- The audit report is based on data furnished by industry and data collected by the audit team during visits to the industry.
- The data collected and information received from the industry like energy consumption, water consumption, material balance etc. with analysis of the effluent, Ambient air, stack emission, solid waste has been used in judging the adequacy and efficacy of Environmental Pollution Control Measures.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

TABLE OF CONTENTS

Sr. No.	DESCRIPTION	Page No.
1.	Executive Summary	6
2.	Observation, Recommendations, and their compliances	7
3.	General (Section – A)	9
4.	Production details (Section – B)	10
5.	Water (Section – C)	11
6.	Air (Section – D)	13
7.	Hazardous Solid Waste (Section – E)	14
8.	Site plan (Section –F)	15
9.	Resource recovery (Section – G)	15
10.	Health (Section – H)	15
11.	Accident and Remedial measure (Section – I)	16
12.	Safety measures (Section – J)	16
13.	Remedial measures (Section – K)	16
14.	Water Cess (Section – L)	17
15.	Consultant (Section – M)	17
16.	Declaration (Section – N)	18
17.	EMS Adequacy / Efficiency certificate (Section – O)	19
18.	Annexures	24-124

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

LIST OF ANNEXURES

SR. NO.	TITLE OF ANNEXURE	PAGE NO.
1.	List of Board of Directors	22
2.	Consolidated Consent & Authorization	23
3.	List of products along with their capacity & purity	52
4.	Month wise no. of days of operation	56
5.	Month wise electricity consumption	57
6.	Month wise production	58
7.	Month wise raw material consumption	59
8.	Details of manufacturing process with material	65
9.	Details of water consumption	86
10.	Water balance diagram	87
11.	Details of wastewater generation	88
12.	Details of effluent treatment with process, capacity of units & flow diagram	90
13.	Month wise chemical consumption for ETP	103
14.	Month wise energy consumption for ETP	108
15.	Details of operator or chemist for ETP	109
16.	Analysis report for water	111
17.	Details flue gas stack & fuel consumption	115
18.	Analysis report for air	125
19.	Air pollution control measures	125
20.	Details of hazardous waste	129

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

21.	**Detail of hazardous (solid) waste generation & disposal**	**133**
22.	**Analysis report for solid waste**	**139**
23.	**Noise Level dB (A) within the plant premises**	**141**
24.	**Total Pollution Load**	**142**
25.	**Site plan**	**143**
26.	**ISO certificates**	**144**
27.	**Membership certificates**	**145**
28.	**Details of health records**	**145**
29.	**Details of PLI policy**	**148**
30.	**On-site emergency plan**	**150**
31.	**The details in respect of Case/complaints under the Water Act-74, the Air Act-81 & the EPA-86**	**154**
32.	**Closures/Notice of direction/show cause notices issued in current and preceding years and corrective and preventive actions taken**	**154**
33.	**Compliance report**	**155**
34.	**Declaration**	**219**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

EXECUTIVE SUMMARY

The Environmental Audit Scheme was introduced by the Gujarat High Court vide its orders dated 20/12/96 & 13/3/97 and modified vide order dated 16/9/99, 22/04/2010 & 23/01/2015, **SWARRNIM INSTITUTE OF TECHNOLOGY** is nominated to carry out Environmental Audit work for the industries falling under Schedule - I category.

INTRODUCTION

M/s. SRF Limited is located at D2/1, GIDC Phase II, P.C.P.I.R, Dahej, Bharuch – 392 130, Gujarat is company incorporated under the Company's Act 1956, with Registrar of Companies Gujarat. The company has its Registered Office in Mumbai.

OBJECTIVES

(1) To check the Adequacy & Efficacy of the common effluent treatment plant, i.e. Wastewater, Air, solid waste, health, and safety systems of M/s. SRF Limited.
(2) To check various records of Environment Management System.
(3) To check whether M/s. SRF Limited meets all required norms of state regulatory agency that is Gujarat Pollution Control Board regarding environmental pollution control.

OPERATIONAL BRIEFING:

The above-mentioned objectives have been fulfilled through meaningful inspection visits and environmental monitoring of M/s. SRF Limited and precise study of its manufacturing system & pollution control facilities.

- Most representative grab effluent samples, ambient air samples, air samples of stacks were taken, analyzed and reported in this report; noise pollution level was also measured using calibrated kit.
- Above mentioned samples were taken during the surprise visits of M/s. SRF Limited by our team at different intervals over appropriate period. Technical information regarding the ETP & details of other environmental management systems were provided by the management.
- The findings reported in this Audit report are entirely based on data furnished by the industry & data collected by the audit team during the audit surveys in the client factory, presuming that during our surveys all the EMS and manufacturing operations were at normal conditions. The auditors shall not be in a position to comment on the EMS and its performance for the period other than the period of audit surveys. Thus, the findings reported in this audit report are strictly limited to the period when the audit team conducted the surveys.

OBSERVATIONS & RECOMMENDATIONS

OBSERVATIONS:

1. M/s. SRF Ltd is an ISO 9000: 2015, ISO 14000: 2015 & ISO 45001:2018 certified organization having valid consent order No. AWH 123782 dt.06/04/23 which is valid up to 10/01/2027.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

2. We have observed all the parameters in Final outlet are within permissible limit as per CCA.
3. Industry has installed magnetic flow meters at final outlet for the quantity of treated effluent discharged to channel.
4. Industry has installed an online continuous monitoring system for treated effluent discharged to channel.
5. M/s. SRF Ltd has established well equipped advanced laboratory with advance instruments like TOC analyzer with well qualified staff.
6. Overall housekeeping is in Very Good condition.
7. All the Flue gas stacks were painted and well maintained throughout the year 2023-24.
8. Adequate hazardous waste storage area is available at site.

RECOMMENDATIONS

1. Plantation in ETP area need to be improve.
2. Need to be provide RCC approach road for newly installed MEE plant.

LAST YEAR'S AUDIT REPORT'S SUGGESTIONS / RECOMMENDATIONS AND THEIR COMPLIANC

Sr. No.	Recommendations	Compliance status
1.	Housekeeping Should be improved near AHF Plant	Complied
2.	Specific Ambient air platforms should be provided with proper electric connections.	Complied
3.	Adequate Porthole should be provided in AHF drying system 2.	Complied
4.	Name plate should be given to every process and flue stack as per CCA names of the stacks.	Complied
5.	Acidic fumes should be control near the AHF Plant	Complied
6.	Industry should maintain the water consumption and discharge data separately for Domestic and Industrial purposes.	Complied
7	Unit should provide the water balance diagram in detail.	Complied

Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10-A,
Gandhinagar – 382 010
Fax: (079) 23222784, (079) 23232161.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ENVIRONMENTAL AUDIT
for
M/s. SRF Limited
(Period from April 2023 to March 2024)

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

(A)	GENERAL	
1	Name of the Industry:	M/S. SRF Limited
2	Location:	D2/1, GIDC Phase II, P.C.P.I.R, Dahej, Bharuch – 392 130, Gujarat
3	Registered Office Address:	The Galleria, DLF Mayur Vihar, Unit No. 236 & 237, Second Floor Mayur Place, Noida Link Road, Mayur Vihar Phase I Extn, Delhi – 110 091.
4	Month & Year of establishment:	June 2012
5	No. of workers employed: Male/Female:	Total Workers: 3732 Nos. Male: 3628 Nos. Female: 104 Nos.
6	No. of electrical connections with service numbers:	1 Number of service connections from DGVCL, Connection No: 63029 with Contract demand 66 MVA. Industry has its own 40 MW captive power plant, operating in parallel with 220 KV DGVCL line.
	Total connected load	188.110 MW
	Electric consumption per unit of product manufactured:	Please refer Annexure-5
	Percentage Enhancement in Energy:	23.37% reduction in specific Electrical Consumption (kW/MT) of Product
	Saving as Compared to Previous Year:	260.48 kW/MT electrical consumption saved
7	Number of D.G. Set & their capacity:	Total 7 Nos. DG Sets DG Set 1 & 2 : 600 kVA DG Set 3 & 4 : 1010 kVA DG Set : 3 x 4200 kVA
8	Name/Residential address of all directors/partners:	Please refer Annexure-1
9	Telephone Nos:(Residential & Industrial) Fax No:	Please refer Annexure-1
	E-mail of Industry:	info@srf.com
	E-mail Partners/Directors:	Please refer Annexure-1
10	No. of shifts & timings:	General: 08:00 hrs. to 16:00 hrs. 1st Shift: 07:00 hrs. to 15:00 hrs. 2nd Shift: 15:00 hrs. to 23:00 hrs. 3rd Shift: 23:00 hrs. to 07:00 hrs.
11	Name & Address of the in charge of Environment/Safety Division/Cell/Unit:	Harendra Singh Dagur (Executive Vice President - Site Head) D2/1, GIDC Phase II, P.C.P.I.R., Dahej, Bharuch – 392130, Gujarat, India.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

12	No. of days during which production activities were in operation during the Audit period covered:	Please refer Annexure – 4
13	Has the industry obtained ISO 9000/ISO 14000/OSHAS 18000/Any other EM accreditation/Certification recognition? Give details.	ISO 9000: 2015, ISO 14000: 2015 & ISO 45001:2018 IMS Certificate No. IND.23.5093/IM/U Version: 1 Revision Date: 14-April-2023, validity up to 17-Apr-2026 obtained from Bureau Veritas. Please refer Annexure- 25
14	Whether the industry has adopted cleaner production/cleaner technology/CDM? Give details.	-
B	**PRODUCT DETAILS**	
1	Name of products(s) & capacity with Yield/purity per day.	Refer Annexure – 3
2	Name of all by products and its quantity per day:	Not Applicable
3	Date of commencement of production for each product. Whether production is as per consented quantity:	Refer Annexure – 3
4	All raw materials required per kg of the product(s):	Refer Annexure – 7
5	Whether the manufacturing process is continuous or batch wise:	Batch as well as continuous process plants are in operation. Refer Annexure – 6
	Indicate the batch capacity:	
	If the process is in batch operation, no. of batches/month along with the duration of the completion of each batch:	
6	-Detailed manufacturing process with schematic flow diagram: - -List of unit's operation & processes & with all chemical reactions along with the time required (in hrs) for completion of each unit operation/process and the total time for completion of the entire batch: -Mass balance in respect of the quantity of water, input of raw materials and wastewater generation.	Refer Annexure – 8

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

C	WATER	
1	The quantity of water consumed per day as well as per tones of product manufactured:	Water Consumption: 10.1 KL/MT of Product Refer Annexure – 9
	(Attach water balance diagram) * over the last three years	Refer Annexure – 9
2	The quantity of wastewater (trade effluent) generated per tones of each product per day, as well as per batch over the last 3 Years	Qty. of Wastewater Generated: 1.7 KL/MT of product. Refer Annexure – 10
3	The particulars of effluent treatment plant: -Name and Size of each unit: - Capacity of ETP: - Flow diagram & Hydraulic diagram, of ETP to be submitted:	Refer Annexure –12
	Whether lighting arrangement around ETP is provided:	Yes
	Whether separate energy meter is installed for effluent treatment plant. If yes, readings of the meter for consumption every month:	Yes, separate energy meter is Provided. Refer Annexure –13
	Whether flow meters are provided at the inlet and outlet of the ETP. Please indicate the type of the flow meter:	Yes, Magnetic Flow Meter is Provided at Inlet & Outlet
4	The method of disposal of final treated effluent and the point of disposal (Please attach sketch)	To Deep Sea via GIDC Drainage network Refer Annexure –12
5	The quality of trade effluent at the inlet and outlet of ETP and at various stages of treatment (Attach separate sheets):	Refer Annexure –11
6	The quantity and quality of sewage and its method of treatment and disposal (Attach separate sheets):	The Sewage generation is about 221 m3/Day, and it is treated separately in sewage treatment plant, after treatment it is reused as green belt development. Refer Annexure –12
	a) As per norms:	Refer Annexure –12
	b) Total pollution load*:	Refer Annexure –12
7	The open area available for disposal of the effluent	Not applicable
8	Whether the quality of treated effluent meets the specified norms:-	Annexure-15

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	If no, the extent of deviation and reasons thereof	
9	Improvement in effluent quality and quantity since previous environmental audit based on performance evaluation of effluent management systems	Yes
	-If yes, provide details (Attach separate sheets):	Refer Annexure - 11
10	Retrofitting Undertaken to Improve performance of ETP:	No
	-If yes, provide details:	NA
11	Major problems encountered during operation of effluent treatment facilities, if any and reasons thereof:	No
12	The details about the operator/chemist responsible for operation & maintenance of effluent treatment plant:	Refer Annexure - 14
	Name of the operators/employees:	
	Qualification & Experience of each Operator/employee whether trained in such operation or not:	
	Salary of operators/employees.	
13	The current status of consent under the Water Act-1974	Refer Annexure - 2
D	**AIR**	
1	No. of the flue gas stacks their height (from ground level) nature & consumption of fuel:	Refer Annexure – 16
2	The details pertaining to the stack monitoring facilities:	Adequate Stack Monitoring Facilities, with Platform, monkey ladders, safety harness approach steps are provided.
3	Number of process stacks, their height (from ground level) source, expected pollutants & the details pertaining to the provisions of stack monitoring facilities:	Refer Annexure – 16

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

4	The quality of emission from each flue gas stack & the process stack & the extent of deviation from them:	Refer Annexure – 17
5	The ambient air quality within the factory premises. Ambient air quality monitoring Stations outside the Industry?	Refer Annexure – 18
6	The status of consent under the Air Act-1981	Refer Annexure – 2
7	The details of air pollution control measures for all process & flue gas stacks:	Refer Annexure –16
8	Improvement in emission quality since previous environmental audit based on performance evaluation of air pollution management system. If yes, provide details. (Attach separate sheets)	Yes
9	Retrofitting Undertaken to improve emission quality. If yes, provide details:	No
10	Major problems encountered during operation of control device, if any and reasons thereof:	No
11	Total Pollution Load	Refer Annexure - 23
E	**HAZARDOUS (SOLID) WASTE**	
1	The quantity, sources & composition of hazardous waste/solid waste from each process/sources over the last three years. (Total sludge generation per tonne of product):	Refer Annexure - 20
	Whether it is as per the consented quantity:	Yes

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

2	The method of storage, treatment & disposal of hazardous/solid waste: The details should include area of storage and disposal and whether storage and disposal system are covered and made impervious (pucca): The quantity of Hazardous waste sent to TSDF. Please also indicate how the quantity of hazardous /solid shall be reduced in next three months: The data/information about leachate generation, quantity & characteristics and treatment facility:	Refer Annexure - 19 Refer Annexure – 21 (a) Proper storage area has been provided with impervious flooring, shed and also partitioned by brick wall with labelling for storage of different category define in CC&A. From storage area hazardous waste is send for incinerable / landfill to registered and/or designated TSDF/Recycler/Actual User. Collected leachate is taken into ETP and Solid waste sent to TSDF site (b) Leachate is treated with Low TDS – Low Organic Stream
3	The status of authorization under the EPA-86 for solid waste	Refer Annexure - 2
4	Plan, if any to reduce hazardous waste generation or its recycling.	We make all the efforts to reduce HW.
F	**SITE PLAN**	
	The site plan showing the location of effluent treatment plant, final point of disposal of effluent, sampling point, drainage line, stacks, solid waste storage, disposal area & green belt (its width)	Refer Annexure - 24
G	**RESOURCE RECOVERY**	
1	The details regarding resource recovery including treated effluent for recycle/reuse from environmental pollution control system including effluent treatment plant:	Installed 4000 KLD Capacity UF/RO System for treatment of effluent generated from utility (cooling tower / boiler blow down, DM and Softener reject) and treated water reuse in cooling tower make-up/process.
	The details regarding resource recovery/by product recovery from manufacturing process by using cleaner production technology:	Plant is being upgraded continuously to minimize wastage. In-house Research and Development efforts are continuously used to improve yields.
H	**HEALTH**	
1	Whether any hazard is involved in the manufacturing or from the work environment: Yes/No If yes, provide details thereof:	Yes, Noise, Pinch, Toxic, Corrosive.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

2	Whether industry has pre-employment & periodical medical examination facilities: Yes/No If yes, provide details thereof:	Refer Annexure – 26
3	Whether health records are maintained regarding adverse effect on the health of workers: Yes/No If yes, provide details thereof:	Refer Annexure – 26
4	Whether industry has appointed a factory medical officer: Yes/No	Yes
	If yes; full-time or part-time. Include the details about the name, address and qualification of the factory medical officer	Dr. Ripalkumar Kiritkumar Patel (FMO), Full time, Bharuch, MBBS + AFIH Dr. Sanjay Hansoti, MBBS + AFIH
5	Details of medical facilities available. Dispensary/Ambulance/Hospitals/First Aid box.	Occupational Health Centre with 2 Nos. Bed, AED, Suction Machine, Infusion pump, All type of antidotes as per SRF requirement & Designated Ambulance at site. The unit has tie up with healing touch Hospital, Baroda Heart Hospital, Apex Hospital, I-Q Hospital at Bharuch and Bhailal Amin General Hospital, Sterling Hospital, BAPS Hospital, Tricolor Hospital at Vadodara for immediate medical attention in the case of emergency.
6	Whether sanitary facilities like water closets, urinals, bathroom are provided & are satisfactory	Yes. Adequate & Satisfactory sanitary facilities are provided.
I	**ACCIDENTS**	
1	The details of accidents in the factory if any & remedial measures taken	No accident reported in the factory during FY 2023-24.
J	**SAFETY MEASURES**	
1	General Environment of the factory	Housekeeping Very **Good** Dustiness **Good** Lighting Very **Good** Ventilation Very **Good**
2	Whether Following Appliance are provided to all persons	Goggles Yes, As per requirement Gloves (Rubber + Cotton) Yes, As per requirement Gumboot Yes, As per requirement Helmet Yes, As per requirement Skin Cream Yes, As per requirement Soap Yes, As per requirement Ear Plugs Yes, As per requirement Face Masks Yes, As per requirement Clothing Yes, As per requirement
3	The details of facilities for disaster management/gas leakage.	Self-contained breathing apparatus, Gas monitoring equipment's, Fire Extinguishers are available.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		A safety manual has also been prepared. We have an on-site emergency plan and conduct mock drills periodically. Refer Annexure- 28
4	Whether on site/off site emergency plans are prepared and are being implemented/upgraded regularly; please give details	Refer Annexure- 28
5	Whether records of occupational hazards are maintained?	Yes
6	Preventive measures adopted to minimize occupational hazard.	Closed loop systems are provided to avoid exposure to persons, PPEs are mandatory while working.
K	**REMEDIAL MEASURES**	
1	The details of sources; monitoring & measures taken for control of noise pollution in & around the industrial premises:	Control Measure: Anti vibration pads are being used for the rotary equipment like Air Compressors, Blowers etc. The personal working in high noise background is being provided with Ear plugs & Muffs level. Refer Annexure – 22.
2	The measures taken for prevention treatment & control of odour nuisance in & around the industrial premises:	We are handling chemicals in a closed loop system.
3	The Details in respect of cases/complaints under Water act-1974, The Air Act-1981 and the EPA-1986:	Refer Annexure - 29
4	The compliance report with respect to all the conditions of NOC/Consent (Under all the Acts):	Refer Annexure - 30
5	Incidents of spillages, leakages etc. and remedial measures thereof	No incident of spillage/leakage reported
6	Whether insurance policy obtained under PLI Act. Yes/No -If yes, provide details	Yes. Refer Annexure –27
L	**WATER CESS**	
1	The details regarding payment of the Water Cess for the previous & current year	Not Applicable.
M	The Name and Address of the Consultant Engaged by the Company/ Industry	Swarrnim institute of technology, Ahmedabad.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

(N) DECLARATION

It is hereby declared that all the information submitted in and with respect to this format is correct and we will be responsible for any lapse regarding incorrect or incomplete information.

1	Mr. Harendra Singh Dagur EVP – Site Head		Dr. Savan Tank Co-ordinator	
2	Mr. Kalpesh Jethva VP - Manufacturing		Dr. Parwathi Pillai Chemical Engineer	
3	Mr. Praveen Mishra AVP – Environment Head		Ms. Brinda Govani Environmental Engineer	
4	Mr. Mayurkumar Jadav Manager - Environment		Ms. Apeksha Brahmbhatt Microbiologist	

Date:- 25/06/2024 **Place:- Swarrnim Institute of Technology, Ahmedabad**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only

THE ADEQUACY CERTIFICATE OF ENVIRONMENT MANAGEMENT SYSTEM

Swarrnim Institute of Technology, Ahmedabad is recognized by the GPCB, Gandhinagar under the Environmental Audit Scheme introduced by the Hon'ble High Court Gujarat, vide its Order GPCB/EA-277/329880 dated 13/10/2015 as an Environmental Auditor for the purpose of the auditing, having carried out Environmental Audit of,

A) **M/s. SRF Limited**
B) **Located at**: D2/1, GIDC Phase II, P.C.P.I.R, Dahej, Bharuch – 392 130, Gujarat
C) **Manufacturing products as under** :

Manufacturing products:

Sr. No.	Name of Product	Total Production as per CCA (MT/Annum)	Actual Production (MT/Annum)
1	Trifluoro Acetic Acid	2000	1677.46
2	Specialty Product		
i	Tetrafluorobenzyl Alcohol	9900	8300.66
ii	Ethyldifluoroacetate		
iii	Ethyl trifluoro acetate		
iv	Ethyltrifluoroacetoacetate		
v	Amino crotonate		
vi	Trifluoroacetic anhydride		
vii	Pentafluorobenzoic Acid		
viii	Pyrazole acid		
ix	Chloro trichloro methyl - cyclopentene		
x	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline		
xi	Fluoromethyl ester		
xii	Diphenylphenol		
xiii	Tetrafluoropropene- 1234yf		
xiv	Isobutyl Acetophenon		
xv	2-Bromo-5-fluorobenzotrifluoride		
xvi	2, 2-Difluoroethyl amine		
xvii	2,3-Dichloro-5-trifluoromethyl-pyridine		
xviii	N[1-{6-Chloro-3-pyridinyl) methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide		
xix	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide		
3	1,1,2,2-Tetrafluoroethyl methyl ether	3000	1931.25
4	Hexafluoropropylene	500	0
5	Ethyl Difluoroacetoacetate	300	0
6	Difluoromethanesulphonlychloride	100	0
7	3-Trifluoromethylacetophenone	1000	0
8	Trifluoro methyl benzamide	1700	1001.70

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

9	TrifluoroMethyl-2-EthoxyVinyl Ketone	1000	0
10	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester	1500	743.17
11	Pentafluorophenol	150	0
12	Monomethyl hydrazine	3500	2862.60
13	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone)	500	328.57
14	Bromopentafluorobenzene	200	0
15	Methyl Hydroxy Pyrazole	100	0
16	5-Bromo-2-2-difluoro-1-3-benzodioxide	500	0
17	Difluorobenzodioxole methyl ester	20	0
18	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)-benzenamine (DHA)	500	0
19	2,4,5-Trifluorophenyl acetic acid	50	10.55
20	Methyl-2- Fluoroacrylate	50	0
21	Ethyl-Trifluoropyruvate	50	0
22	2,3-dichloro pyridine	0	0
23	5-Chloro-2,3-difluoropyridine	600	0
24	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylic Acid	3500	0
25	4 Methoxycyclohexanone (4-MCH)	600	203.24
26	2-amino-3-chloro-5-trifluoromethyl pyridine	600	0
27	Hydrazine Hydrate	3500	0
28	2-methyl sulfonyl-5-(trifluoromethyl)- 1,3,4-thiadiazole	600	179.67
29	1,3-Benzodioxole	500	0
30	**R&D Products**	2000	1999.27
31	**Chlorinated Compound**		
i	Trichloroethylene	150000	138473.30
ii	Perchloroethylene		
iii	Methyl Chloride		
iv	Methylene Dichloride		
v	Chloroform		
vi	Carbon tetrachloride		
32	Anhydrous hydrofluoric acid	40000	30798.56
33	Chlorotrifluoroethane (HCFC 133a)	500	0
34	**HFC Refrigerant**		
i	1,1,1,2- Tetrafluoroethene (HFC 134a)	40000	33622.82
ii	Pentafluoroethane (HFC 125)		
iii	Difluoromethane (HFC-32)		
iv	1,1 difluoroethane (HFC-152a)		
v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)		
vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)		
vii	Refrigerant blend of difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) +1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)		
35	R600a (Butane)	1000	301.64
36	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	500	0
37	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	500	0
38	Hydrofluoric acid (20-70%)	18446	5081.16
39	Anhydrous hydrochloric acid	900	191.42
40	Chlorodifluoromethane (R22)	12000	4253.56
41	Calcium chloride	120000	105135.73
Total		**422366.00**	**337096.32**

Having completed the environmental audit based on personal monitoring, and audit report, prepared as per the direction of the Hon'ble High Courte in Environmental Audit Scheme, it is certified that the Environmental Management System (EMS) provided by this industry for the products manufactured and capacity as stated above is adequate and efficacious to achieve the quality of effluents (Air + Waste Water + Solid Waste) as specified in consent / Notification by GPCB, Gandhinagar for the following quantity of waste generation:

Water:

Particulars	Actual	Consented	Status
Water Consumption	**9292 KL/Day**	**20984 KL/Day**	**Complied**
Industrial effluent	**1553 KL/Day**	**10654 KL/Day**	**Complied**
Sewage generated	**221 KL/Day**	**340 KL/Day**	**Complied**

Air:

Air Emission (Flue Gas Stacks as well as Process Stacks)	**Adequate and efficacious as per annexure 16 & 17**

Hazardous Waste :

Sr. No	Waste	Consented Quantity / YEAR	Actual Quantity / YEAR	Status
Adequate and efficacious as per annexure 19 & 20				

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

The certificate is valid for the audit period only. However it is subjected to automatic cancellation in case of any change in product profile/capacity, quality and quantity of effluent emission (Air + Waste Water + Solid Waste) and efficiency of EMS equipment.

This Certificate forms part of environmental audit report.

(Dr. Savan Tank)

Date: 25.06.2024

Place: Ahmedabad

Name & Address of the Auditor:

Swarrnim Institute of Technology

Swarrnim Startup and Innovation University, Gujarat,380006

Signature of Authorized Person:

(Dr. Savan Tank)	(Dr. Parwathi Pillai)	(Mr. Brinda Govani)	(Ms. Apeksha Brahmbhatt)
Co-ordinator	Chemical Engineer	Env. Engineer	Microbiologist

Swarrnim Startup & Innovation University Gandhinagar

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 1

LIST OF BOARD OF DIRECTORS

LIST OF DIRECTORS – SRF LIMITED wef 01.04.2024

S. No.	Name of the Director	Designation	DIN	PAN	Address
1.	Mr. Ashish Bharat Ram	Chairman & Managing Director	00671567	AAHPR1497F	2, Silver Oak Avenue Westend Green Farms Rajokari New Delhi 110038
2.	Mr. Kartik Bharat Ram	Joint Managing Director	00008557	AALPB6243M	1, Silver Oak Avenue Westend Green Farms Rajokari New Delhi 110038
3.	Mr. Pramod Gopaldas Gujarathi	Director (Safety & Environment) & Occupier	00418958	ACMPG6999G	26, "Yash Bunglow", Dharmsi Park Opp. G.I.D.C Guest house, Post –GIDC Vapi – 396 195 (Gujarat)
4.	Ms. Bharti Gupta Ramola	Independent Director	00356188	AAEPR1353F	E-2244 , Palam Vihar Gurugram-122017 (Haryana)
5.	Mr. Puneet Yadu Dalmia	Independent Director	00022633	AGRPD5590K	18, Golf Link New Delhi 110003
6.	Mr. Yash Gupta	Independent Director	00299621	AAHPG6961D	46A, Friends Colony, New Delhi – 110065
7.	Mr. Raj Kumar Jain	Independent Director	01741527	AACPJ3471E	AR 511b, The Aralias, DLF Golf Course Road, DLF Phase 5, Gurgaon 122009
8.	Mr. Vellayan Subbiah	Non-Executive Non - Independent Director	01138759	AADPV8920B	7 Valliammai Achi Road, Kotturpuram, Chennai 600085 (Tamilnadu)
9.	Mr. Vineet Agarwal	Independent Director	00380300	AAEPA8985E	19, Olof Palme Marg, Vasant Vihar, New Delhi - 110057
10.	Ms. Ira Gupta	Independent Director	07517101	AAIPT1336J	H.No. C- 31, Pushpanjali Farms, Bijwasan, Delhi, 110061

CERTIFIED TO BE TRUE COPY
FOR SRF LIMITED

RAJAT LAKHANPAL
SR. VP (CORPORATE COMPLIANCE) & COMPANY SECRETARY
MEMBERSHIP NO. ACS-12725
ADDRESS- BLOCK -C, SECTOR - 45, GURUGRAM- 122003)

SRF LIMITED
Block - C, Sector - 45
Gurugram - 122 003
Haryana, India
Tel: +91-124-4354400
Fax: +91-124-4354500
Email: info@srf.com
Website: www.srf.com

Regd. Office:
Unit No. 236 and 237, 2nd Floor,
DLF Galleria, Mayur Place
Noida Link Road
Mayur Vihar Phase I Extension
Delhi -110 091

CIN : L18101DL1970PLC005197

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 2

CONSOLIDATED CONSENT & AUTHORIZATION

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

By R.P.A.D.

CONSOLIDATED CONSENT AND AUTHORIZATION (CC & A)
CCA NO: AWH- 119079

NO: GPCB/BRCH-B/CCA- 38(19)/ID-24521/ 678954 DT: 26/07/2022

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 & Other Wastes (Management and Transboundary Movement) Rules-2016, framed under the E(P)Act-1986.

And whereas Board has received consolidated application dated **22/12/2021** and inward no. **208267** for the consolidated consent and authorization (CC & A) of this Board under the provisions / rules of the aforesaid Acts, Consolidated Consent & Authorization is hereby granted as under.

To,
M/s. SRF Ltd.
Plot No: - D-II/I, GIDC, Dahej,
Tal: Vagra, Dist: Bharuch.

1. **Consent Order No. : AWH-119079 date of Issue 02/06/2022.**
2. The consent under Water Act-1974 for conveying the industrial effluent discharge to GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system up to the sea for final Disposal at NIO designated point, The consent under Air Act-1981 & Authorization under Environment (Protection) Act, 1986 shall be **valid up to 10/01/2027** to operate industrial plant to manufacture following products:

Sr. No.	Name of Product	Total Proposed Capacity (MT/Annum)
1	Trifluoro Acetic Acid	2000
2	**Speciality products:**	
i	Tetrafluorobenzyl Alcohol	9900
ii	Ethyldifluoroacetate	
iii	Ethyltrifluroacetate	
iv	Ethyltrifluoroacetoacetate	
v	Amino crotonate	
vi	Trifluoroacetic anhydride	
vii	Pentafluorobenzoic Acid	
viii	Pyrazole Acid	
ix	Chloro trichloro Methyl – Cyclopentene	
x	2-methyl-4- (1,1,1,2,3,3,3-heptafluoro-2-propyl aniline	
xi	Fluoromethyl ester	
xii	Diphenylphenol	
xiii	Tetrafluoropropene -1234 yf	
xiv	Isobutyl Acetophenon	
xv	2-Bromo-5-fluorobenzotrifluoride	

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Name of Product	Total Proposed Capacity (MT/Annum)
xvi	2,2-Difluroethylamine	
xvii	2,3-Dichloro-5-trifluoromethyl-pyridine	
xviii	N[1-(6-Chloro-3-pyridinyl)methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide	
xix	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide	3000
3	1,1,2,2-Tetrafluoroethyl Methyl Ether	500
4	Hexafluoropropylene	300
5	Ethyl Difluoroacetoacetate	100
6	Difluoromethanesulphonlychloride	1000
7	3-Trifluoromethylacetophenone	1700
8	Trifluoromethylbenzamide	1000
9	TrifluoroMethyl-2-EthoxyVinyl Ketone	1500
10	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester	150
11	Pentafluorophenol	3500
12	Monomethylhydrazine	500
13	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone)	200
14	Bromopentafluorobenzene	100
15	Methyl Hydroxy Pyrazole	500
16	5-Bromo-2-2-difluoro-1-3-benzodioxide	20
17	Difluorobenzodioxole methyl ester	500
18	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)benzenamine (DHA)	50
19	2,4,5-Trifluorophenyl acetic acid	50
20	Methyl-2- Fluoroacrylate	50
21	Ethyl-Trifluoropyruvate	600
22	5-Chloro-2,3-difluoropyridine	3500
23	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylic Acid	600
24	4-methoxy cyclohexanone (4 MCH)	600
25	2 Amino 3 Chloro 5 trifluro methyl pyridine	3500
26	Hydrazine Hydrate	600
27	2-methylsulfonyl-5-(trifluoromethyl)-1,3,4-thiadiazole	500
28	1,3 Benzodioxole	
29	**Chlorinated Compounds:**	
i	Trichloroethylene	1,50,000
ii	Perchloroethylene	
iii	Methyl Chloride	
iv	Methylene dichloride	
v	Chloroform	
vi	Carbon tetrachloride	40000
30	Anhydrous Hydrofluoric acid	500
31	Chlorotrifluoroethane (HCFC 133a)	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

Sr. No.	Name of Product	Total Proposed Capacity (MT/Annum)
32	**HFC refrigerants**	
i	1,1,1,2 Tetrafluroethane (HFC 134a)	40000
ii	Pentafluoroethane (HFC 125)	
iii	Difluoromethane (HFC - 32)	
iv	1,1 difluoroethane (HFC-152a)	
v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)	
vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)	
vii	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)	
viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)	
33	R600a (Butane)	1000
34	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	500
35	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	500
36	**R&D Products:**	
i	Organo Heterocyclic Compounds	2000
ii	Aryl/Alkyl/Alicyclic Compounds	
iii	Elemental Fluorine/Bromine /Iodine and their Products/Derivatives	
iv	Alkali Metal / Boron / Phosphorous / Sulphur based Product / Derivatives	
37	Hydrofluoric acid (20-70%)	18,446
38	Anhydrous Hydrochloric acid	900
39	Chlorodifluoromethane (R22)	12,000
40	Calcium Chloride	1,20,000

Sr No.	Captive Power Plant	Proposed Capacity
1	Captive Power Plant	25 MW

Specific conditions:

a) Unit shall comply with all provision of Ozone Depleting substance Regulation and control Rules, 2000 and its amendment from time to time

b) Unit shall not carry out any construction activities and production which attracts provisions of Environment Clearance without obtaining EC from competent authority under EIA notification dated 14/09/2006 and amended thereafter.

c) Unit shall comply with all the conditions stipulated by SEIAA in the order of Environment Clearance issued vide letter no. SEIAA/GUI/EC/5(f)/1538/2020 dated: 15/12/2020.

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

d) Unit shall sell out their hazardous waste to authorized end users who is having authorization with valid CCA and rule 9 permission to receive this waste. Unit shall make MoU with such authorized endusers and submit MoU.
e) All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.
f) Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.
g) Unit shall strictly follow the Solid Fuel guideline framed by Board and shall install APCM as per guideline.
h) Unit shall follow coal handling guideline framed by Board and provide close ash handling facility.
i) Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.
j) Unit shall install online Continuous Emission Monitoring Systems (CEMS) and link it with the server of GPCB for real time data transfer for boiler more than 8 TPH capacity or equivalent capacity of TFH.

3.0 CONDITION UNDER THE WATER ACT:

3.1 The quantity of total water consumption shall not exceed 19413 KL/Day as per below break up as mentioned in form D submitted for consent application under the Water Act- 1974.

a. Domestic: 429 KLD
b. Industrial: 18,769 KLD
c. Gardening: 215 KLD

Total: 19,413 KLD

3.2 The quantity of total waste water generation shall not exceed 9975 KL/Day as per below break up as mentioned in form D submitted for consent application under the Water Act- 1974.

Domestic: 340 KLD
Industrial: 9,635 KLD
Total: 9,975 KLD

3.3 Mode of disposal of wastewater:

a) The quantity of industrial effluent from manufacturing process and other ancillary industrial operations shall not exceed 9635 KLD and the quantity of domestic wastewater (sewage) shall not exceed 340 KLD.
b) 4024 KLD of process steam condensate shall be collected in separate collection tank and reused in cooling tower/process.
c) 3884 KLD of industrial effluent from softener/ DM Plant Reject + Boiler Blow down + Cooling tower Blow Off (including Captive Power Plant) shall be sent to separate ETP consists of Primary Treatment +UF +RO. After treatment, 3301 KLD the treated effluent shall be reused in cooling tower/process and 583 KLD RO reject after confirming the GPCB discharge norms shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.
d) 1727 KLD of industrial effluent (process Effluent + Washing) shall be sent to ETP consisting of primary, secondary and tertiary Treatment units and Multi Effective Evaporator plant (MEE) followed by Agitated Thin Film Dryer (ATFD).

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

e) @ Total 2310 KLD treated (1727 KLD treated industrial effluent + 583 KLD RO reject) shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea for final disposal at NIO designated points.

f) @ 340 KLD of sewage shall be treated separately to confirm the GPCB standard shall be reuse in development of greenbelt / plantation within premises and in monsoon season, it shall be reuse in cooling tower/process shall meet following standards.

Parameters	GPCB Norms
pH	6.5 to 9
TSS	< 50 mg/l
Fecal Coliform (Most Probable Number per 100 milliliter , MPN/100ml)	<1000 MPN/100ml
BOD (5 days 20 degree C)	<20 mg/l

3.4 The quality of treated effluent shall conform to the following standards prior to disposal GIDC Sewer Line - Dahej Vilayat Pipeline/Common Disposal System up to the sea for final disposal at NIO designated point.

Sr. No.	PARAMETERS	PERMISSIBLE LIMIT
1	pH	6 to 9
2	Temperature	Shall not exceed more than 5 °C above receiving water temperature
3	Total Suspended Solids	100 mg/l
4	Oil and Grease	10 mg/l
5	Phenolic Compounds	5 mg/l
6	Cyanide (as CN)	0.2 mg/l
7	Fluorides (as F)	15 mg/l
8	Sulphides (as P)	5.0 mg/l
9	Total Residual Chlorine	1.0 mg/l
10	Ammonical Nitrogen (as N)	50 mg/l
11	Total Kjeldahl Nitrogen (TKN)	50 mg/l
12	Nitrate Nitrogen	50 mg/l
13	Biochemical Oxygen demand [3 day at 27°C]	100 mg/l
14	Chemical Oxygen Demand	250 mg/l
15	Arsenic (as AS)	0.2 mg/l
16	Mercury (as Hg)	0.01 mg/l
17	Lead (as Pb)	0.1 mg/l
18	Cadmium (as Cd)	0.05 mg/l
19	Trivelent Chromium	2.0 mg/l
20	Hexavalent Chromium (as Cr± 6)	0.1 mg/l
21	Copper (as Cu)	3.0 mg/l
22	Zinc (as Zn)	15 mg/l
23	Selenium (as Se)	0.05 mg/l
24	Nickel (as Ni)	3.0 mg/l
25	Manganese (as Mn)	2 mg/l
26	Iron (as Fe)	3 mg/l
27	Vanadium (as V)	0.2 mg/l
28	Bio assay test	90% survival of fish after 96

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		hours in 100% effluent

3.5 The effluent conforming to the above standards shall be discharged into GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system upto the sea for final disposal at NIO designated point.

3.6 Unit shall be required to make storage facilities to store the effluent for at least 48 hours by providing acid proof brick lined impervious tanks/HDPE tanks.

3.7 Unit shall implement & follow communication plan so that respected work can be done in minimum response time in case of emergencies.

3.8 Unit shall provide online monitoring system for pH, TOC and other parameters with recorder & magnetic flow meters for flow measurement of treated wastewater, if applicable as per CPCB norms.

3.9 Unit shall have only one authorized outlet over the ground with full access from outside the premises.

3.10 In case of shut-down of plant for more than three (3) days for any reason, member unit shall intimate to GIDC/ Pipeline Project authority & GPCB well in advance for the better operation & management of pipeline.

3.11 Unit shall make fixed arrangement for discharge of the effluent from their Final collection tanks to the underground drainage network of GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system. Unit shall not keep any by-pass line or system or loose or flexible pipe line for discharge of the effluent into underground drainage network of Pipeline.

3.12 Magnetic flow meters shall be installed at the inlet & outlet of effluent collection tanks/ETP to measure the quantity of effluent discharged into the underground drainage network of GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system.

3.13 Unit shall affix of water meters as per Section 4 (1) of the water (Prevention and Control of Pollution) Cess Act – 1977 for the purpose of measuring and recording the quantity of water consumed at such places as may be required, within 15 days and it shall be presumed that the quantity indicated by the meter has been consumed by the unit until the contrary is proved.

3.14 Unit shall provide adequate / safe effluent sampling facility for the effluent being stored in final collection / discharge tank of ETP or being discharged into GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system upto the sea for final disposal at NIO designated point.

3.15 Unit shall put up at the entrance a board displaying the name of unit, particulars of the products/ process, the name of proprietor/partners /directors of the unit, GIDC Pipeline Project membership number & date of joining of GIDC Pipeline Project membership, the electricity consumer number as on the record of DGVCL.

3.16 Unit shall have to display on-line data outside the main factory gate with regard to and nature of hazardous chemicals being handled in the plant, including waste water and air emission and solid hazardous waste generated within the factory premises, if applicable as per CPCB norms.

3.17 Unit shall either stop or curtail its production activities if the effluent is not conforming to the standards of GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system specified by GPCB.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

3.18 The authorized representative of GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system project shall have right of entry at any time for the purpose of inspection and monitoring the effluent collection facilities/ETP (if required) of Unit.

3.19 Unit shall have to keep accurate records of quality & quantity of effluent discharged to GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system on day-to-day basis. Separate logbook shall be maintained for recording the data & shall be made available for inspection as & when asked.

3.20 Unit 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 each month to GPCB on or before fifth day of the succeeding month.

3.21 In case of incinerators or MEE, the flow measuring devices for mother liquor/ toxic effluent/ Non-biodegradable effluent, light diesel oil, Furnace oil, etc. i.e. fuel used for combustion, air used for combustion shall be separately provided. Incinerator temperature recording devices as well as gaseous flow measuring devices for scrubber shall also be provided. These data of temperature & flow should be recorded every day & submitted to GPCB on monthly basis.

3.22 Disposal system for storm water shall be provided separately. In no circumstances storm water shall be mixed with the industrial effluent.

3.23 Leachate from the hazardous solid waste, if any shall also be connected into a collection tank through leachate collection facilities and shall be treated along with industrial effluent and final treated effluent shall be discharged to the GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system.

3.24 If the GIDC effluent collection system Line- Dahej Vilayat Pipeline/ Common Disposal system Project authority terminates the membership of Pipeline Project, the member unit shall have to close down the manufacturing activities/industrial operation of the process plant immediately until the membership is resumed.

3.25 The Environmental Management Unit/Cell shall be setup to ensure implementation on and monitoring of environment 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 issued. These Cells also coordinate the exercise of environmental audit and preparation of environmental statements.

3.26 The Environmental audit shall be carryout yearly, if applicable. The environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30th September every year.

3.27 Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 5 meters width is developed.

3.28 In case of change of ownership/ management the name and address of the new ownership/ partners/ directors/ proprietor should immediately be intimate to the Board. Also any change in equipment or working conditions as mentioned in the consents form/ order should immediately be intimated to this Board.

3.29 The Board reserves the right to review and/or revoke the consent and / or make modifications in the conditions which it seems fit in accordance with provisions of Water Act-1974.

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

4. **CONDITIONS UNDER THE AIR ACT:**

4.1 The following shall be used as fuel:

Sr. No.	Name of fuel	Total Quantity per day
1	Coal	600 MT/day
2	HSD	215 KLD
3	Natural Gas [Alternative fuel instead of coal]	45000 Nm3/day
4	Furnace Oil	142.5 KLD
5	LSHS / LDO	110 KLD

4.1.1 The condition No. 4.2 for Flue gas stacks under Air Act of the CCA order No: AWH-116118, issued vide letter no. GPCB/ BRCH-B/ CCA-38(17)/ ID-15121/624543, dated 03/03/2022 is amended and shall now be read as under.

Stack	Stack Attached To	Stack Height in Meter	Air Pollution Control Measures	Parameter	Permissible Limit
1	Boiler 35 TPH	94 (Common Stack)	Electrostatic Precipitator + Scrubber	PM	50 mg/NM3
2	Boiler 35 TPH			SO2	600 mg/NM3
3	Boiler 60 TPH			NOx	450 mg/NM3
				Hg	0.03 mg/NM3
4	DG Set 500 KW	11	-		
5	DG Set 500 KW	11	-		
6	DG Set 840 KW	30	-		
7	DG Set 840 KW	30	-		
8	TCE/PCE Plant Thermic Fluid /Fire Heaters No. 1	50	Efficient Burner	PM SO2 NOx	150 mg/NM3 100 ppm 50 ppm
9	TCE/PCE Plant Thermic Fluid /Fire Heaters No. 2	50	Efficient Burner		
10	HFC 134a Plant Thermic Fluid /Fire Heaters	50	Efficient Burner		
11	AHF Plant Heater No. 1 (Thermic Fluid/ Fire Heaters)	46	Efficient Burner		
12	AHF Plant Drying System No. 1	35	Cyclone Separator / Bag Filter		
13	AHF Plant Heaters No. 2 (Thermic Fluid /Fire Heaters)	46	Efficient Burner		
14	AHF Plant	35	Cyclone		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

	Drying System No. 2 (Thermic Fluid /Fire Heaters)		Separator / Bag Filter		
15	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluid /Fire Heaters)	55	Efficient Burner		
16	Boiler 30 TPH	63	-		
17	Boiler 30 TPH	63	-		
18	DG Set 4200kVA	30	-		
19	DG Set 4200 kVA	30	-		
20	DG Set 4200 kVA	30	-		
21	Boiler 17 TPH	53	-		
22	Dust Collector	11	Bag filter	Particulate Matter	150 mg/Nm3

4.2 The Process emission through various stacks/ vent of reactors, process, vessel shall conform to the following standards:

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	CONCENTRATION
HF Plant Stack					
1	HF Plant Central Absorption System	30	Continuous water Circulation	HF	6 mg/Nm^3
TCE/PCE Plant Stack					
2	TCE/PCE Plant (Central Absorption System)	20	Continuous Alkali Circulation	Cl2	9mg/NM3
3	TCE/PCE Plant (CentralAbsorption System)	30	Continuous Water Circulation	HCl	20mg/Nm3
HFC Plant Stack					
4	R134a Plant (Central Absorption System)	30	Continuous Water Circulation	HCl HF	20mg/NM3 6mg/NM3
5	Reactor / Vessel (10 Nos.) Central Absorption System	30	Continuous Water Circulation	HF HCl	6mg/NM3 20mg/NM3
6	Reactor / Vessel (10 Nos.) Central	30	Continuous Water	HCl	20mg/NM3

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	CONCENTRATION
	Absorption System		Circulation		
7	Reactor / Vessel (04 Nos.) Central Absorption System	20	Continuous Alkali Circulation	Cl2	9 mg/NM3
8	Reactor / Vessel (02 Nos.) Central Absorption System	20	Continuous Alkali Circulation	Br2	2mg/NM3
9	Trifluoro Acetic Acid Central Absorption System	30	Continuous Water + Alkali Circulation	HF HCl	6 mg/NM3 20 mg/NM3
10	Ethyldifluoroacetate Central Absorption System	30	Continuous Water + Alkali Circulation	HF HCl	6 mg/NM3 20 mg/NM3
11	Ethyltrifluroacetate Central Absorption System	30	Continuous Water + Alkali Circulation	HF	6 mg/NM3
12	Ethyltrifluoroacetoacetate Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
13	Pentafluorobenzoic Acid Central Absorption System	30	Continuous Water + Alkali Circulation	HCl Cl2	20 mg/NM3 9 mg/NM3
14	Pyrazole Acid Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
15	2-methyl-4-(1,1,1,2,3,3,3-heptafluoro-2-propyl aniline Central Absorption System	30	Continuous Water + Alkali Circulation	HCl Br2	20 mg/NM3 2 mg/NM3
16	Tetrafluoropropene - 1234yf Central	30	Continuous Water + Alkali Circulation	HF HCl	6 mg/NM3 20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	CONCENTRATION
	Absorption System				
17	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
18	Hexafluoropropylene Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
19	Difluoromethane sulphonlychloride Central Absorption System	30	Continuous Water + Alkali Circulation	HCl Cl2	20 mg/NM3 9 mg/NM3
20	Trifluoromethylbenzamide Central Absorption System	30	Continuous Water + Alkali Circulation	HCl Cl2	20 mg/NM3 9 mg/NM3
21	Bromopentafluorobenzene Central Absorption System	30	Continuous Water + Alkali Circulation	Br2	2 mg/NM3
22	5-Bromo-2-2-difluoro-1-3-benzodioxide Central Absorption System	30	Continuous Water + Alkali Circulation	HCl Br2 HF	20 mg/NM3 2 mg/NM3 6 mg/NM3
23	Difluorobenzodioxole methyl ester Central Absorption System	30	Continuous Water + Alkali Circulation	HCl Br2	20 mg/NM3 2 mg/NM3
24	Methyl-2-Fluoroacrylate Central Absorption System	30	Continuous Water + Alkali Circulation	HF	6 mg/NM3
25	CMS plant (Methyl Chloride ,Methylene	30	Continuous Water + Alkali Circulation	HCl Cl2	20mg/NM3 9 mg/NM3

Clean Gujarat Green Gujarat

ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	CONCENTRATION
	dichloride, Chloroform, Carbon tetrachloride) Central Absorption System				
26	Chlorotrifluoroethane (HCFC 133a) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl HF	20 mg/NM3 6 mg/NM3
27	Pentafluoroethane (HFC 125) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl HF	20 mg/NM3 6 mg/NM3
28	Difluoromethane (HFC - 32) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl HF	20 mg/NM3 6 mg/NM3
29	HCl Storage Tank Farm	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
30	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
31	Flare Stack attached to Topramezone Plant	30	--	PM SO2 NOx	150 mg/Nm^3 100 ppm 50 ppm
32	Chlorodifluoromethane (R22) Plant Central Absorption	30	Continuous water + Alkaline Circulation	HF HCl	6mg/NM3 20 mg/NM3

Page 12 of 19

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	CONCENTRATION
	System- Common stack with R134a plant (Central Absorption System)				
33	HFC134a Acid tank farm area scrubber vent	30	Continuous water Circulation	HCl	20 mg/NM3
34	Calcium Chloride Plant Scrubber	30	Continuous Water + Sodium Carbonate Solutions	CO2 HCl	-- 20 mg/NM3
35	Methyl Hydroxy Pyrazole Central Absorption System	30	Continuous water Circulation	HCl	20 mg/NM3
36	TCE/PCE Acid tank farm area scrubber vent	20	Continuous water Circulation	HCl	20 mg/NM3
37	DHF Scrubber	30	Continuous water Circulation	HF	6 mg/Nm^3

4.3 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No.	Parameters	Permissible Limit (microgram /M^3)	
		Annual	24 Hours Average
1.	Particulate Matter (PM_{10})	60	100
2.	Particulate Matter ($PM_{2.5}$)	40	60
3.	Oxides of Sulphur (SO_x)	50	80
4.	Oxides of Nitrogen (NO_x)	40	80

- **Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.**
- **24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.**

4.4 Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified as above.

4.5 The consent to operate the industrial plant shall lapse if at any time the parameters of the gaseous emission are not within the tolerance limits specified as above.

4.6 Unit 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

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

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 Unit 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 6a.m. and10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.

4.8 All efforts shall be made to control VOC emissions and odor problem, if any.

5 GENERAL CONDITIONS: -

5.1 In case of change of ownership/ management the name and address of the new ownership/ partners/ directors/ proprietor should immediately be intimate to the Board. Also any change in equipment or working conditions as mentioned in the consents form/ order should immediately be intimated to this Board.

5.2 Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is at least 1000 trees per acre of land and a green belt of 5 meters width is developed.

5.3 Unit shall put up at the entrance a board displaying 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 DGVCL.

6.0 CONDITIONS UNDER HAZARDOUS & OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES, 2016

6.1 Number of authorization: **AWH- 119079 date of Issue 02/06/2022.**

6.2 **M/s. SRF Ltd.** is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at **PLOT NO: D-II/1, GIDC ESTATE Dahej, Tal: Vagra, Dist: Bharuch.**

Sr. No	Type of Waste	Category	Quantity (MT/year)	Facility
1	Chemical sludge from wastewater treatment	35.3	3265	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing facility.
2	Spent Oil	5.1	600	Collection, Storage, Reuse, Transportation and Disposal by sending to authorized recycler/ refiners.
3	Discarded containers / barrels / liners used for hazardous wastes/chemicals	33.1	5428	Collection, Storage, Decontamination/Detoxification, Reuse, Transportation and Disposal by sending to authorized Decontamination facility.
4	Spent Catalyst	28.2	2763	Collection, Storage, Transportation and Disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

5	Spent Carbon	28.3	468	Collection, Storage, Transportation, and Disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
6	Off- Specification Product	28.4	600	Collection, Storage, Transportation, and Disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
7	Process Residue & Waste	28.1	15125	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.
8	Spent Organic Solvent	20.2	47,586	Collection, Storage, Transportation and Disposal at approved CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission & valid CCA after making MOU.
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	18,553	
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	37,504	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.
11	CuCl Cake	8.2	52	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing or pre-processing.
12	Ammonium Salt	A-10	1717	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing.
13	Potassium Salt	B-36	2572	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing.
14	Sodium Salt	B-36	4402	Collection, Storage, Transportation and Disposal by sending to authorized Actual

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				end-user having rule-9 permission & valid CCA after making MOU (445 TPA) and rest (2127 TPA) shall be Disposed at approved TSDF.
15	Zinc Compound	6.1	44	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing.
16	Hydrofluoricsilic acid (15–40%)	Sch II - Class C - C2	4000	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU.
17	Sulphuric acid (70-95%)	B-15	90382	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or co-processing.
18	Hydrochloric Acid (10 - 33%)	B-15	411553	Collection, Storage, Transportation, and disposal by sending to Actual end-user having rule-9 permission & valid CCA after making MOU or converted in to the Calcium Chloride and sold to actual users/ disposed off in deep sea.
19	Sodium Hypochlorite	B-7	13875	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU.
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	2593	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU
21	Calcium Fluoride	B-10	5844	Collection, Storage, Transportation and Disposal by sending to authorized Actual

Page 16 of 19

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

				end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
22	Calcium Chloride	B-10	165	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
23	Sodium methoxide Solution	C7	120	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
24	Phosphorus trichloride	B-35	934	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
25	Gypsum (CaSO4)	38.1	162400	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or co-processing or pre-processing facility.
26	Aluminium trifluoride	36.1	1000	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing.
27	Liquor Ammonia Solution (10-25%)	A10	1500	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				permission & valid CCA after making MOU.
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	2802	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing.
29	Fluoroform (R23)	28.1	240	Collection, Storage, In-house treatment through thermal oxidizer/transportation and disposal at approved CHWIF/transportation treatment through thermal oxidizer at SRF Limited, Bhiwadi/pre-processing/co-processing / CBMWTF having rotary kiln incinerator / authorized Actual end-user having rule-9 permission & Valid CCA after making MoU.
30	Inorganic Sludge Generation from Calcium Chloride Plant	35.3	2034	Collection, Storage, Transportation and Disposal at approved TSDF
31	Caustic lye	Sch II - Class C - C2	36	Collection, Storage, Transportation and Disposal by sending to authorized Actual end-user having rule-9 permission & valid CCA after making MOU.

6.3 The authorization is granted to operate a facility as above.

6.4 The authorization shall be in force for a period up to **10/01/2027**.

6.5 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.

7. **TERMS AND CONDITIONS OF AUTHORISATION:**

7.1 The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.

7.2 The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the Gujarat Pollution Control Board.

7.3 The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.

7.4 Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

Page 18 of 19

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

7.5 The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, 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 authorised 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 Waste and Penalty"

7.7 It is the duty of the authorised person to take prior permission of the Gujarat Pollution Control Board to close down the facility.

7.8 The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

7.9 The record of consumption and fate of the imported hazardous and other wastes shall be maintained.

7.10 The hazardous and other waste 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.

7.11 The importer or exporter shall bear the cost of import or export and mitigation of damages if, any.

7.12 An application for the renewal of an authorization shall be made as laid down under Hazardous & Other Wastes (Management and Transboundary Movement) Rules-2016.

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 Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

7.15 Unit shall have to display the relevant information with regard to hazardous waste as indicated in the Court's order in W.P. No. 657 of 1995 dated 14th October 2003.

7.16 Unit shall have to display on-line data outside the main factory gate with regard to and nature of hazardous chemicals being handled in the plant, including waste water and air emission and solid hazardous waste generated within the factory premises.

7.17 Unit shall have to manage used or spent oil; empty or discarded barrels / containers / liners contaminated with hazardous chemicals / wastes, process waste as per Hazardous & Other Wastes (Management and Transboundary Movement) Rules-2016, framed under the E(P)Act-1986 and shall apply Authorization for all applicable waste.

FOR AND ON BEHALF OF
GUJARAT POLLUTION CONTROL BOARD

(IRFAN BAGZI)
ENVIRONMENT ENGINEER

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

By R.P.A.D.

CONSOLIDATED CONSENT AND AUTHORIZATION (CC & A – Amendment)
CCA AMENDMENT NO: AWH – 123782

No: GPCB/BRCH-B/CCA- 38(21)/ID-24521/ **DT: /04/2023**

To,
M/s. SRF Ltd.,
Plot No: D-II/I, GIDC, Dahej
Tal: Vagra, Dist: Bharuch.

SUB: Amendment in Consolidated Consent & Authorization (CC&A) under various Environmental Acts/ Rules.
REF: (1) Your application No. 255854 dated 10/06/2022.
(2) CCA No. AWH-119039 dated: 26/07/2022.

This has reference to the CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 which stands amended as under:

The Validity of this order shall be up to 10/01/2027.

1. **Existing products and its quantity as per CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 shall remain unchanged. The capacity of Captive Power Plant (CPP) shall be increased from 25 MW to 45.1 MW.**

2. **SPECIFIC CONDITIONS:**
   a) **Unit shall maintain ZLD for wastewater generated from proposed CPP of capacity 20.1 MW.**
   b) **Unit shall comply MoEF & CC's notification dated 28/06/2018 and its subsequent amendment for Thermal Power Plant (TPP).**
   c) Unit shall comply with all the conditions stipulated by SEIAA in the order of Environment Clearance issued vide letter no. SEIAA/GUJ/EC/5(f)/1538/2020 dated: 15/12/2020.
   d) Unit shall not carry out any construction activities and production which attracts provisions of Environment Clearance without obtaining EC from competent authority under EIA notification dated 14/09/2006 and amended thereafter.
   e) Unit shall follow coal handling guideline framed by Board and provide close ash handling facility.
   f) Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.
   g) Unit shall install online Continuous Emission Monitoring Systems (CEMS) and link it with the server of GPCB for real time data transfer for boiler more than 8 TPH capacity or equivalent capacity of TFH.
   h) Unit shall comply GPCB office order dated 03/06/2021 regarding APCM for SO_2 emission control.
   i) Unit shall not send any hazardous waste to units which are only involved in phase conversion (physical changes). Unit shall ensure that hazardous waste receiving unit is complying CPCB letter dated 29/10/2020.

Outward No: 7 8 8 1 8 2 3

Clean Gujarat Green Gujarat
Website : https://gpcb.gujarat.gov.in

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

3. CONDITION UNDER THE WATER ACT:

3.1 The condition no. 3.1 for Water consumption under the Water Act of CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 is amended and shall now be read as under:

Sr. No.	Water Consumption	Quantity (KLD)		
		Existing	Proposed	Total
1	Domestic	429	0	429
2	Industrial	18,769	1571	20,340
3	Gardening	215	0	215
Total		**19413**	**1571**	**20984**

3.2 The condition no. 3.2 for Wastewater generation under the Water Act of CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 is amended and shall now be read as under:

Sr. No.	Water Generation	Quantity (KLD)		
		Existing	Proposed	Total
1	Domestic	340	0	340
2	Industrial	9635	679	10,314
Total		**9975**	**679**	**10,654**

3.3 The condition no. 3.3 for mode of disposal of wastewater under the Water Act of CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 is amended and shall now be read as under:

a) 4024 KLD steam condensate of boilers shall be collected in separate collection tank and reused in cooling tower/process.

b) 4511 KLD of industrial wastewater from Softener/ DM Plant Reject + Boiler Blow Down + Cooling Tower Bleed Off (including of Captive Power Plant) shall be sent to separate ETP consists of Primary Treatment + UF+RO. After treatment, 3928 KLD treated wastewater shall be reused and 583 KLD RO reject after confirming discharge norms shall be sent to GIDC sewer line – Dahej Vilayat pipeline / common disposal system.

c) 1779 KLD of industrial wastewater (generated from Process & Scrubber + Washing + cooling of Thermal Oxidizer) shall be sent to ETP consists of Primary, Secondary and Tertiary Treatment units and Multi Effect Evaporated plant (MEE) followed by Agitated Thin Film Dryer. After treatment, treated effluent after confirming discharge norms shall be sent to GIDC sewer line – Dahej Vilayat pipeline / common disposal system.

d) Total 2362 KLD treated wastewater (1779 KLD treated wastewater + 583 KLD RO reject) shall be sent to GIDC sewer line – Dahej Vilayat pipeline / common disposal system up to the sea for final disposal at NIO designated point after conforming discharge norms as per previous CCA.

e) 340 KLD of sewage shall be treated separately in STP and treated sewage after conforming following standards shall be reused in development of greenbelt / plantation within premises. In monsoon season, it shall be reused in cooling tower/process.

Parameters	Norms
pH	6.5 to 9
TSS	< 100 mg/l
Fecal Coliform (Most Probable Number per 100 milliliter , MPN/100ml)	<1000 MPN/100ml
BOD (3 days 27 degree C)	<30 mg/l

Outward No: 7868 dt. 31/07/2023

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152
GPCB

f) Unit shall develop adequate greenbelt / plantation area within premises for utilization of treated domestic wastewater.

4. CONDITIONS UNDER THE AIR ACT:

4.1 The condition no. 4.1 for Fuel consumption under the Air Act of CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 is amended and shall now be read as under:

Sr. No.	Name of fuel	Quantity		
		Existing	Proposed	Total
1	Coal	600 MT/day	1068 MT/day	1668 MT/day
2	HSD	215 KL/day	1 KL/day	216 KL/day
3	Natural Gas [Alternative fuel instead of coal]	45000 Nm³/day	203 Nm³/Day	45203 Nm³/Day
4	Furnace Oil	142.5 KL/day	--	142.5 KL/day
5	LSHS / LDO	110 KL/day	--	110 KL/day

4.2 The condition No. 4.1.1 for flue gas stacks under the Air Act of CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 is amended and shall now be read as under:

Stack	Stack Attached To	Stack Height in Meter	Air Pollution Control Measures	Parameter	Permissible Limit
Existing					
Same as per CCA order no: AWH-119039.					
Proposed					
23	Boiler 175 TPH	110	Electrostatic Precipitator + Auto Lime Dosing Scrubber	PM SO2 NOx Hg	30 mg/Nm³ 100 mg/Nm³ 100 mg/Nm³ 0.03 mg/Nm³
24	Thermal Oxidizer- 1	40	Quencher + Water Absorber + Alkali scrubber	As mentioned below:	

Treated flue gas emission discharge through stack of Thermal Oxidizer to atmosphere shall always be less than or equal to the following parameter specific emission standards:

Parameters	Emission Standards	Sampling Duration
Particulate Matter	50 mg/Nm³	30 Minutes or more (for sampling about 300 liters of emission)
HCl	50 mg/Nm³	30 Minutes
SO_2	200 mg/Nm³	30 Minutes
CO	100 mg/Nm³	Daily average
Total Organic Carbon	20 mg/Nm³	30 Minutes
Total dioxins and furans	0.1 ng TEQ/Nm³	8 Hours

Outward No: 73[illegible] 06[illegible]

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sb + As + Pb + Cr + Co + Cu + Mn + Ni + V + Cd + Th + Hg and their compounds	1.5 mg/Nm³	2 Hours

Unit shall comply following conditions:

A. All monitored values shall be corrected to 11% oxygen on dry basis.

B. The CO_2 concentration in tail gas shall not be less than 7%.

C. In case, halogenated organic waste is less than 1% by weight in input waste, all the facilities in twin chamber Thermal Oxidizer shall be designed so as to achieve a minimum temperature of 850 ± 25°C in primary chamber and 950°C in secondary combustion chamber not less than two seconds.

OR

All the facilities in single chamber Thermal Oxidizer for gaseous hazardous waste shall be designed so as to achieve a minimum temperature of 950°C in the combustion chamber with a gas residence time not less than two seconds.

D. In case halogenated organic waste is more than 1% by weight in input waste, waste shall be incinerated only in twin chamber Thermal Oxidizer and all the facilities shall be designed to achieve a minimum temperature of 850 ± 25°C in primary chamber and 1100°C in secondary combustion chamber with a gas residence time in secondary combustion chamber not less than two seconds.

E. Scrubber meant for scrubbing emissions shall not be used as quencher.

F. Thermal Oxidizer shall be operated (i.e. combustion chambers) with such temperature, retention time and turbulence, as to achieve Total Organic Carbon (TOC) content in the ash and residue less than 3% and their loss on ignition is less than 5% of the dry weight. In case of non-conformity, ash and residue, as the case may be shall re-incinerated.

G. Thermal Oxidizer shall be designed and operated as per CPCB's directions/guidelines issued time to time.

4.3 There shall be no change in process gas emission from proposed expansion.

4.4 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No.	Parameters	Permissible Limit (microgram /M³)	
		Annual	24 Hours Average
1.	Particulate Matter (PM_{10})	60	100
2.	Particulate Matter ($PM_{2.5}$)	40	60
3.	Oxides of Sulphur (SO_x)	50	80
4.	Oxides of Nitrogen (NO_x)	40	80

- **Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.**
- **24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.**

4.5 Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified in condition as above.

Outward No:#38542 Dt:10/04/2023

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

5. **CONDITIONS UNDER HAZARDOUS & OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES, 2016**

5.1 Unit shall comply with provisions of Hazardous & Other Wastes (Management & Trans boundary Movement) Rules-2016.

5.2 The condition No. 6.2 under authorization for Hazardous & other wastes of the CCA order No: AWH-119039, issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 is amended and shall now be read as under:

Sr. No.	Name of Haz. Waste	Category Number	Quantity			Facility
			Exi.	Pro.	Total	
1	Chemical sludge from wastewater treatment	35.3	3265 MTPA	0	3265 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing facility
2	Spent Oil	5.1	600 MTPA	0	600 MTPA	Collection, Storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners
3	Discarded containers / barrels / liners used for hazardous wastes/chemicals	33.1	5428 MTPA	0	5428 MTPA	Collection, Storage, Decontamination/Detoxification, Reuse or Transportation and Disposal by sending to authorized Decontamination Facility
4	Spent Catalyst	28.2	2763 MTPA	0	2763 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
5	Spent Carbon	28.3	468 MTPA	0	468 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
6	Off-Specification Product	28.4	600 MTPA	0	600 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
7	Process Residue & Waste	36.1	15,125 MTPA	0	15,125 MTPA	Collection, Storage, Transportation and Disposal at approved CHWIF or co-processing or pre-processing facility

Outward No:738542, 04/04/2023

Clean Gujarat Green Gujarat
Website : https://gpcb.gujarat.gov.in

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

8	Spent Organic Solvent	20.2	47,586 MTPA	0	47,586 MTPA	Collection, Storage, Transportation and Disposal at approved CHWIF or co-processing or pre-processing facility or send to authorized actual end-user having rule-9 permission & valid CCA after making MOU
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	18,553 MTPA	0	18,553 MTPA	
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	37,504 MTPA	365 MTPA	37,869 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing facility
11	CuCl Cake	8.2	52 MTPA	0	52 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing or pre-processing facility
12	Ammonium Salt	A-10	1717 MTPA	0	1,717 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
13	Potassium Salt	B-36	2,572 MTPA	0	2572 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility

Outward No:7385 42/06/02/2023

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

14	Sodium Salt	B-36	4402 MTPA	0	4402 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF
15	Zinc Compound	6.1	44 MTPA	0	44 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
16	Hydrofluoric silic acid (15-40%)	Sch II - Class C - C2	4000 MTPA	0	4000 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
17	Sulphuric acid (70-95%)	B-15	90382 MTPA	0	90382 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
18	Hydrochloric Acid (10-33%)	B-15	4,11,553 MTPA	0	4,11,553 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or converted in to the Calcium Chloride and then send to actual end users
19	Sodium Hypochlorite	B-7	13,875 MTPA	0	13,875 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU

Outward No:738542/06/04/2023

Clean Gujarat Green Gujarat
Website : https://gpcb.gujarat.gov.in

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	2593 MTPA	0	2593 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
21	Calcium Fluoride	B-10	5844 MTPA	0	5844 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
22	Calcium Chloride	B-10	165 MTPA	0	165 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
23	Sodium methoxide Solution	C7	120 MTPA	0	120 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
24	Phosphorus trichloride	B-35	934 MTPA	0	934 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility

Outward No:738542/06/04/2023

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, SECTOR 10-A,
GANDHINAGAR - 382010,
(T) 079-23232152

25	Gypsum (CaSO4)	38.1	1,62,400 MTPA	0	1,62,400 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or co-processing or pre-processing facility
26	Aluminium trifluoride	36.1	1000 MTPA	0	1000 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
27	Liquor Ammonia Solution (10-25%)	A10	1500 MTPA	0	1500 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	2802 MTPA	0	2802 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved CHWIF or co-processing or pre-processing facility
29	Fluoroform (R23)	28.1	240 MTPA	0	240 MTPA	Collection, Storage, In-house treatment (incineration) through Thermal Oxidizer.
30	Inorganic Sludge generated from Calcium Chloride	35.3	2034 MTPA	0	2034 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF.
31	Caustic lye	Sch II - Class C - C2	36 MTPA	0	36 MTPA	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU

Outward No:738542, 0[illegible]2023

Clean Gujarat Green Gujarat
Website : https://gpcb.gujarat.gov.in

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

32	Ash from Thermal Oxidizer and flue gas cleaning residue	37.2	0	40 MTPA	40 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
33	Exhaust Air or Gas Cleaning Residue (Mixed/Lean Acid generated from Scrubber of Thermal Oxidizer)	35.1	0	1908 MTPA	1908 MTPA	Collection, Storage, Transportation and Disposal at approved CHWIF or co-processing or pre-processing facility
34	Insulation waste	--	0	300 MTPA	300 MTPA	Collection, Storage, Transportation and Disposal at approved TSDF.

Unit shall use online manifest system integrated with Vehicle Location Tracking System (VLTS) of XGN.

6. All other conditions of the CCA order no: AWH-119039 issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ID-24521/678954 dated 26/07/2022 shall remain unchanged.

FOR AND ON BEHALF OF
GUJARAT POLLUTION CONTROL BOARD

(IRFAN KAGZI)
ENVIRONMENT ENGINEER

Outward No:738542,06/04/2023

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 3
(A) LIST OF PRODUCTS ALONG WITH THEIR CAPACITY

Sr. No.	Name of Product	Total Production as per CCA (MT/Annum)	Actual Production (MT/Annum)
1	Trifluoro Acetic Acid	2000	1677.46
2	Specialty Product		
i	Tetrafluorobenzyl Alcohol	9900	8300.66
ii	Ethyldifluoroacetate		
iii	Ethyl trifluoro acetate		
iv	Ethyltrifluoroacetoacetate		
v	Amino crotonate		
vi	Trifluoroacetic anhydride		
vii	Pentafluorobenzoic Acid		
viii	Pyrazole acid		
ix	Chloro trichloro methyl - cyclopentene		
x	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline		
xi	Fluoromethyl ester		
xii	Diphenylphenol		
xiii	Tetrafluoropropene- 1234yf		
xiv	Isobutyl Acetophenon		
xv	2-Bromo-5-fluorobenzotrifluoride		
xvi	2, 2-Difluoroethyl amine		
xvii	2,3-Dichloro-5-trifluoromethyl-pyridine		
xviii	N[1-{6-Chloro-3-pyridinyl) methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide		
xix	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide		
3	1,1,2,2-Tetrafluoroethyl methyl ether	3000	1931.25
4	Hexafluoropropylene	500	0
5	Ethyl Difluoroacetoacetate	300	0
6	Difluoromethanesulphonlychloride	100	0
7	3-Trifluoromethylacetophenone	1000	0
8	Trifluoro methyl benzamide	1700	1001.70
9	TrifluoroMethyl-2-EthoxyVinyl Ketone	1000	0
10	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester	1500	743.17
11	Pentafluorophenol	150	0
12	Monomethyl hydrazine	3500	2862.60
13	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone)	500	328.57
14	Bromopentafluorobenzene	200	0
15	Methyl Hydroxy Pyrazole	100	0
16	5-Bromo-2-2-difluoro-1-3-benzodioxide	500	0
17	Difluorobenzodioxole methyl ester	20	0
18	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)-benzenamine (DHA)	500	0
19	2,4,5-Trifluorophenyl acetic acid	50	10.55

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

20	Methyl-2- Fluoroacrylate	50	0
21	Ethyl-Trifluoropyruvate	50	0
22	2,3-dichloro pyridine	0	0
23	5-Chloro-2,3-difluoropyridine	600	0
24	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylic Acid	3500	0
25	4 Methoxycyclohexanone (4-MCH)	600	203.24
26	2-amino-3-chloro-5-trifluoromethyl pyridine	600	0
27	Hydrazine Hydrate	3500	0
28	2-methyl sulfonyl-5-(trifluoromethyl)- 1,3,4-thiadiazole	600	179.67
29	1,3-Benzodioxole	500	0
30	**R&D Products**	2000	1999.27
31	**Chlorinated Compound**		
i	Trichloroethylene	150000	138473.30
ii	Perchloroethylene		
iii	Methyl Chloride		
iv	Methylene Dichloride		
v	Chloroform		
vi	Carbon tetrachloride		
32	Anhydrous hydrofluoric acid	40000	30798.56
33	Chlorotrifluoroethane (HCFC 133a)	500	0
34	**HFC Refrigerant**		
i	1,1,1,2- Tetrafluoroethene (HFC 134a)	40000	33622.82
ii	Pentafluoroethane (HFC 125)		
iii	Difluoromethane (HFC-32)		
iv	1,1 difluoroethane (HFC-152a)		
v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)		
vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)		
vii	Refrigerant blend of difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) +1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)		
viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)		
35	R600a (Butane)	1000	301.64
36	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	500	0
37	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	500	0
38	Hydrofluoric acid (20-70%)	18446	5081.16
39	Anhydrous hydrochloric acid	900	191.42
40	Chlorodifluoromethane (R22)	12000	4253.56
41	Calcium chloride	120000	105135.73
Total		**422366.00**	**337096.32**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

B) COMMENCEMENT OF PRODUCTION OF PRODUCTS

Sr. No.	Product	Date of Commencement
1	TRIFLUORO ACETIC ACID	03/06/2014
2	**Speciality Product**	-
i	Tetrafluorobenzyl Alcohol	03/06/2014
ii	ETHYL DI-FLUORO ACETATE (EDFA)	21/01/2013
iii	ETHYL TRIFLUORO ACETATE	21/01/2013
iv	Ethyltrifluoroacetoacetate	03/06/2014
v	Amino crotonate	03/06/2014
vi	Trifluoroacetic anhydride	03/06/2014
vii	Pentafluorobenzoic Acid	03/06/2014
viii	PYRAZOLE ACID	21/01/2013
ix	Chloro trichloro Methyl – Cyclopentene	21/01/2013
x	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline	22/02/2018
xi	Fluoromethyl ester	03/06/2014
xii	Diphenylphenol	03/06/2014
xiii	Tetrafluoropropene	03/06/2014
xiv	Isobutyl Acetophenon	03/03/2022
xv	2-BROMO-5-FLUOROBENZOTRIFLUORIDE(BFBTF)	25/10/2019
xvi	2,2-Difluroethylamine	03/03/2022
xvii	2,3-Dichloro-5-trifluoromethyl-pyridine	03/03/2022
xviii	N[1-{6-Chloro-3-pyridinyl)methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide	03/03/2022
xix	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide	03/03/2022
3	1,1,2,2-TETRA FLUORO ETHYL METHYL ETHER	17/05/2018
4	HEXAFLUOROPROPYLENE	22/02/2018
5	Ethyl Difluoroacetoacetate	03/03/2022
6	Difluoromethanesulphonlychloride	22/02/2018
7	3-Trifluoromethylacetophenone	03/03/2022
8	Trifluoromethylbenzamide	22/02/2018
9	TrifluoroMethyl-2-EthoxyVinyl Ketone	03/03/2022
10	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester	22/02/2018
11	Pentafluorophenol	22/02/2018
12	MONO METHYL HYDRAZINE	22/02/2018
13	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone)	17/05/2018
14	Bromopentafluorobenzene	22/02/2018
15	Methyl Hydroxy Pyrazole	03/03/2022
16	5-Bromo-2-2-difluoro-1-3-benzodioxide	22/02/2018
17	Difluorobenzodioxole methyl ester	22/02/2018
18	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)benzenamine (DHA)	03/03/2022
19	2,4,5-Trifluorophenyl acetic acid	03/03/2022

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

20	Methyl-2- Fluoroacrylate	17/05/2018
21	Ethyl-Trifluoropyruvate	22/02/2018
22	2,3-dichloro pyridine	25/10/2019
23	5-Chloro-2,3-difluoropyridine	25/10/2019
24	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylic Acid	25/10/2019
25	4-methoxy cyclohexanone (SS16)	25/10/2019
26	2 Amino 3 Chloro trifluro methyl pyridine	03/03/2022
27	Hydrazine Hydrate	03/03/2022
28	2-methylsulfonyl-5-(trifluoromethyl)-1,3,4-thiadiazole	03/03/2022
29	1,3 Benzodioxole	25/10/2019
30	**R&D Products**	22/02/2018
31	**Chlorinated Compound**	
i	Trichloroethylene	21/01/2013
ii	Perchloroethylene	21/01/2013
iii	Methyl Chloride	03/03/2022
iv	Methylene dichloride	22/02/2018
v	Chloroform	22/02/2018
vi	Carbon tetrachloride	22/02/2018
32	Anhydrous Hydrofluoric acid	21/01/2013
33	Chlorotrifluoroethane (HCFC 133a)	22/02/2018
34	**HFC Refrigerant**	
i	1,1,1,2 Tetrafluroethane (HFC 134a)	21/01/2013
ii	Pentafluoroethane (HFC 125)	21/01/2013
iii	Difluoromethane (HFC - 32)	22/02/2018
iv	1,1 difluoroethane (HFC-152a)	22/02/2018
v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)	22/02/2018
vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)	22/02/2018
vii	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)	22/02/2018
viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)	22/02/2018
35	R600a (ISO Butane)	22/02/2018
36	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	22/02/2018
37	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	22/02/2018
38	Hydrofluoric acid (20-70%)	22/02/2018
39	Anhydrous Hydrochloric acid	22/02/2018
40	Chlorodifluoromethane (R22)	03/03/2022
41	Calcium Chloride	03/06/2014

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 4

MONTH WISE NUMBER OF DAYS OF OPERATION

Month	Days
Apr-23	30
May-23	31
Jun-23	30
Jul-23	31
Aug-23	31
Sep-23	30
Oct-23	31
Nov-23	30
Dec-23	31
Jan-24	31
Feb-24	29
Mar-24	31
TOTAL	**366**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 5

MONTH WISE ELECTRICITY CONSUMPTION

Month & Year	Electrical Consumption for Production	Total Production in (MT)	Electricity Consumption per MT of Product (KWH)
Apr-23	21318443	25445	838
May-23	22631219	28685	789
Jun-23	21560433	27120	795
Jul-23	23072201	32622	707
Aug-23	21799964	19518	1117
Sep-23	23908060	22703	1053
Oct-23	25097697	25023	1003
Nov-23	25244559	33752	748
Dec-23	26143953	33773	774
Jan-24	26178845	39247	667
Feb-24	26266335	24300	1081
Mar-24	24672735	24908	991
Total	**287894444.0**	**337096.3**	**10562.6**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 6

MONTH WISE PRODUCT & BY-PRODUCT

Month	Total Production (MT)	
	Product	By-product
Apr-23	25445.22	Nil
May-23	28684.89	
Jun-23	27119.95	
Jul-23	32621.91	
Aug-23	19517.62	
Sep-23	22703.36	
Oct-23	25022.51	
Nov-23	33751.87	
Dec-23	33773.15	
Jan-24	39247.11	
Feb-24	24300.49	
Mar-24	24908.26	
Total	**337096.30**	
Avg./Month	**28091.36**	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 7

RAW MATERIAL CONSUMPTION

Raw Material Data, Fy 2023-24		
Sr. No.	**Material Name**	**Consumption in MT/Year**
1	**Trifluoro Acetic Acid**	
	R0030	7071.162
	AHF	3215.991
	98% H2SO4	6532.067
	W0681	327.337
	W0034	143.517
2	**Ethyldifluoroacetate**	
	P14+1	31.08428439
	Ethanol (Invoice)	10.402
3	**Ethyltrifluoroacetoacetate**	
	P7	892.347
	RM-3236/R0010	831.83
	R0012	445.6
	ANH. HCL	240.211
	RM-3234/R0404	92.116
	R0037	1.7495
	48% NaOH	25.654
4	**Ethyl Trifluoroacetate**	
	P7	892.347
	R000000000010	831.83
	R000000000012	445.6
	R000000000068	240.211
	Hy-Flow	92.116
	R000000000037	1.7495
	48% NaOH	25.654
5	**Amino crotonate**	
	ETFAA	487.722
	Cyclo Hexane	51.721
	R000000000600	66.038
6	**2,4,5-Trifluorophenyl acetic acid**	
	SS5600	27.562
	Ethyl Cyanoacetate	19.82
	Potassium Carbonate	42.5

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	Ethyl Acetate	48.117
	Tetrabutylammonium bromide	1.563
	Sodium Chloride	40.544
	Calcium Chloride	1.88
	Hydrochloric Acid	44.843
	Sulphuric Acid	213.833
	Sodium Hydroxide 47%	31.07
	N-Methyl-2-pyrrolidone	11.878
	MDC	34.331
	SS-5604	0.395
	Activated Carbon	0.554
	Supercell/Hyflow Aid	1.224
	Potassium Carbonate	7.7
	Hydrochloric Acid	7.79
	Hypo	3.1
	TEA	1.55
7	**Pyrazole Acid**	
	R0041	2533.41
	R0140	4158.98
	R0263	1799.8
	R0168	766.11
	R0006	350.45
	R0044	1379.57
	R0037 step-2	712.19
	ROO37 Step-1	163.81
	R0032	675.57
	R0032	0
	R0076	2616.53
	CAUSTIC LYE	2616.53
	ANHYDROUS HCL	0
	HYDROCHLORIC ACID	7480.75
	FP143	3470.491
8	**2-Bromo-5-fluorobenzotrifluoride(BFBTF)**	
	METHYLENE CHLORIDE	279.189
	P-4501	155.001
	CAUSTIC LYE	541.148
	P-4502	85.254
	SODIUM BROMIDE SOLUTION	274.487
	Sodium Bisulphite	29
	LIQUID CHLORINE	738.51

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	HYDROCHLORIC ACID	1458.89
	PYRIDINE	259.48
	ANHYDROUS HYDROFLUORIC ACID	1278.98
	Sodium Nitrite Anti-Caking Grade Powder	362.5
	Sodium Bisulphite	72.5
	SULPHURIC ACID	766.14
9	**Chlorotrichloro Methyl - Cyclopentene**	
	DCPD	767.011
	CTC	1443.908
	R0077	11.883
	R0075	55.115
	R0070	29.281
	RM-3208/R0053	10.597
	R0166	192.592
10	**1,1,2,2-Tetrafluoroethyl Methyl Ether**	
	MONOCHLORODIFLUOROMETHANE R22	5319.733
	METHANOL	962.784
	CAUSTIC POTASH LYE	317.923
	SULPHURIC ACID	2267.448
	DIPENTINE	1.02
	Dimethyl Formamide	3.8
	ANHYDROUS HCL	99.172
	SODIUM META BISULPHITE	9.966
	SODIUM METHOXIDE	162.629
	CAUSTIC LYE	22.55
11	**Trifluoromethylbenzamide**	
	R0166	693.541
	AIBN	35.545
	Liq. Chlorine	3271.341
	AHF	695.564
	98% H2SO4	1252.069
	95% H2SO4	1336.71
	MDC	384.563
	RM-3226/R0163	498.255
	48% NaOH	2371.028
	MeOH	32.591
	R0024	0.41
12	**2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester**	
	R0090	576.749
	W0002	174.325

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	R000000000600	49.251
	P-3911/R0023	24.2
	R0026	30.2
	R0166	125.401
	P-3930/W0157	476.264
13	**Mono methyl Hydrazine**	
	R0229	1746
	R0006	3033.1
	AHCl	3011.9
	NaOH	5440.5
	H2SO4	0
14	**[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone)**	
	N-BUTANOL	435.678
	SODIUM NITRITE	432.6
	CAUSTIC LYE (NAOH)	1410.966
	HYDROGEN PEROXIDE 50% SOLUTION	486.4619167
	LIQUID NITROGEN	6922.209
	HYDROCHLORIC ACID	3242.9919
	METHYLENE CHLORIDE	433.054
	DIMETHYL FORMAMIDE (DMF)	1378.107
	SC-50	429.242
	RM-3203	337.055
	LIQUID CHLORINE	208.561
	Potassium Carbonate – Powder	305.524
	RM-3207	238.09
	BUTYL ACETATE	584.688
	Potassium Carbonate – Granules	382.27
	METHANOL	450.696
	HYDROGEN GAS	16.69274336
	AQ. NH3 (AQUEOUS AMMONIA)	210.98523
	ACTIVATED CARBON POWDER - Grade Carbopal Gn-P - MAKE: DONAU CARBON	32.837
	RM-3212	0.29628138
	RM-3218	164.935
	47% HYDROBROMIC ACID (HBR)	297.456
	POTASSIUM SULFITE	94.519
	5-ETHYL-2-METHYLPYRIDINE (MEP)	42.84
	RM-3234	136.72
	RM-3219	1.1397
	ETHYL ACETATE	14.885

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	ACETIC ACID	353.04
	RM-3221	4.2645
	SS-25	162.489
	1,4- DIOXANE	226.184
	RM-3227	330.118
	FORMIC ACID	134.541546
	RM-3223	10.27
	RM-3225	0.5044
	Sulphuric acid	241.29
	SODIUM CARBONATE	848.37
15	**4-Methoxycyclohexanone**	
	P40 STEP-2 99% purity	257.155
16	**2-(methyl sulfonyl)-5-(trifluoromethyl)- 1,3,4-thiadiazole**	
	CS2	100.015
	HYDROBROMIC ACID	258.21128
	METHANOL	50.091
	Toluene	27.562
	CAT4101	5.352
	Hydrazine Hydrate	83.373
	AQUEOUS AMMONIA	61.978
	HYDROGEN PEROXIDE	335.388
	POTASSIUM SULFITE	67.971
	CAUSTIC LYE	236.224
	TFA	105.399
	Sulpuric acid	1169.971
	Acetic acid	151.126
	Sodiam tungstate	2.82
17	**Chlorinated Compound**	
i	**Trichloroethylene / Perchloroethylene**	
	EDC (MT)	21226.331
	Chlorine (MT)	35261.2611
	AIBN (MT)	35.308
	Ba(OH)2 (MT)	15.79
	NaOH (MT)	124.99
ii	**Methyl chloride, Methylene dichloride, Chloroform, Carbon tetrachloride**	
	Methanol	41534.19
	Chlorine	115972.58
	Sulphuric acid	14716.58
	Caustic Lye 48 %	1768.21
iii	**Anhydrous Hydrofluoric acid**	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	Fluorspar (MT)	72072.87611
	Sulphuric acid (MT)	67375.054
	Oleum (MT)	15752.815
18	**HFC Refrigerant**	
i.	**1,1,1,2 Tetrafluroethane (HFC 134a)**	
	Trichloroethylene	17724.767
	AHF	11552.402
	Sulphuric acid	1817.240982
ii	**Pentafluoroethane (HFC 125)**	
	Perchloroethylene	8043.052
	AHF	5047.6
	Sulphuric acid	519.33
iii	**Difluoromethane (HFC - 32)**	
	C2	17921.0221
	AHF	8860.778
	Sulphuric acid	2097.721
iv	**CaCl2**	
	Limestone	34060.84195
	Hydrochloric acid	71535.636
v	**Chlorodifluoromethane (R22)**	
	C3	6127.971
	AHF	2255.706
	Sulphuric acid	699.612

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE-8

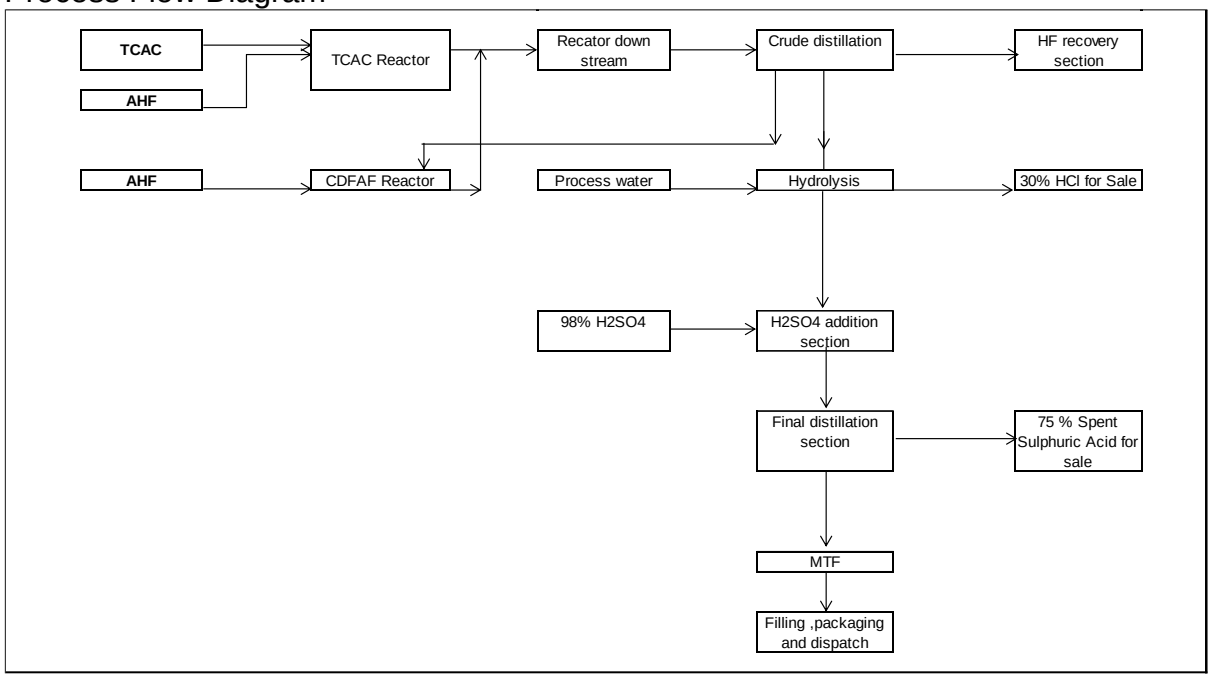
DETAILS OF MANUFACTURING PROCESS WITH MATERIAL

1. Trifluoro acetic acid (TFA)

Process Description:

Trichloroacetyle chloride is reacted with Anhydrous Hydrofluoric acid in presence of catalyst and form Trifluoro acetyl fluoride, chlorodifluoro acetyl fluoride and hydrochloric acid , Chlorodifluoro acetyl fluoride again recycled from crude distillation section to 2nd reactor (CDFAF) and converted in TFAF .TFAF from TFAF tower going to derivative stream and remain go for hydrolysis ,30 % HCl produced from HCl scrubbing section. After hydrolysis this material goes to sulfuric acid addition section and final distillation section for final product. 30 % HCl stream from hydrolysis section and 75 % Sulfuric acid from final distillation section for sale as a Product.

Process Flow Diagram



2. Specialty Products

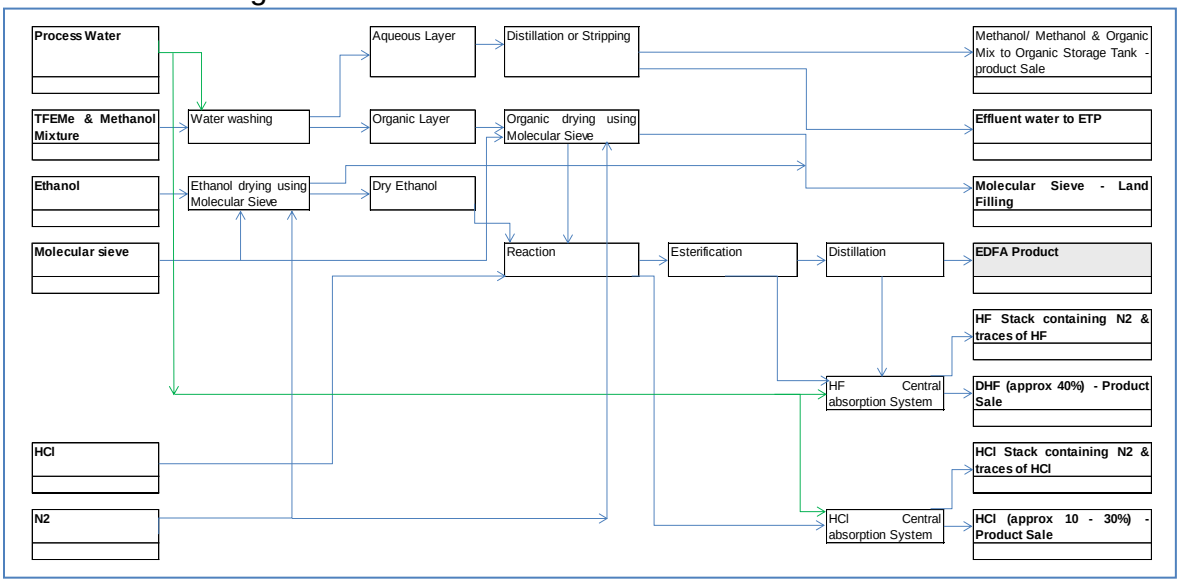
i. Ethyldifluoroacetate

Process Description:

TFEMe is received with Ethanol present into it. It will water washed to remove water & then dried to remove Moisture. Dry TFEMe is pyrolyzed in presence of Iron based Catalyst to produce Acetyl fluoride. The vent of the reactor, containing Acetyl fluoride, will take to the esterification section, where the vent gas reacts with ethanol to form crude EDFA product. Crude EDFA product will distill to produce pure EDFA. HF will send to HF Scrubber to produce HF (approx.40 %). Catalyst activation will done use of HCl gas. Excess HCl will go to HCl scrubber. Water & Methanol mixture will either distilled for Methanol recovery or it will be go to Organic stripper, before sending it to ETP.

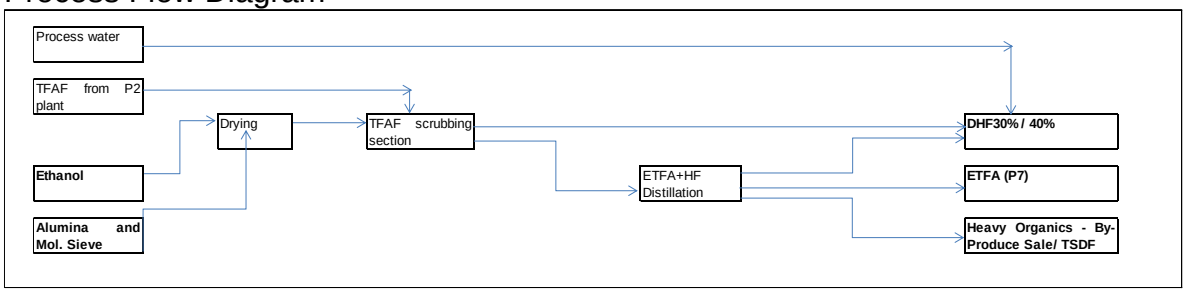
SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Process Flow Diagram



ii. Ethyl Trifluoro Acetate

Process Description
Reaction of Trifluoroacetyl fluoride (TFAF) with Ethanol to form EthylTrifluoro acetate (ETFA) and Hydrogen fluoride. HF is separated from distillation and pure ETFA is recovered.
Process Flow Diagram

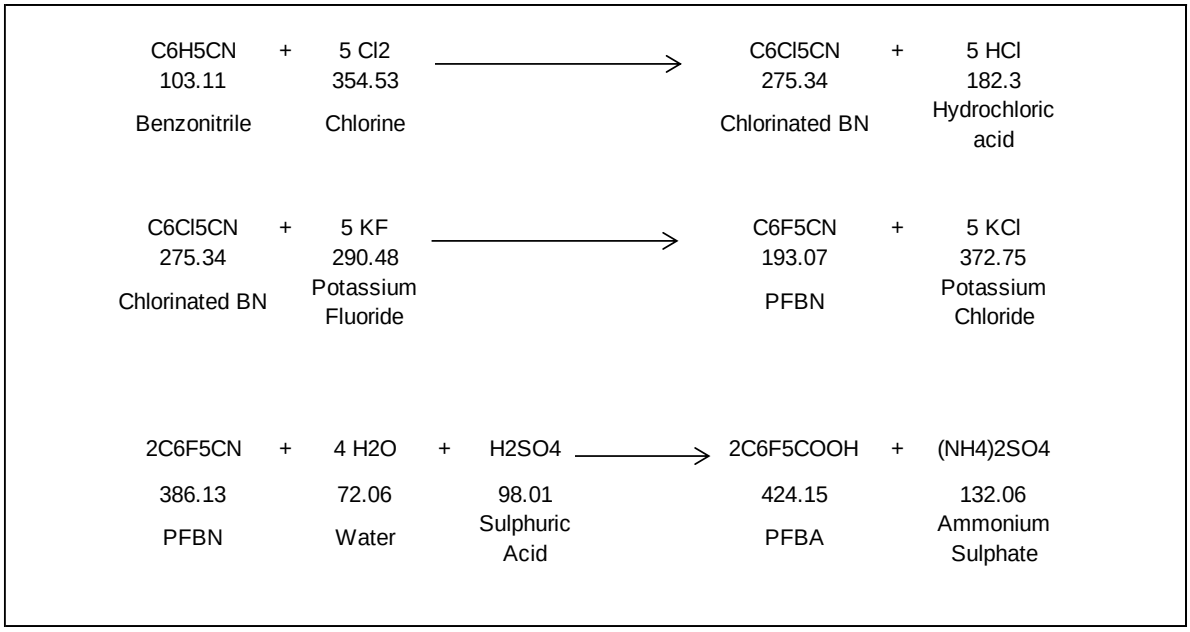


iii. Pentafluorobenzoic Acid (PFBA)

Process Description:
Benzonitrile (BN) will chlorinate in the Reactor. Chlorinated BN then fluorinated to form Fluorinated BN, PFBN (Pentafluorobenzonitrile). It will be hydrolysed by using Sulphuric Acid & H2O to produce PFBA.

Chemical Reaction:

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.



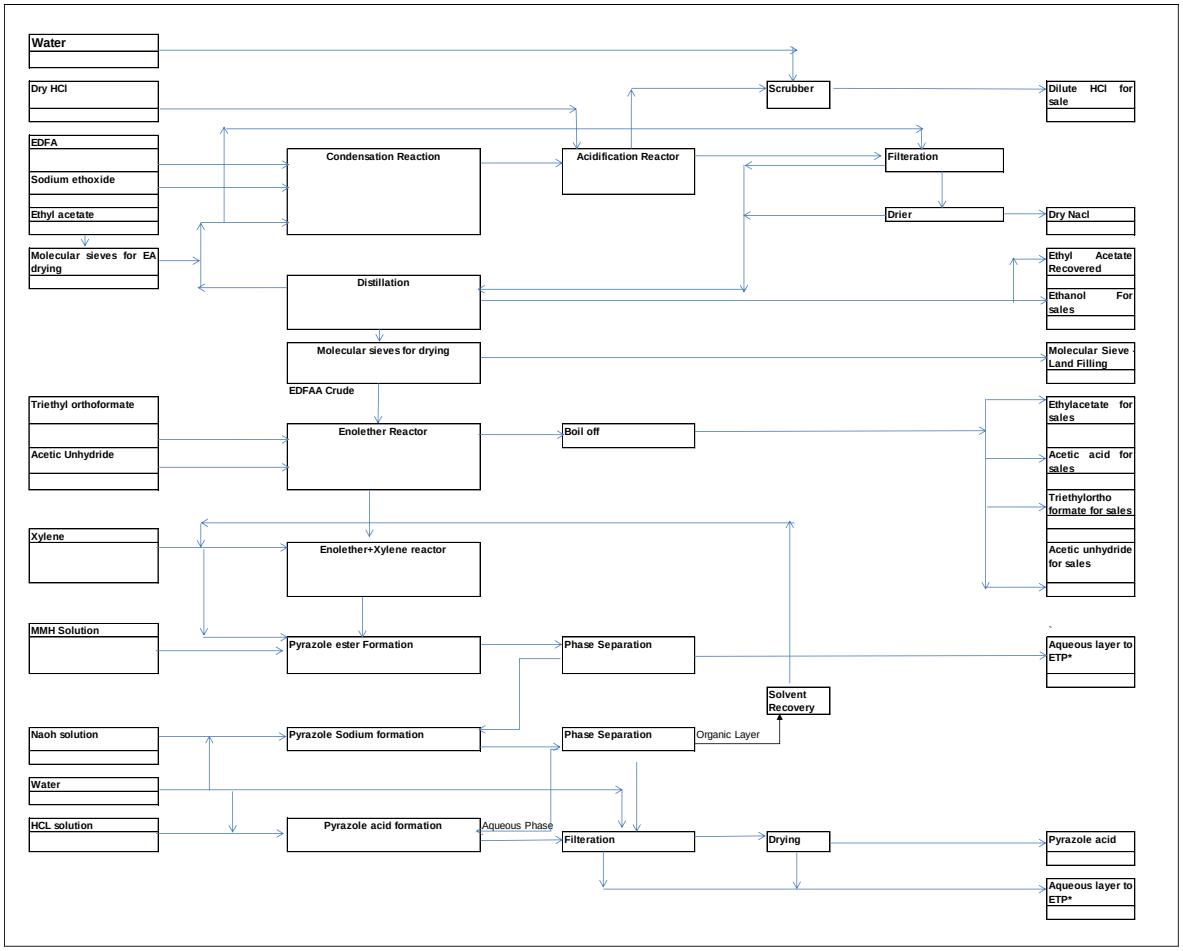
iv. Pyrazole Acid

Process Description:

EDFA is reacted in presence of Sodium ethoxide catalyst to form salt of EDFAA in presence of Ethyl acetate Salt is acidified with Dry HCL to form EDFAA and Sodium Salt at RT. It is taken to filteration to remove sodium chloride salts EDFAA with solvents then taken to distillation column to recover EDFAA crude EDFAA is reacted in presence of Acetic Anhydride with Orthoformate to give Enolether. The Enolether from step -2 is reacted with MMH in presence of Xylene to form pyrazole ester & ethanol. Pyrazole ester on reacting with caustic lye to form pyrazole sodium & on further acidification with HCL to form pyrazole acid salt. Pyrazole acid salt will be filtered & dried to get dry pyrazole acid.

Process Flow Diagram:

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.



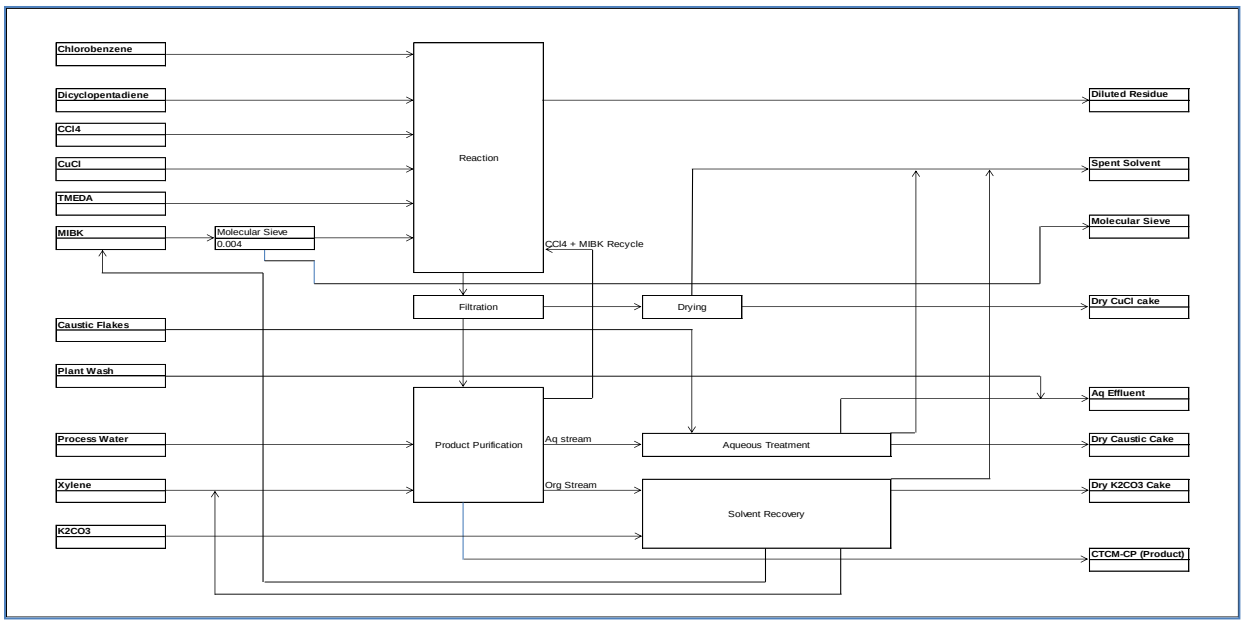
v. Chloro trichloro Methyl – Cyclopentene

Process Description

Dicyclopentadiene (DCPD) will crack to Cyclopentadiene (CPD) at temperature of 150°C. CPD will react with CCl4 in presence of catalyst solution comprising of CuCl, TMEDA (Tetramethylethylenediamine) & MIBK (Methyl isobutyl ketone) and mixture of CCl4 & MIBK. This leads to the formation of CTCM-CP. Reaction mass will go for filtration. CuCl cake will send for drying & sold. CCl4 & MIBK will stripped off from the Reactor mass, go for water wash. Aqueous layer will send for caustic treatment & then post organic stripping, send to ETP. Organic layer will send to Distillation after addition of xylene & desired Product will obtain. Product distillation overhead will go to a distillation column for Xylene & MIBK recovery & recycling.

Process Flow Diagram:

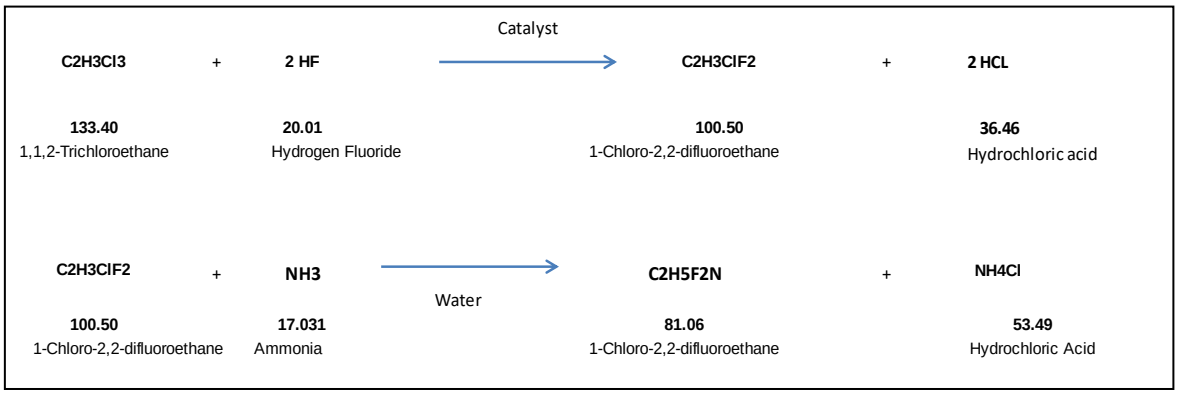
SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.



vi. 2,2-Difluroethylamine

Process Description:
1,1,2-Trichloroethane (TCA) reacts with Hydrogen Fluoride in presence of catalyst and form 1-Chloro-2,2-Difluroethane, 1-Chloro-2,2-difluoroethane reacts with Ammonia to form 1-Chloro-2,2-diflouroethane.

Chemical Reaction:



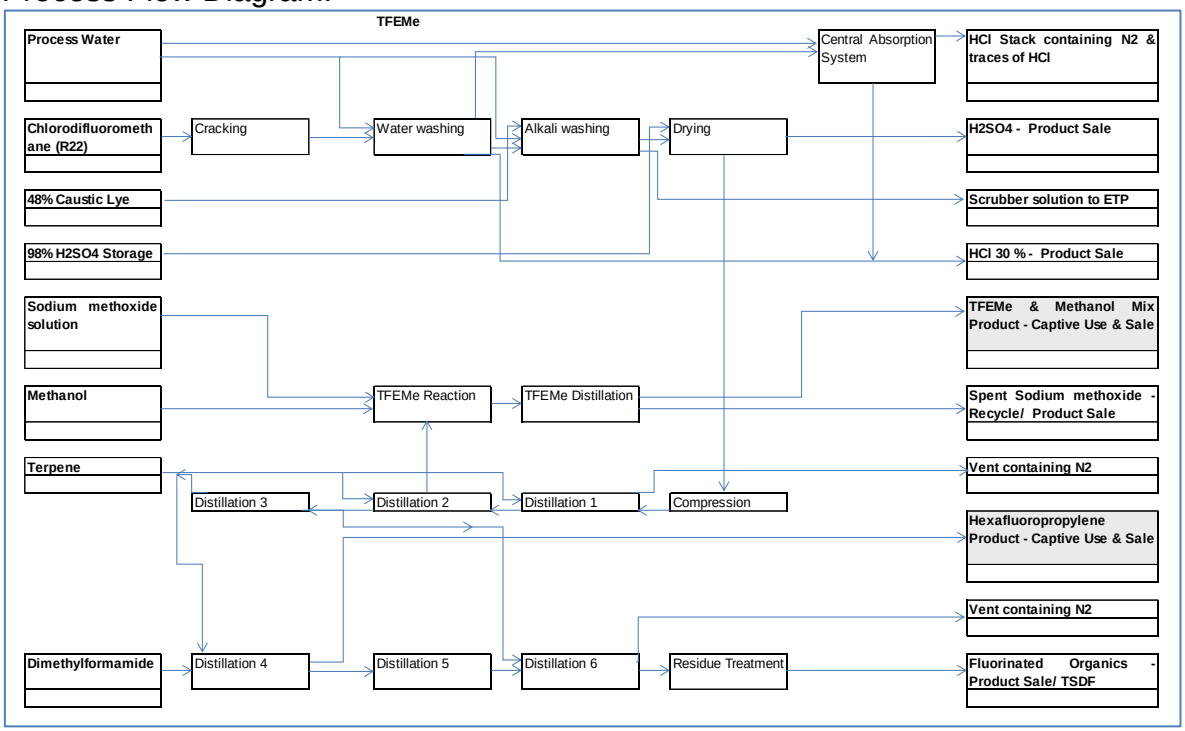
3. 1,1,2,2-Tetrafluoroethyl Methyl Ether (TFEMe)

Process Description:
Chlorodifluoromethane (R22) wills pyrolyse at High Temp. In electrically heated furnace. On pyrolysis, R22 breaks in to No. of products with HCl gas as product. Product Gas Mix containing HCl will pass through HCl absorbers where Fresh water will circulate in absorber to absorb HCl gas & make product Gas HCl free. In this stage 30 % HCl solution will generate as product of the process. Gas will be washed with Alkali solution & dried before sending to Compressor section. Product gas will be compressed at High pressure to achieve condensation of the Gas mix. In Liquid form which will be fed to Distillation section for separation of products. Distillation Section: In this section Tetrafluoroethylene (TFE) & Hexafluoropropylene (HFP) will separate out from product gas mix. Unreacted R22 will separate & recycle back to Reaction section. Residue from the Distillation section will treat

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

with solvent & send for Incineration. Tetrafluoroethyl methyl ether Reaction Section: TFE will react with Methanol in presence of Catalyst in pressure Reactor to form TFEMe. TFEMe Distillation Section: TFEMe + unreacted Methanol mix will feed to Distillation column for Separation of TFEMe & unreacted Methanol. Unreacted Methanol will recycle back to Reactor.

Process Flow Diagram:

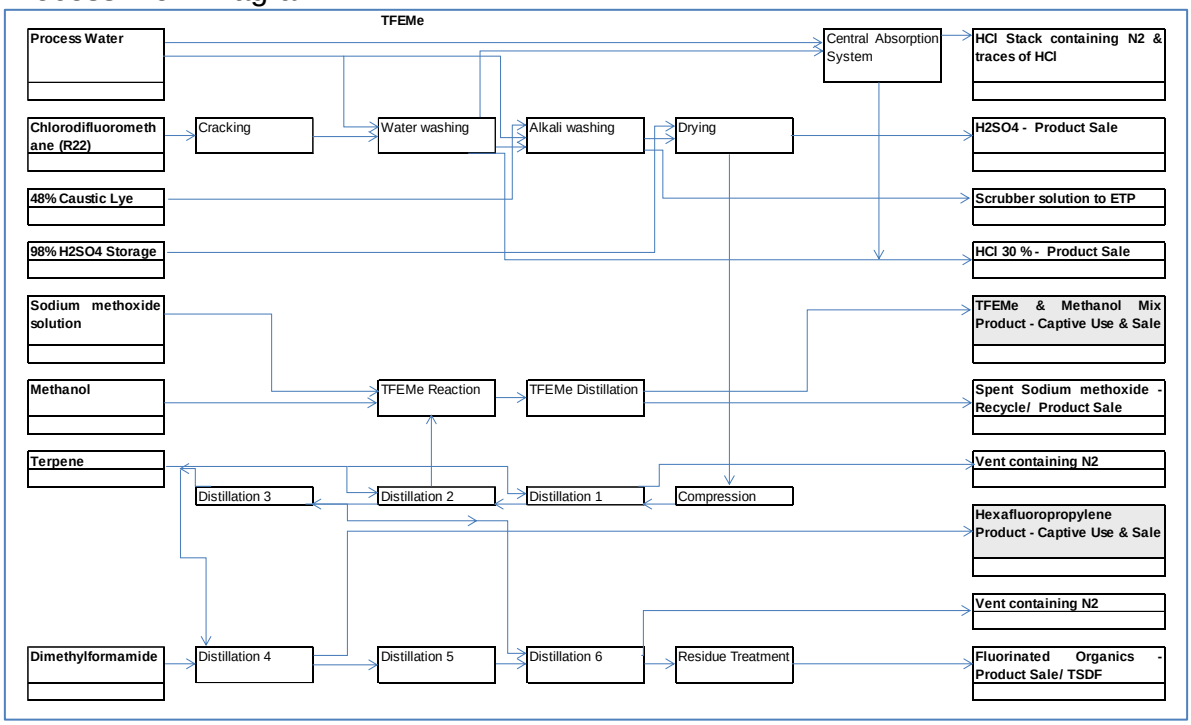


4. Hexafluoropropylene

Process Description:
Reaction Section: Chlorodifluoromethane (R22) will pyrolyse at High Temp. In electrically heated furnace. On pyrolysis, R22 breaks in to No. of products with HCl gas as product.
Refining Section: Product Gas Mix containing HCl will pass through HCl absorbers where Fresh water will circulate in absorber to absorb HCl gas & make product Gas HCl free. In this stage 30 % HCl solution will generate as product of the process. Gas will be washed with Alkali solution & dried before send to Compressor section. Product gas will compress at High pressure to achieve condensation of the Gas mix in Liquid form which will be feed to Distillation section for separation of products.
Distillation Section: In this section Tetrafluoroethylene (TFE) & Hexafluoropropylene (HFP) will separate out from product gas mix. Unreacted R22 will separate & recycle back to Reaction section. Residue from the Distillation section will treat with solvent & send for Incineration.
Tetrafluoroethyl methyl ether Reaction Section: TFE will react with Methanol in presence of Catalyst in pressure Reactor to form TFEMe.
TFEMe Distillation Section: TFEMe + unreacted Methanol mix will feed to Distillation column for Separation of TFEMe & unreacted Methanol. Unreacted Methanol will recycle back to Reactor.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Process Flow Diagram:



5. Trifluoro Methyl Benzamide

Process Description

Step 1: Ortho Xylene, AIBN and Chlorine will charge to the reactor to produce step -1 product. The vent gases was scrubbed

Step 2: Step-1 Product and HF will charge to the reactor to produce step -2 products. The vent gases scrubbed.

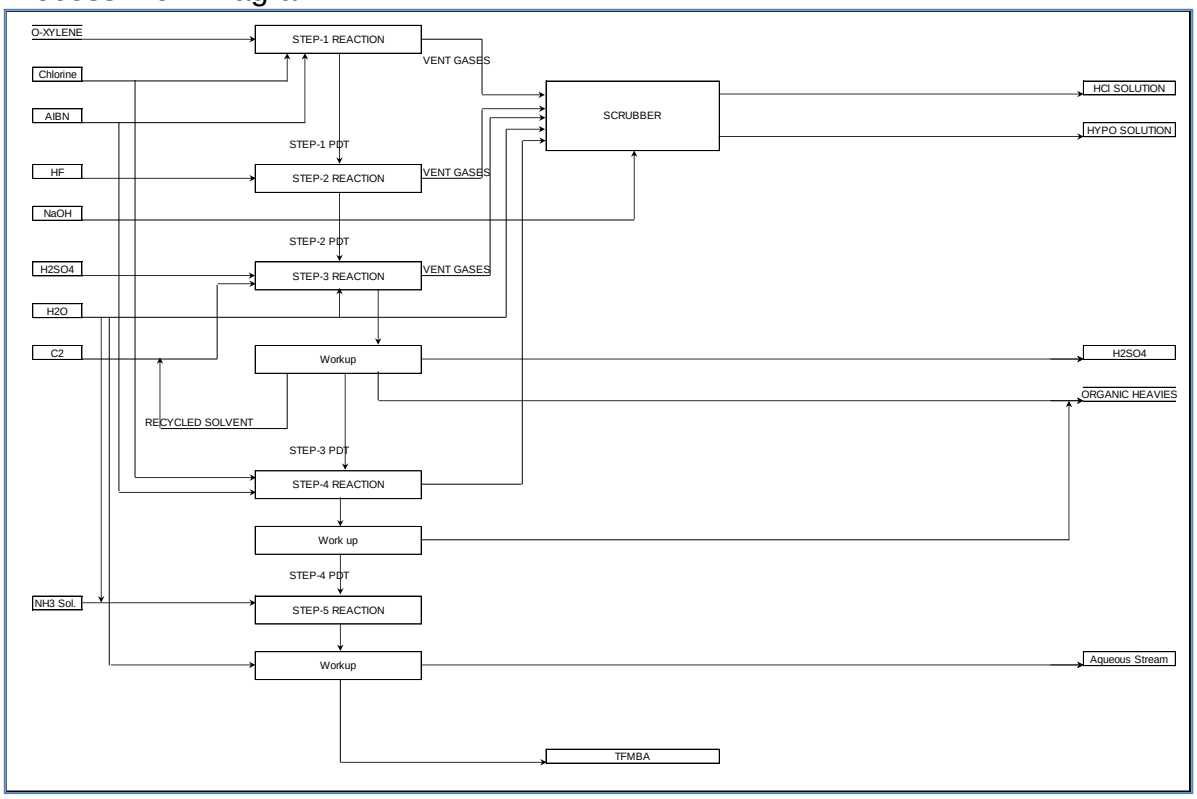
Step 3: Step-2 Product, Methylene dichloride and H2SO4 will charge to the reactor for hydrolysis to form Step-3 Product and vent gas was scrubbed. Further processing of product will be done and taken to the next step.

Step 4: Step-3 product, AIBN and Chlorine will charge in the reactor .The vent gases was scrubbed. And taken to the next step.

Step 5: Step-4 product, ammonia solution and water was added the reactor. Further processing of product will be done. Pure Product will be obtained at the end of this step and it will be sent to storage.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

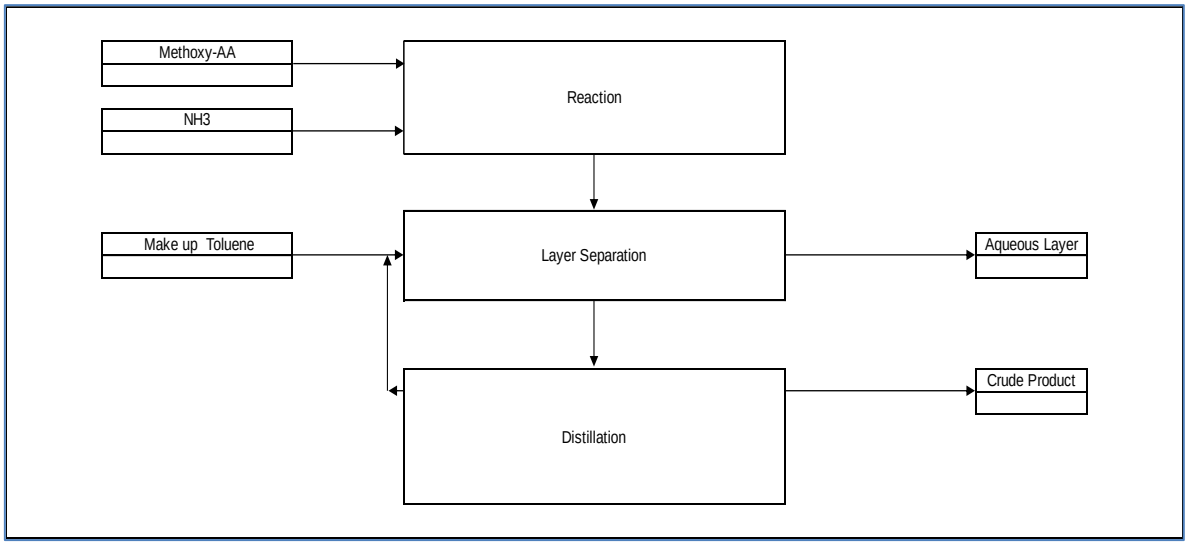
Process Flow Diagram



6. 2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester

Process Description:

Charge Methoxy AA and Toluene into the reactor and purge Ammonia. Water removed from the reaction mixture and crude product taken for next step. Step 1 and Step 2 material will charge into the reactor in presence of acetic acid. A low boiler was removed and crude product will be further purified at reduced pressures.

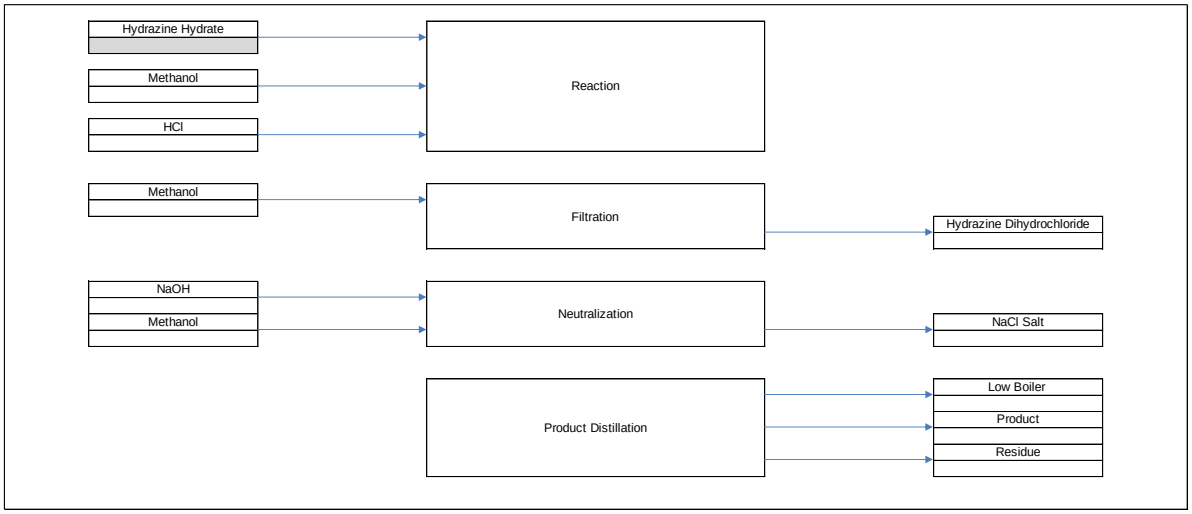


SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

7. Monomethylhydrazine

Process Description:
Hydrazine Hydrate charged into the mix of Methanol and HCl. Reaction mixture will filtrate to recover Hydrazine Dihydrochloride. NaOH added to the filtrate for the formation of MMH and NaCl. Material will be filtered and filtrate was taken for final distillation to get 35-40% MMH solution in water.

Process Flow Diagram:



8. [3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-l)methanone (Topramezone)

Process Description:
Step 1: 3-Nitro-o-xylol reacts with potassium methoxide and butyl nitrite in presence of DMF and catalytic quantity of butanol to form salt of OXIM. This salt will be hydrolysed with concentrated HCl to form EXP-Oxim and potassium chloride. Precipitated product was filtered and washed. EXP-Oxim thus obtain will take to Step-2 without drying.
Step 2: Step-1 Product (EXP-Oxim) was dried using azeotropic distillation and chlorinated with vapor chlorine in presence of Butyl Acetate as solvent. The chlorinated product EXP-HSCl in butyl acetate was cyclized using ethylene in a pressurized reactor. Cyclization takes place in presence of K2CO3, water, butyl acetate and ethylene in a pressurized reactor. After the reaction product was acidified using HCl (15-33%) and crystallized by removing butyl acetate and cooling.
Step 3: Step-2 product was hydrogenated by reacting with Hydrogen in presence of Pd/C catalyst under pressure at a temperature of 30 ºC. Activated Carbon will add to the reaction mixture as filtration media. Methanol was used as solvent for the reaction.
Step 4: Step-3 product was brominated using HBr(48%) and H2O2 (50%). Potassium sulfite will be used to kill any residual peroxide and the mixture was washed with caustic solution to remove any impurities. Pyridine was used as solvent for the reaction.
Step 5: Step-4 product will take for thiomethylation where it will react with DMDS and n-Butyl Nitrite in presence of Cu (catalyst). Subsequently the reaction mass was washed with HCl

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

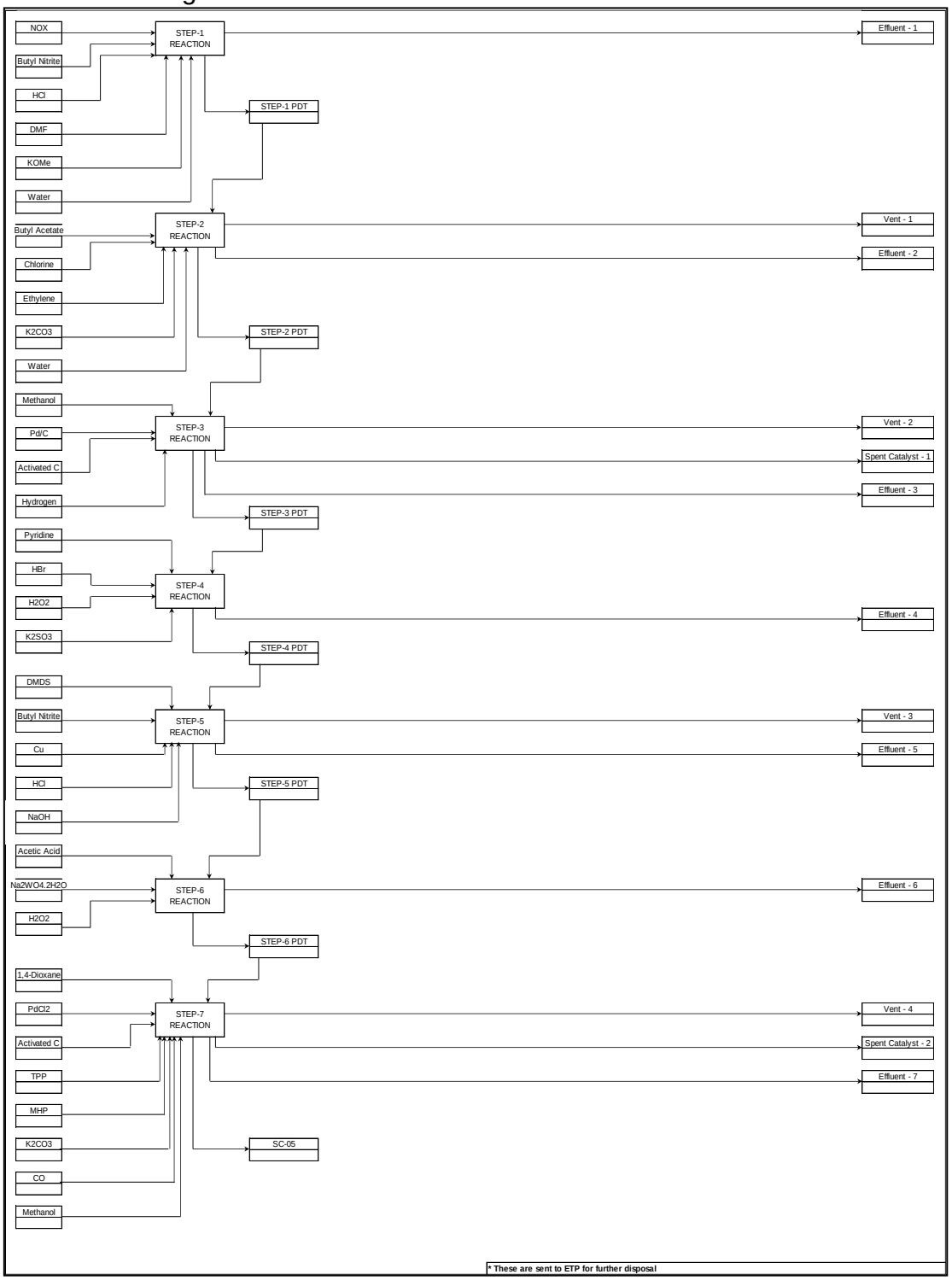
and NaOH to remove Cu from the reaction mixture. DMDS was also used as solvent in this reaction.

Step 6: The resulting product from step-5 was oxidized using H2O2 (50%) in the presence of Sodium Tungstate as catalyst and Acetic acid as solvent. It will be crystallized by cooling and filtered.

Step 7: Step-6 reacts with MHP, K2CO3 and Carbon monoxide in presence of TPP & PdCl2 as catalyst and 1, 4-dioxane as solvent and activated carbon as filtration media for catalyst removal. After azeotropioc removal of 1, 4-dioxane with water, the salt was hydrolyzed using HCl and purified using methanol. The product will be subsequently filtered and dried before packaging.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Process Flow Diagram:



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

9. 2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)benzenamine

Process Description:

2, 5 Dichloro phenol will react with HFP gas in presence of acetonitrile to form DHB---- Step 1 reaction. Crude mass from step-1 undergo distillation to recover solvent and pure DHB was taken for step 2 reaction. In step-2 DHB undergo nitration using nitric acid, in presence of sulfuric acid, to form DHNB----Step 2 reaction. DHNB crude undergo workup followed by distillation to obtain pure DHNB, recovered solvents will be recycled and aqueous effluent will be sent for treatment. DHNB was hydrogenated using Hydrogen gas in presence of catalyst to form DHA. DHA crude will be distilled to obtained pure product and recovered solvents will be recycled for subsequent batches.

Chemical Reaction:

Step-1

			KOH/HCl/CH3CN			
C6H4Cl2O	+	C3F6	---------->	C9H4Cl2F6O		
2,5, Dichloro Phenol		HFP gas		DHB		
163		150		313		

Step-2

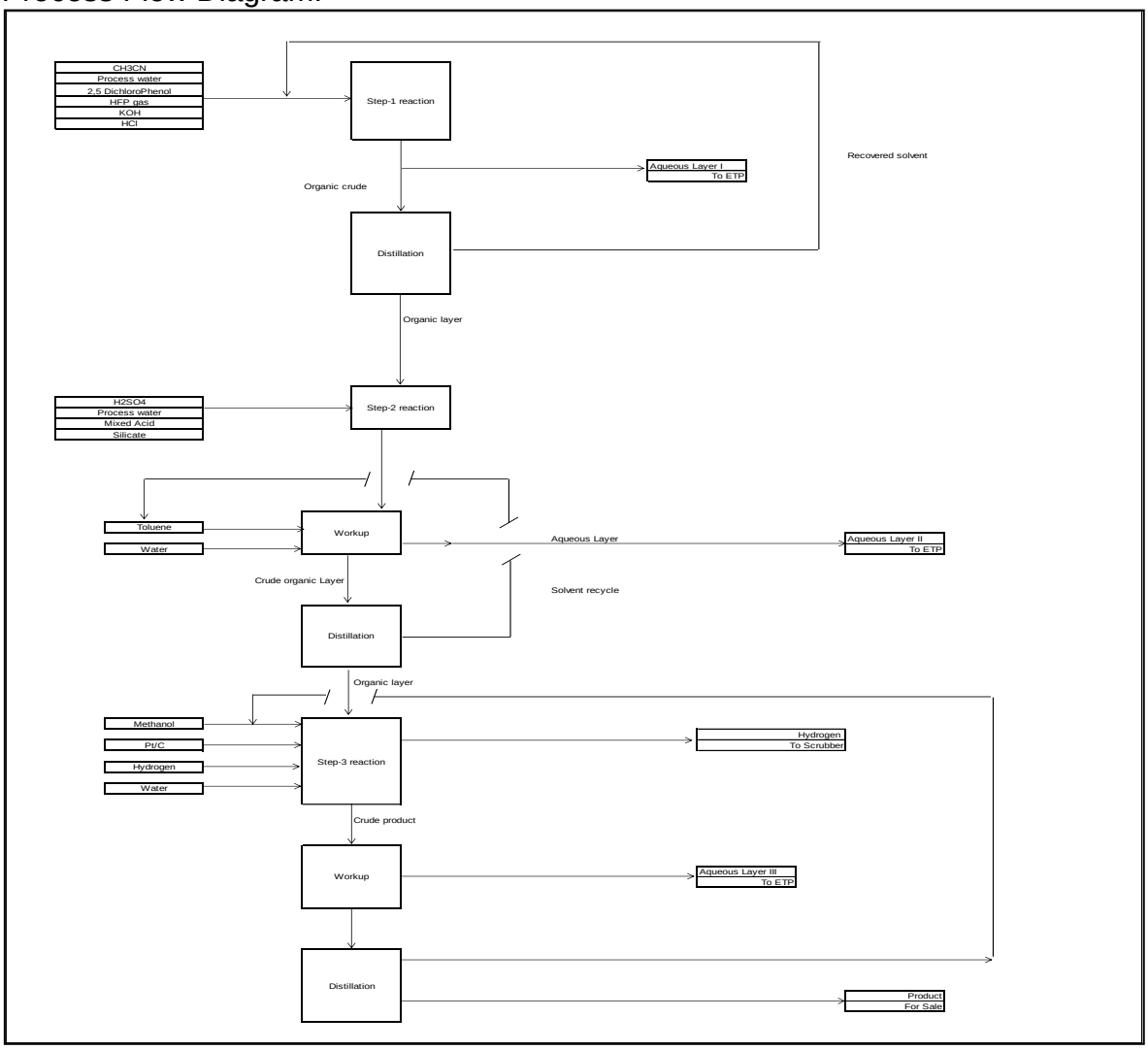
			H2SO4			
C9H4Cl2F6O	+	HNO3	---------->	C9H3NO3Cl2F6	+	H2O
DHB		Nitric acid		DHNB		Water
313		63		358		18

Step-3

			CH3OH			
C9H3NO3Cl2F6	+	3H2	---------->	C9H5NOCl2F6	+	2H2O
DHNB		Hydrogen		DHNB		Water
358		6		328		18

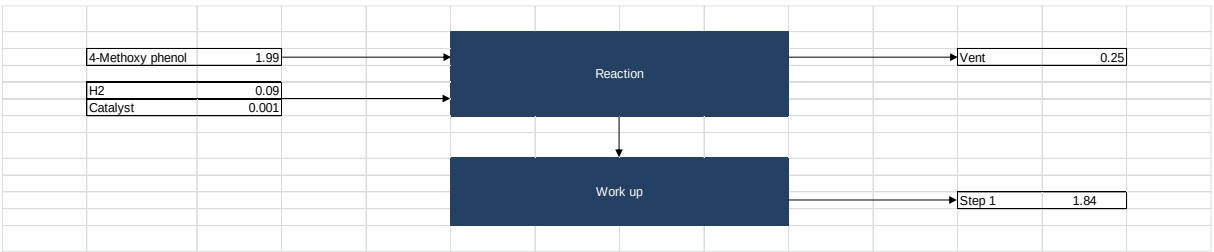
SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Process Flow Diagram:

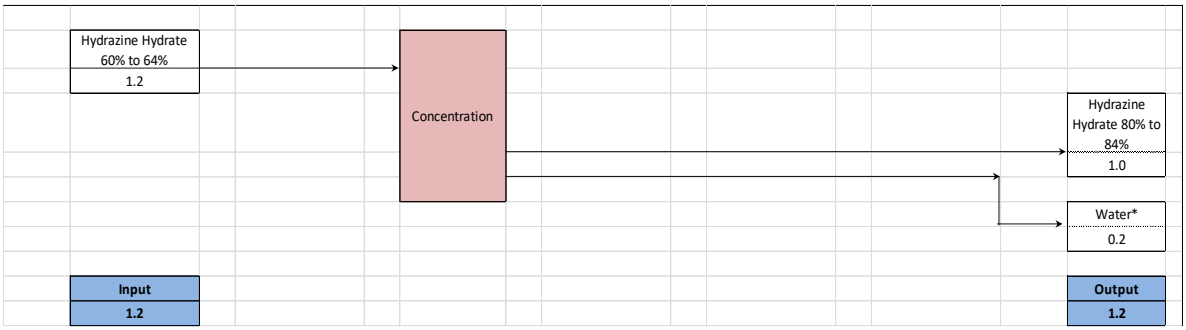


10. 4- Methoxycyclohexanone

Process Description:
4 methoxy phenols react with hydrogen, followed by filtration to produce step 1 intermediate
Step 1 reacts with sodium hypochlorite to form 4 MCH crude, this crude further purified to give pure 4-MCH



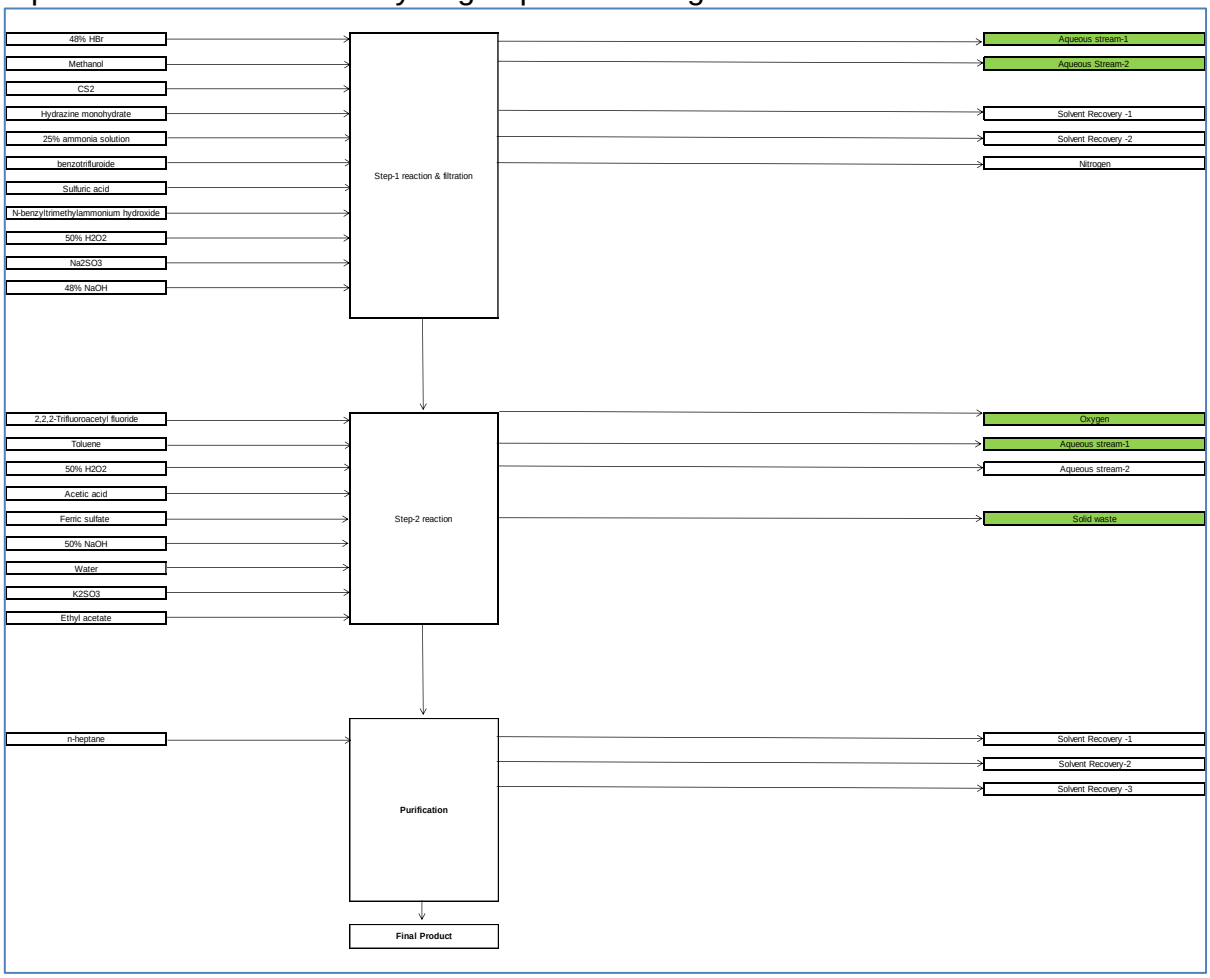
SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.



11. 2-(Methylsulfonyl)-5-(trifluoromethyl)-1,3,4-thiadiazole

Process Description:
Methanol, HBr reacts to give Methyl bromide which insitu reacts with CS2, hydrazine and ammonia react to give Step 1

Step 1 reacts with TFA and hydrogen peroxide to give MSTMT



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

9. Chlorinated Compound

i. Trichloroethylene / Perchloroethylene

Process Description

Chlorination Section:

In Chlorination section, a reaction between Ethylene dichloride and Chlorine is carried-out in presence of catalyst. The HCl + Organic vapours from reactor are sent to HCl distillation column to recover the organics. The organic product from reactor is distilled to obtain a mixture of Tetra / Penta / Hexa Chloroethanes, which will be sent to cracker section. The distillation top organic liquid is sent as recycle to chlorination reactor. The distillation top HCl + Organics are dried in CaCl2 and sent to HCl distillation for the recovery of organics.

Cracker Section:

The mixture of Tetra / penta / hexa chloroethanes are vaporized and cracked in a process furnace. The high temperature vapours from furnace are routed through a packed bed reactor and the product vapors are condensed and collected. The liquid product is routed to distillation section and HCl vapors are sent to HCl distillation for the recovery of organics.

Distillation Section:

In this section, the cracker product is distilled in a series of 4 columns. The products P11 and P12 are routed to MTF for further storage and sale. Stabilizer is added in the Product. The separated light and heavy organics, consisting of Chlorinated butadiene. The product mixture is washed with Aqueous Ba (OH) 2 solution before separating the P11 and P12 products. The aqueous BaCl2 solution will be sent to ETP for further treatment.

HCl Distillation Section:

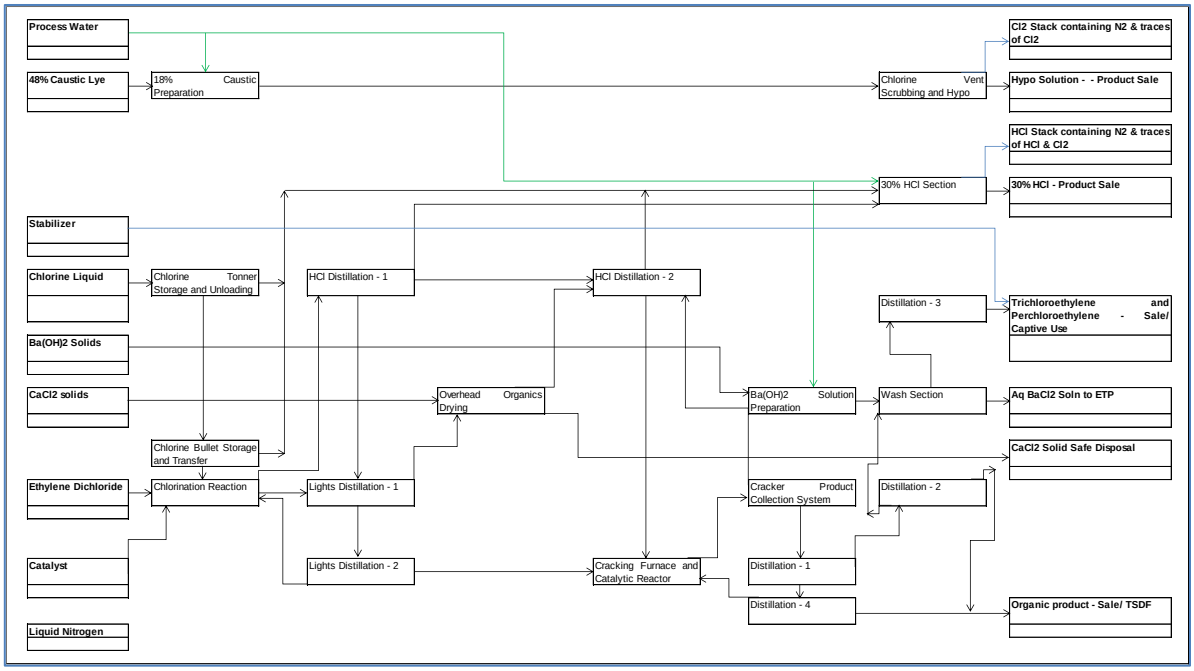
In this section, two separate columns are provided to recover the organics from HCl + Organics vapor mixture coming from the process. The recovered organics are recycled back to the process. The HCl vapors are absorbed in process water to prepare 30% HCl solution, which will be sold as product.

Control System:

Plant is controlled by DCS/PLC from the main control room. Each parameter is continuously monitored, recorded and controlled automatically. Various trips / interlocks are given to handle any kind of emergency. Multiple alarm system has been used to take care of any deviation in terms of operation & safety. The critical pumps are on emergency power supply (UPS). Most of the emergency control actions are remote controlled from control room, rather than manual action in field.

Process Flow Diagram

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.



ii. Chloromethanes (CMS Plant)

Process Description:

In Chlorination section, main raw materials are: Chlorine and. Reaction takes place in presence of UV rays or thermally or catalytically. At the outlet of reactor, a mixture of C2, C3 and C4 is obtained along with HCL and un-reacted C1. The necessary quantity of 100% HCL is sent to C1 reactor and balance goes for absorption to 33% from the HCL distillation (removal column). This is followed by C1 removal columns. After C1 and HCL removal, the mixture ofC2, C3 and C4 is sent to crude storage. The production of C2/C3/C4 depends on the ratio ofC1 & Cl2 feed in the reactor.

C1 Reactor & C1 Wash Section:

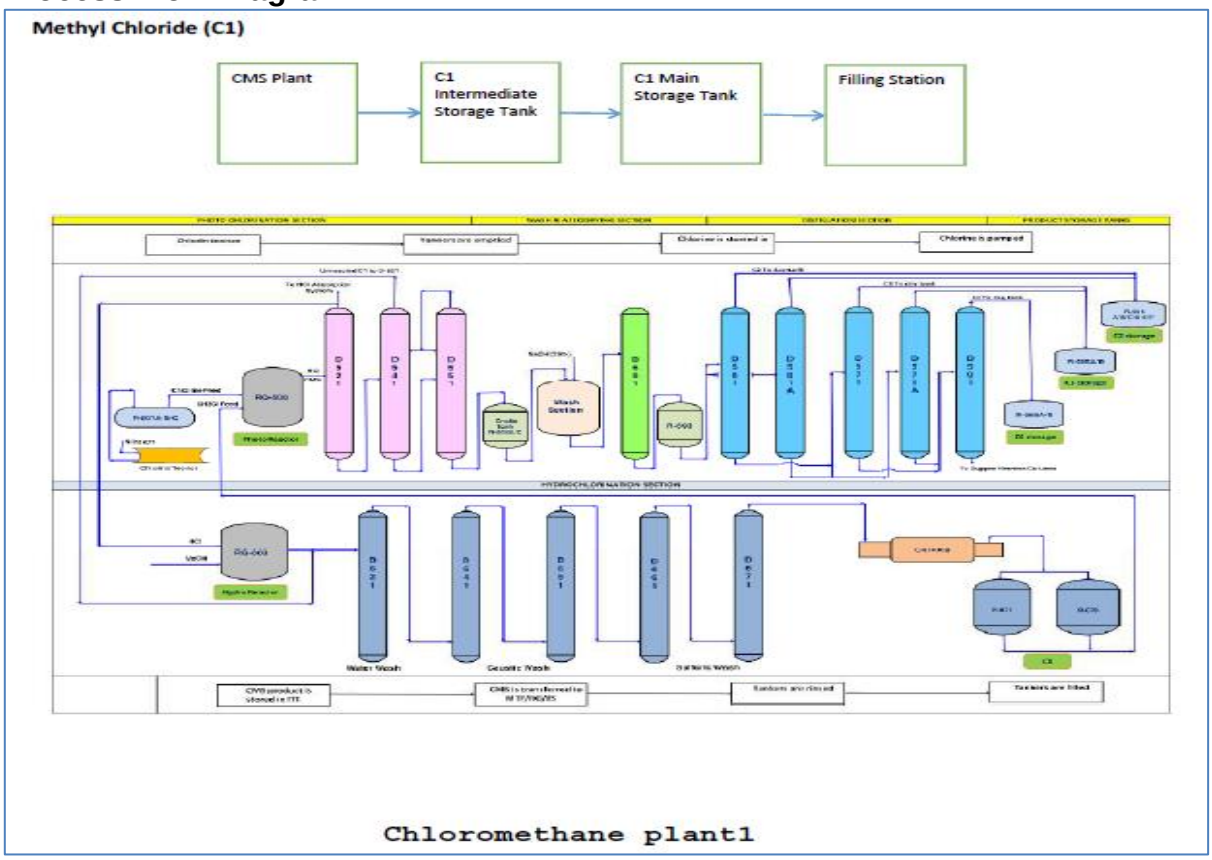
In C1 section, main raw materials are: Methanol and 100% HCL (From chlorination section). The reaction takes place in the presence of catalyst. C1 (Methyl Chloride) is formed which after purification (removal of acidity, free chlorine & moisture, etc.) and compression is sent to storage.

Wash & Distillation Section:

In this section, crude CMS is treated for removal of residual acidity and moisture (drying). The dried CMS is fed to distillation train for C2, C3 and C4 production. CMS plant is controlled by DCS/PLC from the main control room. Each parameter is continuously monitored, recorded and controlled automatically. Various trips / interlocks are given to handle any kind of emergency. Multiple alarm system has been used to take care of any deviation in terms of operation & safety. The critical pumps are on emergency power supply (UPS). Most of the emergency control actions are remote controlled from control room, rather than manual action in field.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Process Flow Diagram:



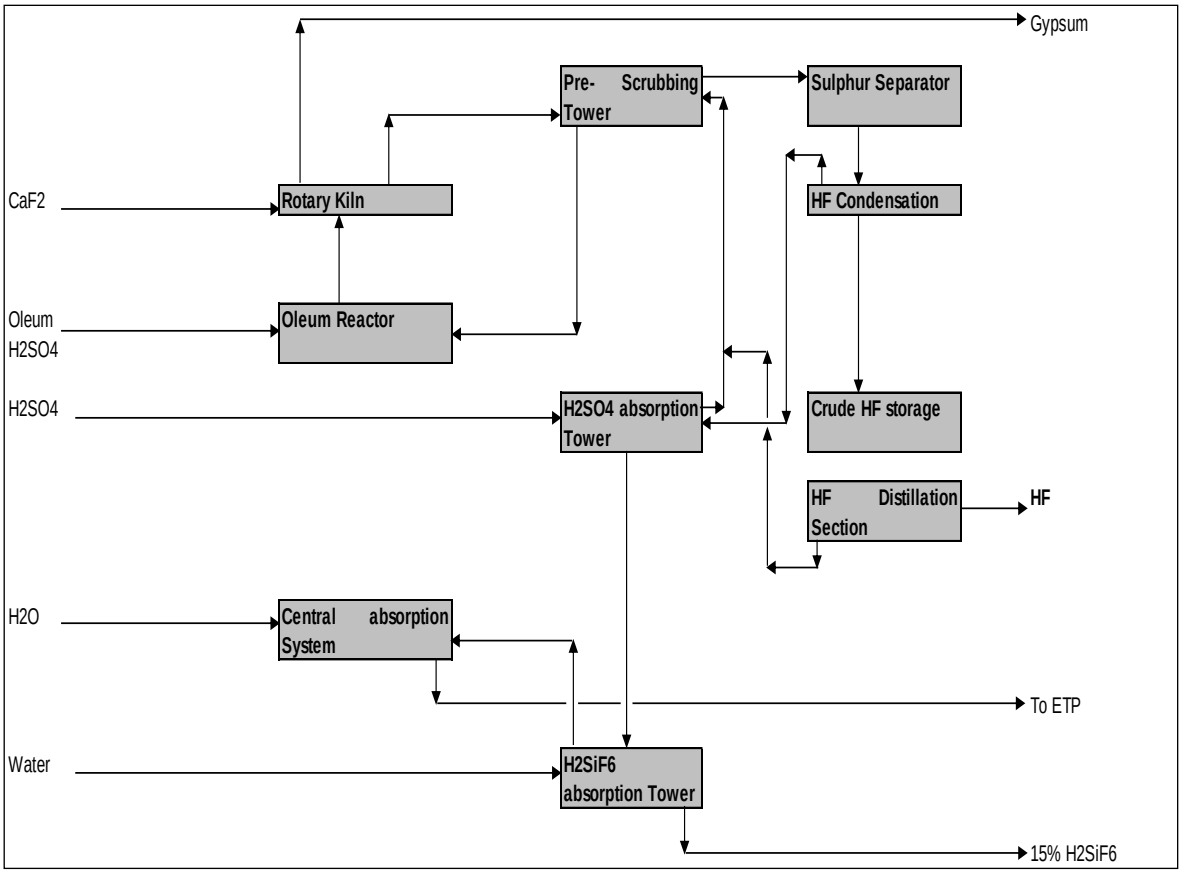
10. Anhydrous Hydrofluoric Acid

Process Description

HF is produced in an indirectly heated rotary reactor (kiln) under small vacuum by the reaction of Sulfuric acid & dried Fluorspar. Oleum is used to convert the moisture into H2SO4. Crude HF thus produced, is distilled in Distillation Columns to produce pure HF.

Process Flow Diagram

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.



11. HFC Refrigerant

i. 1,1,1,2- Tetrafluoromethane (HFC 134a)

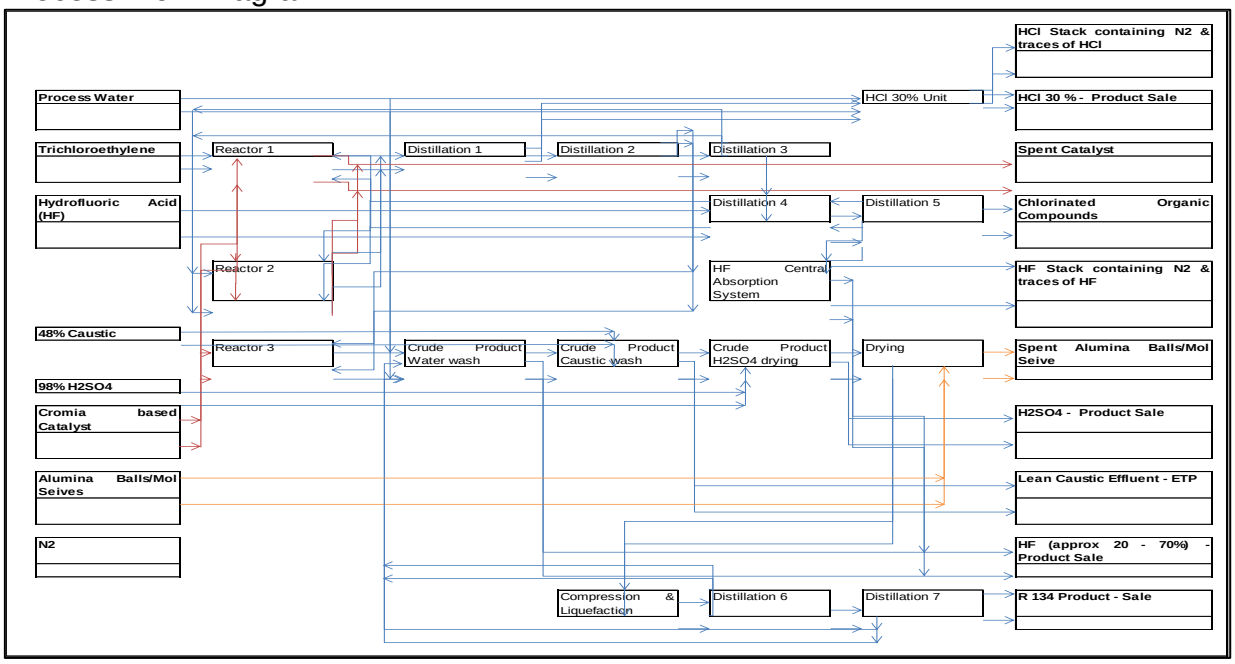
Process Description:
Trichloroethylene (TCE) is reacted with Hydrofluoric Acid in presence of Catalyst to produce R 133a. R 133a is then reacted with HF in another Reactor in presence of Catalyst to produce R 134a. HCl produced is separated from R 134a.
R134a thus produced is sent to the wash section & distilled to get the pure product.
Chemical Reaction:

C2HCl3	+	3HF	=	CF3CH2Cl	+	2HCl
131.388		60.019		118.485		72.922

CF3CH2Cl	+	HF	=	CH2FCF3	+	HCl
118.485		20.006		102.031		36.461

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Process Flow Diagram:

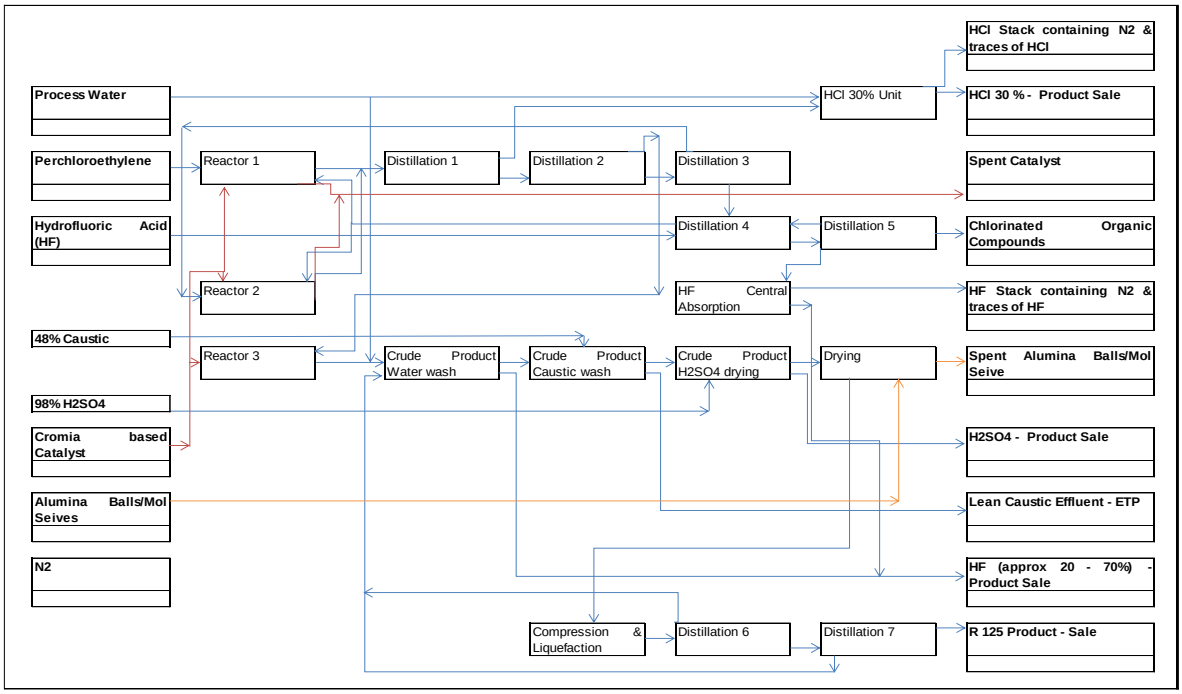


ii. Pentafluoroethane (HFC 125)

Process Description:

Perchloroethylene (PCE) is reacted with Hydrofluoric Acid in presence of Catalyst to produce R 123. R 123 is then reacted with HF in another Reactor in presence of Catalyst to produce R 125. HCl produced is separated from R 125.

R125 thus produced is sent to the wash section & distilled to get the pure product.

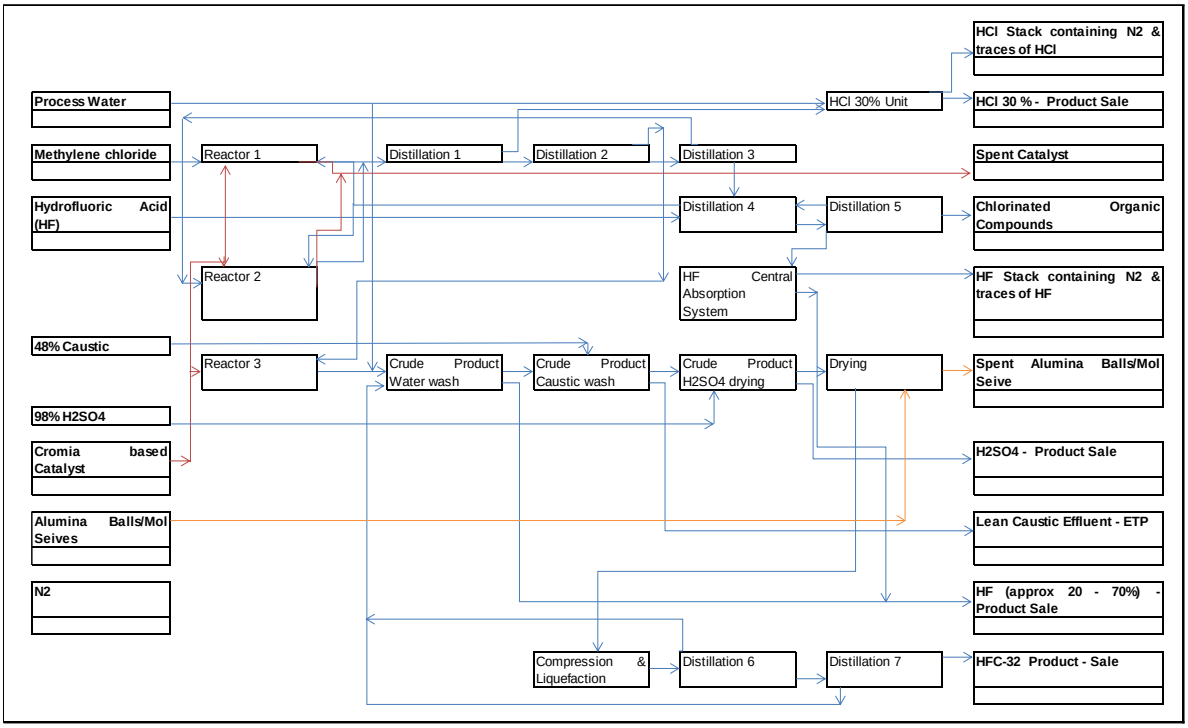


SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

iii. Difluoromethane (HFC - 32)

Process Description:

Methylene chloride will react with Hydrofluoric Acid in presence of Catalyst to produce Difluoromethane (HFC - 32).

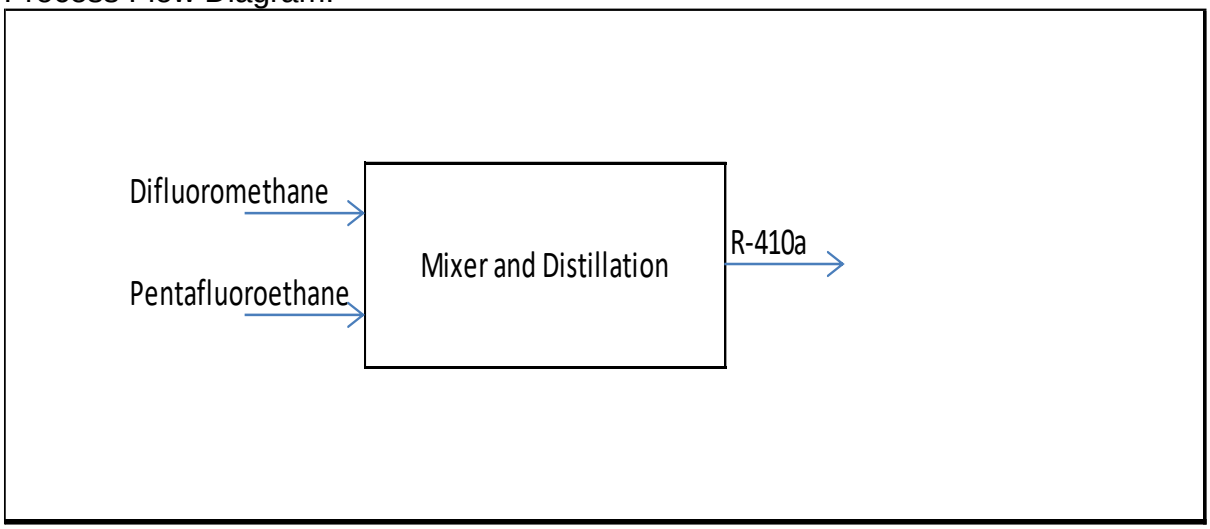


iv. Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)

Process Description:

In the process of R-410a, mixture of Difluoromethane (CH2F2, called R-32) and Pentafluoroethane (CHF2CF3, called R-125) and to get R-410a.

Process Flow Diagram:



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

12. Hydrofluoric Acid 20 - 70%

Process Description:
HF gas will generate as product gas which will be absorbed in water to generate 20-70% HF solution. It shall be sold as product.

13. Anhydrous Hydrochloric Acid

Process Description:
In the process for production of CMS, we get HCl from HCl column D-521, which is used for refining the HCl coming from the vent of its reactor, at the pressure of 9.5 barg, temperature of -30 degC. HCl column have its top partial condenser E-522 receiving overhead vapors from column. The condensate of the exchanger is sent as reflux to the Column. Vent of the condenser is sent to the 33% HCl Elberger SectionE-701 which Contains Chlorine, Methanol and C1 impurities in it. A side HCl vapor stream is taken from the Vent line of D-521 Column which will be further Purified, transferred, stored and filled in cylinders.

14. Chlorodifluoromethane (R22)

Process Description:
Hydrofluoric Acid reacts with Chloroform (C3) in presence of catalyst to produce HFC-22, AHCl, Unreacted HF. In Crude Distillation section HCl and HFC-22 separated from top and unreacted Hydrofluoric acid and moisture separated. HCl will be absorbed in Absorption section to produce 30-33% Dilute Hydrochloric acid. HFC-22 gas washed with NaOH and Sulphuric acid to remove moisture and acidity and then compressed fed to Product distillation section where HFC-22 will be separated and stored.The R22 produced is primarily used as a feedstock

Chemical Reaction:

Chemical Name		C3		AHF		R22		HCl
Reaction		**CHCl3**	**+**	**2HF**	⟶	**CHClF2**	**+**	**2HCl**
MW	g/mol	119.378		20.006		86.468		36.461

15. Calcium Chloride

Process Description:
31% HCl added with Limestone in the reaction section in which reacts to produce Calcium chloride and Carbon dioxide gas. The Calcium chloride solution is neutralized in neutralization section by adding slaked lime and clarified in Clarifier with addition of flocculant. Clarified Calcium chloride solution is then filtered through sand filter and stored as 33.5% Calcium Chloride solution. The Carbon dioxide gas is scrubbed in vent scrubber and released to atmosphere as CO2 gas. The cake from the clarified is filtered in the filter press to recover calcium chloride solution which is recycled and solid sludge is separated and disposed as solid waste

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE-9

DETAILS OF MONTH WISE WATER CONSUMPTION

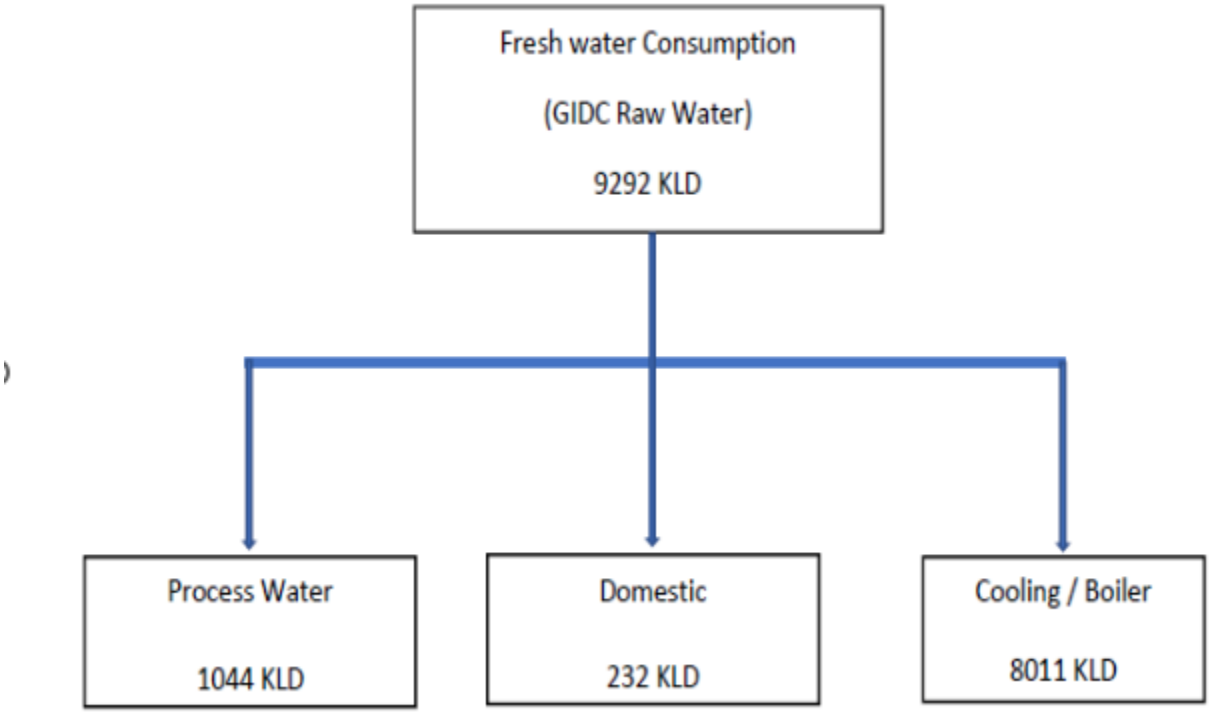
Water Consumption			
Month	**Initial Reading**	**Final Reading**	**DIFF**
Apr-23	249316	563614	314298
May-23	563614	872236	308622
Jun-23	872236	1175291	303055
Jul-23	1175291	1444113	268822
Aug-23	1444113	181380	250677
Sep-23	181380	421161	239781
Oct-23	421161	696900	275739
Nov-23	696900	981800	284900
Dec-23	981800	1253136	271336
Jan-24	1253136	1551110	297974
Feb-24	1551110	1833852	282742
Mar-24	1833852	2134830	300978
Total	**11223909**	**13109423**	**3398924**
Average Consumption KL per Day			**9292**

COMPARATIVE STATEMENT OF WATER CONSUMPTION

Year	Water Consumption	Production	Water Consumption per MT of Production
	KL	**MT**	**KL**
Financial Year 2021-22	2740700	181475	15.1
Financial Year 2022-23	3354738	245581	13.7
Financial Year 2023-24	**3398924**	**337096**	**10.1**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

WATER BALANCE DIAGRAM



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 10

MONTHWISE WASTEWATER GENERATION

Wastewater Discharge			
Month	**IR**	**FR**	**DIFF**
Apr-23	2526892	2582687	55795
May-23	2582687	2628315	45628
Jun-23	2628315	2678408	50093
Jul-23	2678408	2734871	56463
Aug-23	2734871	2791762	56891
Sep-23	2791762	2834769	43007
Oct-23	2834769	2872830	38061
Nov-23	2872830	2915145	42315
Dec-23	2915145	2959904	44759
Jan-24	2959904	3010379	50475
Feb-24	3010379	3056381	46002
Mar-24	3056381	3095098	38717
Total	**33592343**	**34160549**	**568206**
Average Discharge KL per Day			**1553**

COMPARATIVE STATEMENT OF WATER CONSUMPTION

Year	Waste water discharge	Production	Waste Water Discharge per MT of Production
	KL	**MT**	**KL**
Financial Year 2021-22	531866	181475	2.9
Financial Year 2022-23	659453	245581	2.7
Financial Year 2023-24	**568206**	**337096**	**1.7**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 11

MONTHWISE WASTEWATER GENERATION

Month	MEE Feed	ETP feed	UF Feed	DMF Feed	TOTAL
Apr-23	16794	31400	75985	65887	190066
May-23	16725	31296	72067	60538	180626
Jun-23	16004	28302	58551	58616	161473
Jul-23	16859	29052	57565	58767	162243
Aug-23	16544	27813	58111	65754	168222
Sep-23	17197	28552	48483	52975	147207
Oct-23	16572	27641	51858	57260	153331
Nov-23	16647	28401	69046	75833	189927
Dec-23	19084	32763	86004	94194	232045
Jan-24	19537	33599	83506	93080	229722
Feb-24	18078	31664	86328	100004	236074
Mar-24	15115	33349	83639	98085	230188
Total (KL)	205156	363832	831143	880993	2281124
Avg./Month (KL)	**17096.33**	**30319.33**	**69261.92**	**73416.08**	**190093.67**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 12

DETAILS OF EFFLUENT TREATMENT WITH PROCESS, CAPACITY OF UNITS & FLOW DIAGRAM

ETP Treatment Plant scheme

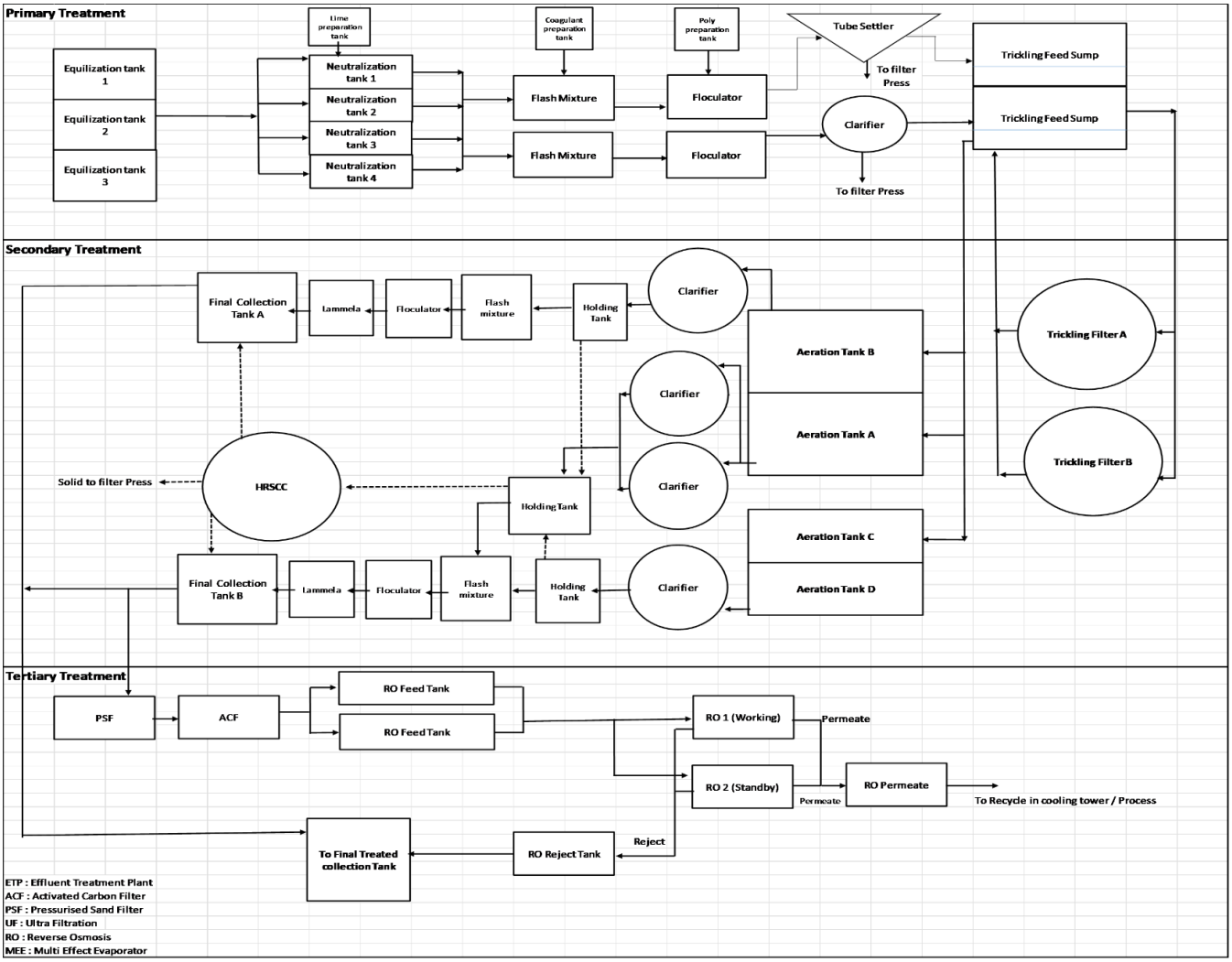
EFFLUENT TREATMENT PLANT (ETP):

Unit has installed a proposed ETP set same as that of the existing capacity to handle the proposed additional effluent. The existing domestic and industrial effluent treatment plant shall be treated with four different streams as following:

1. Low TDS with Low Organic effluent stream
2. High TDS with High Organic effluent stream
3. Utility Effluent stream generated by cooling tower and boiler blowdown.
4. Domestic effluent stream

1. TREATMENT SCHEME FOR LOW TDS WITH LOW ORGANIC EFFLUENT STREAM:

Schematic Diagram of Low TDS with Low organic Effluent Treatment Plant:



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

DETAILS OF UNIT SIZE OF LOW TDS WITH LOW ORGANIC EFFLUENT STREAM:

Sr. No.	Treatment Unit	No. of Unit	Size of Unit				Capacity (cum)		Design Parameter – Retention Time			
			L	B	TD	LD	Hydraulic	Total	UoM	Actual	Recommended	Remarks
1	Equalization tank	1	12	12	3.8	3.5	504	547	hour	12	8 to 24	Adequate
2	Equalization tank (Proposed)	1	11.8	6.75	3.8	3.5	279	303	hour			Adequate
3	Equalization tank (Proposed)	1	9.6	5.5	6.3	6	317	333	hour			Adequate
4	Neutralization tank	2	9.1	9.1	3.3	3	497	547	hour	10.8	6 to 12	Adequate
5	Neutralization tank (Proposed)	1	9.1	6.5	3.8	3	177	225	hour			Adequate
6	Neutralization tank (Proposed)	1	9.6	5.5	6.3	6	317	333	hour			Adequate
7	Flash mixer	2	1.9	1.9	2.3	2	14	16	---	0.15	----	Adequate
8	Flocculator	2	2.3	2.3	2.3	2	22	24	---	0.24	----	Adequate
9	Tube settler	1	4	4	5.3	5.2	83	85	hour	5.88	1 to 4	Adequate
10	Primary Clarifier (Proposed)	1	10	10	3.8	3.5	275	298	hour			Adequate
11	Feed sump - Trickling	1	9	9	3.5	3	243	284	---			Adequate
12	Feed sump – Trickling (Proposed)	1	9.1	7	4	3.5	223	255	---	---	----	Adequate
13	Aeration tank	3	21	21	5.2	4.7	6218	6880	hour	67.83	48	Adequate
14	Holding tank	1	6.5	6.5	3.3	3	127	139	---	1.39	----	Adequate
15	Flocculator	1	2.1	2.1	2.8	2.5	11	12	---	0.12	----	Adequate
16	Tube settler	1	4.5	4.5	5.5	5.4	109	111	hour	1.19	1 to 4	Adequate
17	Final collection tank	1	12	12	3.8	3.5	504	547	hour	69.1	48	Adequate

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

18	Final collection tank (Proposed)	1	21.94	6.65	6.25	6.1	890	912	hour			Adequate
19	Guard tank	1	21	21	5.2	4.7	2073	2293	---			Adequate
20	Guard tank	1	21	21	7	6.5	2867	3087	---			Adequate
21	Sludge tank	1	10	4	3	2.7	108	120	---	1.18	----	Adequate
22	Leachate tank	1	3.2	3	2	1.7	16	19	---	0.18	----	Adequate
23	HRSCC (Proposed)	1	12	12	3.8	3.5	396	430	---	4.32	----	Adequate
ROUND TANK									**Design Parameter - VOR**			
1	Trickling filter	2	14	---	7.6	7.3	2246.4	2338.7	Kg/cum.d	0.44	----	Adequate
2	Sec. Clarifier	2	4.8	---	2.8	2.5	90.4	101.3	hour	1.99	1 to 4	Adequate
		1	7	---	2.7	2.4	92.3	103.9				Adequate
DESIGN PARAMETER – HOLD UP VOLUME												
1	Acid dosing tank	1	0.8	---	1.1	1	0.5	0.6	---	0.055	----	Adequate
2	Alkali dosing tank	1	0.8	---	1.1	1	0.5	0.6	---	0.055	----	Adequate
3	Lime slurry prp. Tank	1	0.8	---	1.1	1	0.5	0.6	---	0.055	----	Adequate
4	MGO slurry prp. Tank	1	0.8	---	1.1	1	0.5	0.6	---	0.055	----	Adequate
5	Na2CO3 prp. Tank	1	0.8	---	1.1	1	0.5	0.6	---	0.055	----	Adequate
6	Flocculant prp. Tank	1	0.8	---	1.1	1	0.5	0.6	---	0.055	----	Adequate

STAGE WISE EFFLUENT CHARACTERISTICS DETAILS:

Parameter	Unit	Inlet effluent quality	Physio-chemical Treatment	Secondary treated quality followed by Bio Tower	Secondary treated quality followed by Activated Sludge Process	Tertiary treated quality	Final treated quality
pH	-	04 to 11	9 to 10	7.5 to 8.5	7 to 7.5	7 to 7.5	7 to 7.5
TSS	mg/L	1000	< 100	< 100	< 100	< 100	< 100
TDS	mg/L	3000	3000	3000	3000	3000	3000
NH4-N	mg/L	500	400	40	20	20	20
BOD	mg/L	4000	4000	1800	90	90	90

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

COD	mg/L	5000	4000	<2000	<500	<400	<250
Fluoride	mg/L	< 50	< 10	< 10	< 10	< 10	< 10

Low tds with low organic effluent treatment plant has been established for treatment of cod less than 5000 mg/l, tds less than 3000 mg/l, fluoride < 50 mg/l and for heavy metals like antimony, zinc, nickel, copper, barium, lead and iron with combine physio-chemical, anaerobic and aerobic biological process, and tertiary treatment system. The collected influent is equalized in collection by continuous air diffusion system.

Equalization
Influent coming from different plant pits is collected in equalization tank. Through equalization ph is stabilized and chemical requirements are minimized for neutralization.

Physio-chemical treatment
Hydroxide and sulphide treatment shall be provided for removal of heavy metals and fluoride. For this process hydrated lime and ferrous sulphate dosed for removal of suspended solid, fluoride and heavy metals. In this system calcium shall react with fluorides, hydroxide (oh-) & sulphate shall react with heavy metals.

Flash mixer
The colloidal particles present in effluent require coagulation for flocs to agglomerate. In flash mixer, the coagulants viz., non-ferric alum or pac, shall be added under rapid mixing.

Flocculator
The coagulated effluent shall be then fed to flocculator where polyelectrolyte shall be added under slow mixing for formation of flocs readily settle able.

Sedimentation process
In tube settler, suspended solids, calcium fluoride (caf) and heavy metals are removal by sedimentation through primary tube settler. Settled solid (suspended solid, calcium fluoride and metal hydroxide or sulphide) shall be sent to filter press for dewatering. The ss free supernatant shall be collected and sent to the equalization tank.

Bio tower
A bio tower operates by having the wastewater fall through a packed bed tower filled with permeable packing. The packing has both aerobic and anaerobic microorganisms growing on it. The bio tower shall be operated with recycling. Bio towers use stationary filter media for the treatment of wastewater.
The following are several steps that are often considered to improve nitrification:
The fixed film reactor and activated sludge process shall be run in series. This will allow most of the bod removal to occur in the first stage and improved nitrification to occur in the second stage.
The amount of ventilation and hydraulic recirculation is increased and shall be operated by 10 times recycling of feed rate. This will allow nitrifying bacteria to operate at increased growth rates.
Hydraulic dosing shall be increased by high recirculation rates. Shearing off of excessive bio-growth shall allow enhanced ventilation and promote new growth for added nutrient removal.

Activated sludge process
In activated sludge process wastewater containing organic matter is aerated in an aeration basin in which micro-organisms metabolize the suspended and soluble organic matter. Part of organic matter is synthesized into new cells and part is oxidized to co2 and water to derive energy. In activated sludge systems the new cells formed in the reaction are removed from the liquid stream in the form of a flocculent sludge in secondary settling tanks. A part of this settled biomass, described as activated sludge is returned to the aeration tank and the remaining forms waste or excess sludge.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Physio-chemical treatment
The supernatant from asp shall be then fed to flocculator where pac / sodium hypochlorite shall be added under slow mixing for formation of flocs and destruction of micro-organisms.

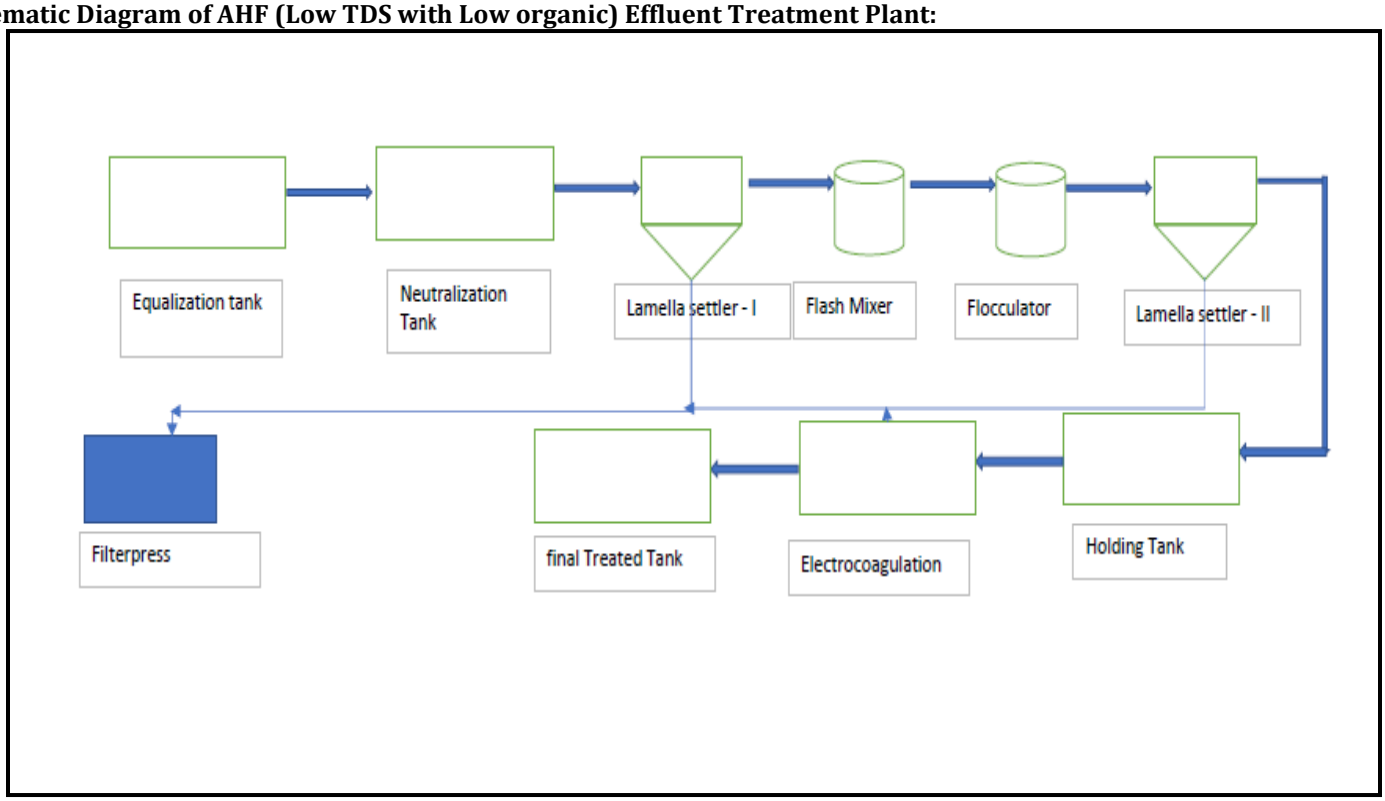
Sedimentation
The treated effluent shall be then fed to tube settler for tertiary ss removal.

Sludge decanting and dewatering
The primary sludge from primary tube settler and biological sludge from activated sludge process shall be collected in the sludge holding tank, and then fed into the filter press or decanter for dewatering. Leachate shall be transferred to the equalization tank and the dewatered sludge shall be stored in impervious designated area.

The dewatered calcium fluoride and metal content sludge shall be sent to secured landfill site or shall be sold to actual users by confirming of the heavy metal content.

(A) TREATMENT SCHEME FOR AHF PLANT EFFLUENT (Low TDS with Low organic):

Schematic Diagram of AHF (Low TDS with Low organic) Effluent Treatment Plant:



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

DETAILS OF UNIT SIZE OF AHF EFFLUENT STREAM:

Sr no	Treatment Unit	No. of Unit	Size of Unit				Capacity (cum)		Design Parameter – Retention Time			Remarks
			L	B	TD	LD	Hydraulic	Total	UoM	Actual	Recommended	
1	Equalization tank	1	10.5	10.5	3.8	Adequate	386	419	Hour	20.6	8 to 24	Adequate
2	Neutralization tank	2	5.7	5.7	3	2.7	175	195	Hour	9.4	6 to 12	Adequate
3	Flash mixer	1	1.8	------	2.3	2	5.1	5.8	Min.	16.3	10 to 20	Adequate
4	Flocculator	1	2	------	2.3	2	6.3	7.2	Min.	20.1	20 to 30	Adequate
5	Tube settler - 1	1	3	3	3.5	3.4	31	32	Min.	97.9	30 to 150	Adequate
6	Holding tank	1	5.5	5.5	3	2.7	82	91	-	4.4	-	Adequate
7	Electro coagulation*	1	-----	-----	----	----	----	-----	-----	-	-	Adequate
8	Tube settler - 2	1	2.8	2.8	3.5	3.4	27	27	Hour	85.3	30 to 150	Adequate
9	Treated water collection tank	1	10	5	3	2.7	135	150	Hour	7.2	-	Adequate
10	Filter press	2	-----	----	----	----	-----	-----	-	-	-	48"*48"*47 Plates
11	Lime slurry prp. tank	1	2	2	2	1.7	6.8	8	-	0.4	-	Adequate

STAGE WISE EFFLUENT CHARACTERISTICS DETAILS:

Parameter	Unit	Inlet effluent quality Equalization	Physio-chemical Treatment Lamella Settler – I	Electro-coagulation System	Physio-chemical Treatment Lamella Settler – II	Final treated quality
pH	-	2.0-3.0	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5
TSS	mg/L	5000	<500	<100	<100	<100
COD	mg/L	1000	<500	<100	<100	<100
Fluoride	mg/L	<10000	< 1000	< 15	< 15	< 15

Equalization Tank

The fluorinated effluent streams from different sources shall be collected in collection cum equalization tank. Equalization of fluctuating wastewater flows will make hydraulic pollutant loadings more uniform and will improve the effectiveness or reliability of essential treatment processes.

Neutralization Tank

Through equalization pH is stabilized and chemical requirements are minimized for neutralization, dosing of treatment chemicals are controlled. Equalization improves process reliability. The equalized flow shall be fed to neutralization tank for neutralization the effluent. The feeding pH is between 2 to 3, it is required to dose hydrated lime solution. It is required to maintain pH between 6.5 to 8.5.

Flash Mixer

The colloidal particles present in effluent require coagulation for flocs to agglomerate. In flash mixer, the coagulants viz., non-ferric alum or PAC, shall be added under rapid mixing.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Flocculator

The coagulated effluent shall be then fed to Flocculator where polyelectrolyte shall be added under slow mixing for formation of flocs readily settle able.

Tube Settler – I

The effluent shall be then fed to tube settler – I for solids separation. Settled solids removed from Tube Settler and collected into the sludge collection tank.

Holding Tank

Tube Settler – I clear overflow shall be collected into the holding tank for check quality of fluoride. If fluoride is found high (more than 15 mg/L) then effluent fed into the electro-coagulation system for further removal of fluoride and fluoride is found below 15 mg/L then effluent shall be transferred to final treated collection tank for final disposal.

Electro coagulation System

If fluoride is found high (more than 15 mg/L) in holding tank, then fed to Electro-coagulation System for final Fluoride removal.

Tube Settler – II

The effluent shall be then fed to tube settler – II for solids separation. Settled solids removed from Tube Settler and collected into the sludge collection tank.

Final Treated Collection Tank

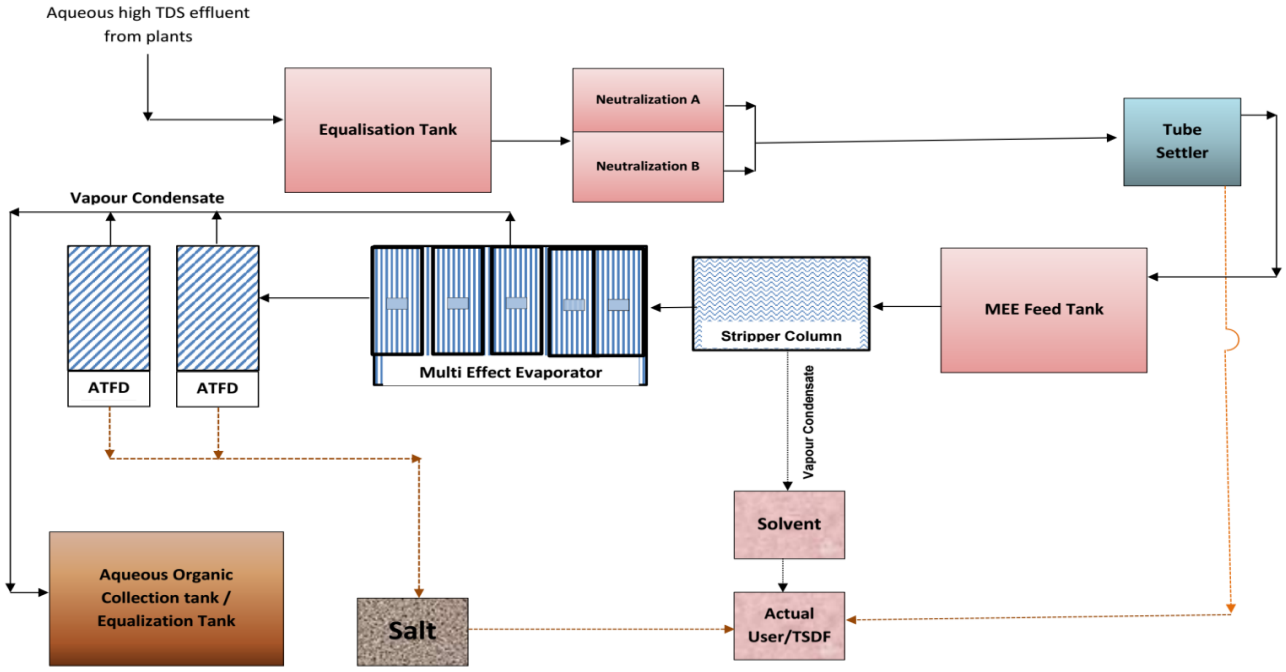
The treated effluent shall be discharged to Final Treated Collection Tank for final discharge to GIDC drain.

Filter Press

The primary sludge from (Tube Settler – I and II) shall be collected in the sludge holding tank, then fed into the Filter Press for dewatering. Leachate shall be transferred to the equalization tank and the dewatered sludge shall be stored in impervious designated area. Sludge should be reused as raw material CaF_2 in AHF plant.

2. TREATMENT SCHEME FOR HIGH TDS WITH HIGH ORGANIC EFFLUENT STREAM:

Schematic Diagram of High TDS with High organic Effluent Treatment Plant:



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

STAGE WISE EFFLUENT CHARACTERISTICS DETAILS:

Parameter	Unit	Inlet effluent quality	Primary treated quality	Stripper Column	MEE Condensate	ATFD Condensate	ATFD Salt
pH	-	04 to 11	7 to 8	7 to 8	7 to 8	7 to 8	7 to 8
TSS	mg/L	1000	< 100	< 100	< 100	< 100	-
TDS	mg/L	150000	150000	105000	3000	2500	-
NH4-N	mg/L	300	200	20	20	20	-
COD	mg/L	50000	45000	250000	5000	2500	-

High TDS with high organic effluent treatment plant is establishing with physio-chemical, Stripper Column and Multi effect Evaporated with Agitated Thin Film Dryer process. The collected influent is equalized in collection by continuous air diffusion system.

Equalization

Influent coming from different plant pits with having COD less than 50000 mg/L and TDS less than 150000 mg/L are collected in equalization tank. Through equalization pH is stabilized and chemical requirements are minimized for neutralization.

Physio-chemical treatment

The equalized flow shall be fed to neutralization tanks for neutralization process. When pH is below 8, it is required to dose caustic soda 50 % or lime solution. When pH is above 9, it is required to dose recovered HCl.

Flash Mixer

The colloidal particles present in effluent require coagulation for flocs to agglomerate. In flash mixer, the coagulants viz., non-ferric alum or PAC, shall be added under rapid mixing.

Flocculator

The coagulated effluent shall be then fed to flocculator where polyelectrolyte shall be added under slow mixing for formation of flocs readily settleable.

Sedimentation

The effluent shall be then fed to tube settler for solids separation. Settled Solids removed from Primary Tube Settler to sludge holding tank.

Feed Tank

The primary treated clear overflow effluent collected in to Feed Tank.

Quadruple Effect Evaporators with Agitated Thin Film Dryer

- The clarified effluent shall be pumped to Stripper Column through Pre-heaters for removal of low boilers. Condensate of stripper shall be collected in stripper condensate tank. It shall be disposed to CHWIF for incineration.
- The concentrated stream shall be fed in to Multi Effect Evaporated (MEE) column for evaporation. MEE condensate shall be collected in MEE condensate tank. It shall be transferred to Low TDS with low COD stream for further treatment.
- The MEE concentrated stream shall be fed in to Agitated Thin Film Dryer (ATFD).
- ATFD condensate shall be collected in to ATFD condensate tank. It shall be transferred to Low TDS with low COD stream for further treatment and the ATFD salt shall be disposed to secured landfill site.

Sludge Decanting and Dewatering

The primary sludge from primary tube settler shall be collected in the sludge holding tank, and then fed into the Filter Press for dewatering. Leachate shall be transferred to the equalization tank and the dewatered sludge shall be stored in impervious designated area. Sludge should be disposed to secured landfill site.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

BASIS OF DESIGN – Multi Effect Evaporator with Agitated Thin Film Dryer

We have considered 5500 kg/hr feed with the inlet of 1 % w/w Low boilers (Solvent). We have considered for the design basis as Solvent 1 % w/w.

Stripper Section

Type of System	:	Packed Bed type stripper system
CAPACITY		
Organics	:	(55 kg/hr Solvent + 55 kg/hr Water)
Feed Rate	:	5500 Kg/hr (15 % w/w TDS)
FEED PROPERTIES		
Organics	:	1 % w/w basis. (Solvent) – Low Boilers
Solvent	:	Water
Specific Gravity	:	1.15
Temperature	:	30°C
Viscosity	:	4-6 cp
TOP PRODUCT FROM STRIPPER		
Organics	:	(55 kg/hr Solvent + 55 kg/hr Water)
Temperature	:	50 - 55°C
BOTTOM PRODUCT FROM STRIPPER (TO EVAPORATOR)	:	
OPERATING CONDITIONS		
Mode of Heating	:	Steam
Steam	:	150 kg/hr @ Dry Saturated at 3 bar (g)
Power (Installed / Absorbed)	:	16 KW / 13 KW
Cooling Water	:	12 m3/hr
MATERIAL OF CONSTRUCTION		
All contact parts	:	Duplex steel
Vapor / Condensate	:	SS 316L

EVAPORATOR SECTION

Type of System	**:**	**Four effect Forced circulation evaporator**
CAPACITY (Evaporation Plant)		
Evaporation Rate	:	3850 kg/hr
Feed Rate	:	5500 Kg/hr
Product Rate	:	1650 Kg/hr (50 %w/w solids)

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

FEED PROPERTIES				
Solid Content Range (w/w)	:	15 % w/w (TSS less than 500 ppm) (COD: 80000 to 100000 mg/lit)		
Form	:	Clear Solution with totally dissolved solids		
Solvent	:	Water		
Specific Gravity & PH	:	1.15 & Min. 6.5 and Max. 7.5		
Viscosity		4-6 cp (assumed)		
Temperature	:	30°C		
OPERATING CONDITIONS				
Mode of Heating	:	Dry Saturated Steam at 3 kg/cm2 (g)		
MATERIAL OF CONST				
Feed/ Product	:	Duplex steel		
Vapor Liquid Separators	:	SS 316L		
Non-contact parts	:	SS 316L		
UTILITY SPECIFICATIONS				
Power (Evaporator)	:	Voltage: 415 / 4 wire Frequency: 50 HZ		
		Connected Load	:	68 kW
		Consumed Load	:	54.5 kW
Steam (Evaporator)	:	Dry Saturated at 3.0 kgs/cm2 (g) Before Control valve		
			:	**1170 kg/hr**
Cooling water		Normal at 2 kgs./sq.cm(g)	:	120 m3/hr
		Inlet temp 32°C /Outlet temp. 37°C		1.2 m3/hr
		Make up & Seal water	:	
Space Requirement	:	15 mL x 12 mW x 15 mH		

AGITATED THIN FILM DRYER SECTION

CAPACITY	:	915 kg/h WATER EVAPORATION
FEED RATE	:	2000 kg/h
INITIAL SOLIDS	:	50 %
FINAL MOISTURE IN DRY PRODUCT	:	5-10 %
WATER EVAPORATION	:	915 kg/h
DRY SOLID OUTPUT	:	1085 kg/h
DRY SATURATED STEAM REQUIREMENT		
At 7 kg/cm2-g PRESSURE	:	1100 kg/h
ELECTRICAL LOAD	:	47 kW (Each)
NORMAL CONSUMPTION	:	38 kW (Each)
COOLING WATER CIRCULATION		
RATE AT 32°C - 37°C	:	100 m3/h
COOLING WATER INLET TEMP	:	32 °C
COOLING WATER OUTLET TEMP	:	37 °C

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

TECHNICAL SPECIFICATIONS (MECHANICAL)		
Jacket temperature	250°C (Design)	
Jacket pressure	15 kg/cm2-g (Design)	
Surface area	**20 square meters (Approximately) 2 nos.**	
Rotor Design	High Performance hinged blades (dryer type)	
Rotor speed	approximately 270 - 300 rpm	
Distributor	Distribution ring	
Power	38 KW, 415V 50Hz	
Top bearing	Taper Roller type	
Bottom bearing	Roller type OR Bush bearing	
Agitated Thin Film Dryer (Section – A)		
Agitated Thin Film Dryer – 20 m2(Quoted Separately)	2 nos.	Inner Shell: SS 316L Outer Shell: SS 316L
Accessories (Section – B)		
Balance Tank for Feed	1 no.	SS 316L
Vapor Exhaust Duct (1 Lot)	1 no.	SS 316L
Blower	1 no.	SS 316L
SS Pipes & Fittings (Sch 10 – 1 lot)	1 no.	SS 316L (Sch. 10)
Surface Condenser	1 no.	Shell: SS 316L, Tubes: Duplex Steel Tube Sheet: Duplex Steel

ADDITIONAL NEW INSTALLATIONS:

1. **DESIGN BASIS OF STRIPPER– 2NOS.**

Type of System	:	Packed Bed Type Stripper System
CAPACITY		
Organics	:	1988 kg/h Solvent + 1988 kg/h Water
Feed Rate	:	15900 kg/h (12.5 % w/w Low Boilers)
FEED PROPERTIES		
Organics	:	12.5 % w/w Low Boilers, Other Water
Solvent	:	Low Boilers
Specific Gravity	:	1.07
pH	:	6-7 (pH to be neutralized before entering to the system)
Temperature	:	30 C
Viscosity	:	< 3 Cp
TOP PRODUCT FROM STRIPPER		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Organics	:	1988 kg/h Solvent + 1988 kg/h Water
Temperature	:	90 - 95°C
BOTTOM PRODUCT FROM STRIPPER		
Bottom Product	:	11924 kg/h
Temperature	:	75° to 80°C
OPERATING CONDITIONS		
Mode of Heating	:	Dry Saturated at 3 kg/cm2 (g) @ PHS-01

2. DESIGN BASIS OF TVR+MEE(4FC)+SEE(1FC) – 2NOS.

Type of System	:	TVR + Four Effect (4FC) Circulation Evaporator
CAPACITY (Evaporation Plant)	:	As per 7% w/w TDS
Evaporation Rate	:	11777 kg/h
Feed Rate	:	15900 kg/h
Product Rate	:	4123 kg/h (27% w/w)
FEED PROPERTIES		
Feed Composition (w/w)	:	7% w/w TDS
Form	:	Clear Solution with totally dissolved solids
Solvent	:	Water
Specific Gravity	:	1.07
Viscosity	:	4-6 cp
pH	:	6.5-8
Temperature	:	25-35° C
OPERATING CONDITIONS		
Mode of Heating	:	Dry Saturated Steam at 7 kg/cm2 (g) @ TVR-01

Type of System	:	Single Effect (1FC) Circulation
CAPACITY (Evaporation Plant)	:	As per 27% w/w TDS
Evaporation Rate	:	1339 kg/h
Feed Rate	:	4123 kg/h
Product Rate	:	2783 kg/h (40% w/w)
OPERATINGCONDITIONS		
Mode of Heating	:	ATFD VAPOR

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

3. DESIGN BASIS OF ATFD – 2NOS.

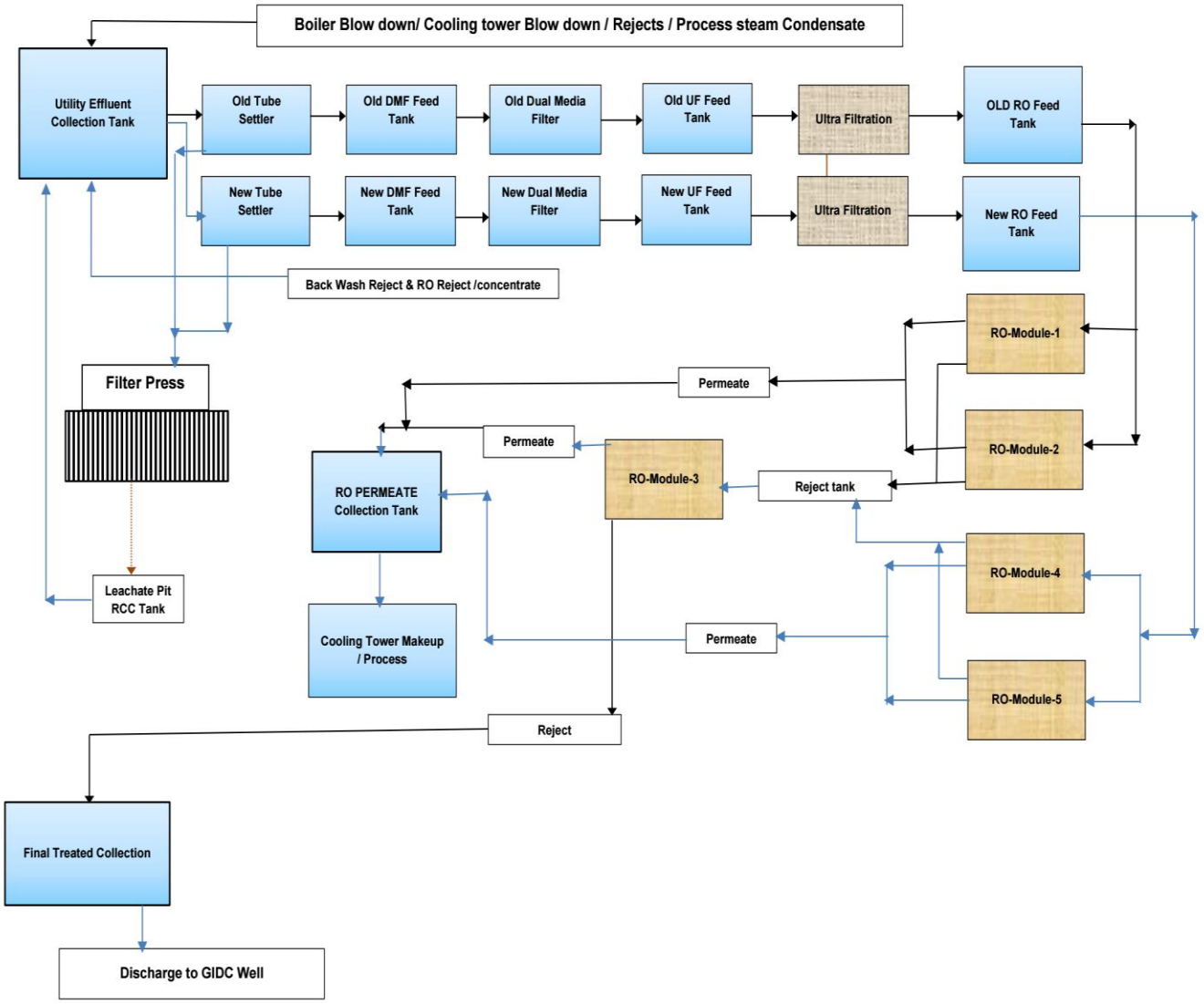
Type of System		ATFD (Agitated Thin Film Dryer)
Evaporation Rate	:	1546 kg/h
Feed Rate	:	2783 kg/h (40% w/w)
Product Rate	:	1780 kg/h (8-10% Moisture)
Area	:	30 M2 x 2 Nos.
FEED PROPERTIES		
Solid Content Range	:	40% w/w TDS
Solvent	:	Water
OPERATINGCONDITIONS		
Mode of Heating	:	Dry Saturated Steam at 7 kg/cm2 (g)
Type of System		ATFD (Agitated Thin Film Dryer)
Evaporation Rate	:	1547 kg/h
Feed Rate	:	2784 kg/h (40% w/w)
Product Rate	:	1781 kg/h (8-10% Moisture)
Area	:	31 M2 x 2 Nos.
FEED PROPERTIES		
Solid Content Range	:	40% w/w TDS
Solvent	:	Water
OPERATINGCONDITIONS		
Mode of Heating	:	Dry Saturated Steam at 7 kg/cm2 (g)

Note: Same designed philosophy has been adopted for other MEEs installations.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

3. TREATMENT SCHEME FOR UTILITY EFFLUENT GENERATED FROM DM/SOFTENER, COOLING TOWER AND BOILER BLOW DOWN:

Schematic Diagram of Utility Effluent Treatment Plant:



DETAILS OF UNIT SIZE OF UTILITY EFFLUENT STREAM:

Sr. No.	Treatment Unit	No. of Unit	Total Capacity (cum)	Remarks
1	Collection Tank	1	1500	Adequate
2	pH control Tank	1	5	Adequate
3	Tube settler	1	40	Adequate
4	Filter feed sump	1	100	Adequate

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

5	Permeate Tank	1	800	Adequate
6	Reject Tank	1	1000	Adequate
7	Ultra-Filtration	4	1500 cum/d	Adequate
8	Reverse Osmosis	4	1400 cum/d	Adequate
9	Reverse Osmosis	1	1000 cum/d	Adequate

STAGE WISE EFFLUENT CHARACTERISTICS DETAILS:

Parameter	Unit	Inlet effluent quality	Primary treated quality	Permeate treated quality	Concentrated treated quality
pH	-	7 to 8	7 to 8	6 to 7	7 to 8
TSS	mg/L	100	< 50	Nil	Nil
TDS	mg/L	2500	2500	< 225	< 16500
COD	mg/L	50	25	< 5	< 100

Utility Effluent (from DM / Softener reject, cooling Tower and Boiler Blow Down) treatment plant is established with physio-chemical, Ultra filtration, and Reverse Osmosis process. The collected influent is equalized in collection by continuous air diffusion system.

Equalization
Utility waste water, DM plant waste water and blow downs from boiler and cooling tower shall be collected in collection tank.

Physio-chemical treatment
Acid, Alkali & coagulant pump shall be provided to pump Acid, Alkali & coagulant dosing in pH control tank. pH tank stirrer shall be provided to mix effluent & chemicals in the tank. pH indicator shall be provided in tube stirrer pH shall be interlocked with Acid & Alkali dosing pumps.

Sedimentation
Mix effluent from pH control tank shall overflow in tube settler. We are providing tube settler with cool deck media for better setting of suspended solids in tube settler. Settler sludge at bottom of tube settler shall be pumped in filter press feed sump.

Filter Feed Sump:
Tube settler shall over flow to filter feed sump collected effluent shall be pumped to dual media filter. For removing of suspended solids, turbidity & smell. We are providing dual media filter with one working & one stand by condition. This dual media is periodically required to be cleared of accumulated solids by back washing the filter using fresh water in reverse flow sequence.

Ultra filtration System:
Ultra filtration (UF) is a form of filtration that uses a membrane to separate different fluids or ions. Ultra filtration is not as fine a filtration process as Nano filtration, but it also does not require the same energy to perform the separation. Ultra filtration also uses a membrane that is partially permeable to perform the separation, but the membrane's pores are typically much larger than the membranes pores that are used in Nano filtration.
Ultrafiltration is most commonly used to separate a solution that has a mixture of some desirable components and some that are not desirable. One of the uses that demonstrate the usefulness of ultrafiltration is separation of oil in an emulsion from water. In this case, oil emulsions, for example, machining coolant emulsions can have the oil separated and concentrated, with the water phase being discharged to sanitary sewer, and the concentrated oil phase being disposed of at a lower cost.
Ultrafiltration is capable of concentrating bacteria, some proteins, some dyes, oils and colloidal or emulsified components. Ultrafiltration is only somewhat dependent upon the charge of the particle and is much more concerned with the size of the particle. Ultrafiltration is typically not effective at separating dissolved organic streams.

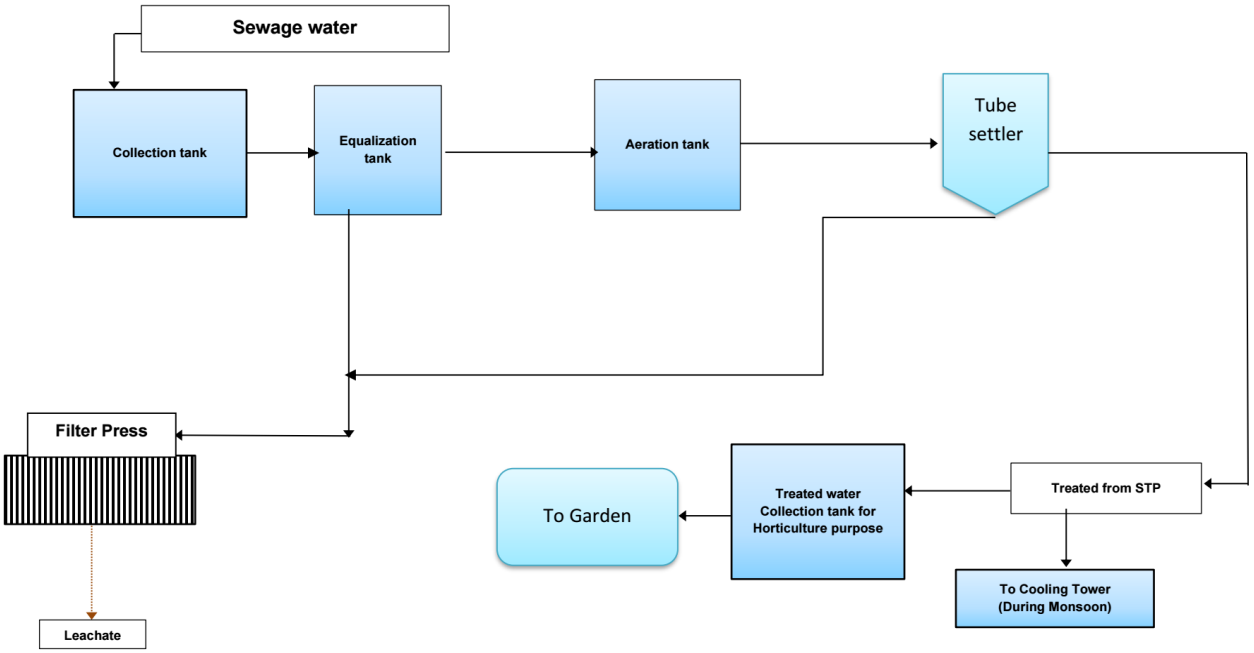
SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Reverse Osmosis System:
Reverse osmosis is a membrane separation process for removing solvent from a solution. When a semi permeable membrane separates a dilute solution from a concentrated solution, solvent crosses from the dilute to the concentrated side of the membrane in an attempt to equalize concentrations. The flow of solvent can be prevented by applying an opposing hydrostatic pressure to the concentrated solution.
The magnitude of the pressure required to completely impede the flow of solvent is defined as the "osmotic pressure". If the applied hydrostatic pressure exceeds the osmotic pressure (see figure below), flow of solvent will be reversed, that is, solvent will flow from the concentrated to the dilute solution. This phenomenon is referred to as Reverse Osmosis. The figure illustrates the concepts of osmosis, osmotic pressure, and reverse osmosis schematically.

Sludge Decanting and Dewatering
The primary sludge from primary tube settler shall be collected in the sludge holding tank, and then fed in to the Filter Press for dewatering. Leachate shall be transferred to the equalization tank and the dewatered sludge shall be stored in impervious designated area. Sludge should be disposed to secured landfill site.

4. TREATMENT SCHEME FOR DOMESTIC EFFLUENT (STP) STREAM:

Schematic Diagram of Sewage Treatment Plant:



DETAILS OF UNIT SIZE OF SEWAGE EFFLUENT TREATMENT PLANT:

Sr No.	Treatment Unit		No. of Unit	Size of Unit				Capacity (cum)		Design Parameter – Retention Time				Remarks
				L	B	TD	LD	Hydraulic	Total	UoM	Designed	Actual	Recommended	
1	Collection Tank		1	2	7.7	2.6	2.3	35	40	Hour	2.8	2.5	-	-

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

2	Oil and Grease Trap	1	1.7	3.6	3.5	3.2	20	21	Hour	1.6	1.4	0.2 to 0.3	Adequate
3	Equalization Tank	1	10	5	3	2.7	135	150	Hour	10.8	9.5	6 to 10	Adequate
4	Aeration Tank	1	10	-- --	4	3.7	290.5	314	Hour	23.2	20.5	12 to 24	Adequate
5	Tube Settler	1	2.2	2.2	2.5	2.2	11	12	Hour	0.9	0.8	0.5 to 1	Adequate
6	Treated water tank	1	10	5	3	2.7	135	150	Hour	10.8	9.5	-	-

STAGE WISE EFFLUENT CHARACTERISTICS DETAILS:

Parameter	Unit	Inlet effluent quantity/quality	Primary Treatment	Secondary Treatment	Ultra filtration treated quality	Final treated quality
pH	-	8 to 9	7 to 8.5	7 to 8.5	7 to 8.5	7 to 8.5
TSS	mg/L	300 - 400	< 10	< 10	< 1	< 1
BOD	mg/L	300 - 500	< 30	< 20	< 20	< 20

Collection Tank:
Raw sewage from the plant through the pipeline comes to the collection tank. The sewage with the help of cutter pump (1 Working + 1 Stand by) transfer to bar Screen chamber

Bar Screen:
Raw sewage from the source is usually received into the bar screen chamber by gravity. Screen provided will remove all floating and big size matter such as plastic bottles, polythene bags, glasses, stones, etc., which may otherwise choke the pipeline and pumps.

Oil & Grease Trap:
If the sewage generated includes maximum quantity from kitchen and canteen, there is a possibility of higher concentrations of oil and grease in the raw sewage. It needs to be removed before biological treatment as it otherwise may cause problems for biological treatment. A small tank with a baffle wall is need for oil & grease trap.

Equalization:
Sewage with having BOD between 300 – 500 mg/L and TSS between 300 – 400 mg/L is collected in equalization tank. Through equalization pH is stabilized and chemical requirements are minimized for neutralization.

Physio-chemical treatment
Acid, Alkali & coagulant pump shall be provided to pump Acid, Alkali & coagulant dosing in pH control tank. pH tank stirrer shall be provided to mix effluent & chemicals in the tank. pH indicator shall be provided in tube stirrer pH shall be interlocked with Acid & Alkali dosing pumps.

Tube Settler:

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Mix effluent from pH control tank shall overflow in tube settler. We are providing tube settler with cool deck media for better setting of suspended solids in tube settler. Settler sludge at bottom of tube settler shall be pumped in filter press feed sump.

Activated Sludge Process

In activated sludge process wastewater containing organic matter is aerated in an aeration basin in which micro-organisms metabolize the suspended and soluble organic matter. Part of organic matter is synthesized into new cells and part is oxidized to CO2 and water to derive energy. In activated sludge systems the new cells formed in the reaction are removed from the liquid stream in the form of a flocculent sludge in secondary settling tanks. A part of this settled biomass, described as activated sludge is returned to the aeration tank and the remaining forms waste or excess sludge.

Sludge Decanting and Dewatering:

The sludge from the Primary Settling Tank and Secondary Settling Tank to be removed from the bottom of the Settling tank and transferred to sludge tank. Sludge fed in to the centrifuge for drying of the sludge & the dried sludge may be used as manure for development of greenbelt & the substrate may be recycled back to the equalization tank.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –13

MONTH WISE ENERGY CONSUMPTION FOR ETP

Month	Electricity Consumed in ETP in KVA
Apr-23	1119568
May-23	1130485
Jun-23	1120001
Jul-23	1193735
Aug-23	1169955
Sep-23	1159120
Oct-23	1157572
Nov-23	1161464
Dec-23	1215597
Jan-24	1153668
Feb-24	1097650
Mar-24	1251192
Total	13930007
Avg./Month	**1160834**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 14

DETAILS OF OPERATOR/ CHEMIST FOR ETP

List of Employee CETP		
Sr. No.	**Employee Name**	**Qualification**
1	Praveen Mishra	MTech Environment
2	Mayurkumar Jadav	M. E. (Environment) + PDIS
3	Mayur Vekaria	M.Sc. (Environment) + PDIS
4	Mahesh Palkar	B.E (Chemical)
5	Anilkumar Vaghel	B.E (Environment)
6	Akram Patel	B.E (Chemical)
7	Bipin Nakum	B.E (Chemical)
8	Sahejad Patel	B.E (Chemical)
9	Monali Parmar	M.Sc. (Environment Mgmt.)
10	Chandra Shekhar	B.Sc. (PCM)
11	Ruchi Upadhyay	M.Sc. (Environment) / PDIETM
12	Ruchi Gangwar	Diploma (Chemical)
13	Bhavik Shah	M.Sc. (Organic Chemistry)
14	Radhakrishna Dwivedi	B.Sc. (Chemistry)
15	Pritesh Patel	M.Sc. (Chemistry)
16	Meet Vyas	Diploma (Chemical)
17	Parth Parmar	M.Sc. (Environment Mgmt.)
18	Mehul Sharma	B.Sc. (Chemistry)
19	Vikas Pandey	M.Sc. (Chemistry)
20	Umasankar Patel	Diploma (Chemical)
21	Lokesh Patra	Diploma (Mechanical)
22	Vikas Yadav	B.Sc. (Chemistry)
23	Bhoop Singh Pal	B.Sc. (Chemistry)
24	Rishabh Chauhan	Diploma (Chemical)
25	Pradeep Vishwakarma	B.Sc. (Chemistry)
26	Ronak Vasant	Diploma (Instrument)
27	Dilip Prajapati	Diploma (Chemical)
28	Mohammad Umar Shaikh	Diploma (Chemical)
29	Santosh Panda	M.Sc. (Chemistry)
30	Savan Salunke	M.Sc. (Chemistry)
31	Bipin Kumar Gupta	B.Sc. (Chemistry)
32	Manohar Patidar	M.Sc. (Biotech)
33	Harshad Patel	B.Sc. (Chemistry)
34	Ankur Yadav	B.Sc. (Chemistry)
35	Omkarnath Mishra	M.Sc. (Chemistry)
36	Ashok Yadav	ITI (AOCP)
37	Alpesh Jadav	ITI
38	Hiren Parekh	ITI (AOCP)

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

39	Dharmendra Yadav	ITI (AOCP) / B.A
40	Sarvesh Singh Pal	B.A
41	Prakashbhai Dodiya	ITI (AOCP)
42	Nilesh Parmar	ITI (AOCP)
43	Prakash Patel	ITI (AOCP)
44	Arjun Sindha	ITI (AOCP)
45	Chirag Patel	ITI (Instrument)
46	Imran Master	ITI (AOCP)
47	Suresh Kumar Sagathiya	ITI (AOCP)
48	Prakash Solanki	ITI (AOCP)
49	Mohsin Deewan	ITI (COPA)
50	Ravi Jawlekar	ITI (AOCP)
51	Vishal Prajapati	Diploma (Mechanical)
52	Sunny Macchi	ITI (Wireman)
53	Kiran Kumar Patel	ITI
54	Sakil Multani	ITI (Instrument)
55	Dilipsinh Yadav	ITI (AOCP)
56	Ajay Kumar Maurya	Diploma (Chemical)
57	Jayesh Vasava	ITI (Instrument)
58	Jitendra Thakre	ITI (Electrical)
59	Ajit Solanki	ITI (Fitter)
60	Rahul Vasava	ITI (Fitter)
61	Aditya Pal	Diploma (Mechanical) / B.A
62	Jayesh Patel	ITI (AOCP)
63	Neeraj Singh	B.A / ITI (Welder)
64	Jateen Bhoja Kansara	
65	Ashok Bhagat	ITI (AOCP)
66	Bhavesh Kumar Patel	ITI (AOCP)
67	Aziz Multani	ITI (AOCP)
68	Parimal Kanthariya	ITI (AOCP) / B.A
69	Yuvrajsinh Ataliya	ITI (AOCP) / B.A
70	Smit Patel	ITI (AOCP)
71	Ajay Desai	ITI (AOCP)
72	Haresh Parmar	ITI (AOCP)
73	Jignesh Patel	ITI (AOCP)
74	Vrund Patel	M.Sc. (Environment)
75	Sunny Dobariya	M.Sc. (Environment)
76	Raj Chhodavadiya	M.Sc. (Environment)
77	Richaben Modi	B.Tech (Environment)

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 15

ANALYSIS REPORT OF WATER

First Monitoring
Sampling Location : **Wastewater (Inlet - CETP)**
Sampling Type: Grab Sampling
Sampling done by: Swarrnim Institute of Technology- Environmental Audit Team
Sampling Method: APHA & IS 3025

Sr. No	Parameters	Unit	Result	Permissible Limit
1	pH	-	9.5	**6.0-9.0**
2	Temperature	mg/L	29.0	
3	TSS	mg/L	78.0	**100**
4	Oil & Grease	mg/L	19.5	**10**
5	Fluoride	mg/L	5.6	**15**
6	Sulphide	mg/L	2.5	**5**
7	Total Residual Chlorine	mg/L	<0.1	**1.0**
8	Ammonical Nitrogen	mg/L	185.0	**50**
9	Total Kjendhal Nitrogen	mg/L	220.00	**50**
10	Nitrate Nitrogen	mg/L	55.0	**50**
11	BOD	mg/L	1200.00	**100**
12	COD	mg/L	5002.00	**250**

First Monitoring
Sampling Location : **Wastewater (Outlet - CETP)**
Sampling Type: Grab Sampling
Sampling done by: Swarrnim Institute of Technology- Environmental Audit Team
Sampling Method: APHA & IS 3025

Sr. No	Parameters	Unit	Result	Permissible Limit
1	pH	-	7.5	**6.0-9.0**
2	Temperature	mg/L	28.0	
3	TSS	mg/L	38.0	**100**
4	Oil & Grease	mg/L	<2.0	**10**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

5	Fluoride	mg/L	0.55	**15**
6	Sulphide	mg/L	1.6	**5**
7	Total Residual Chlorine	mg/L	<1.0	**1.0**
8	Ammonical Nitrogen	mg/L	11.5	**50**
9	Total Kjendhal Nitrogen	mg/L	29.4	**50**
10	Nitrate Nitrogen	mg/L	14.2	**50**
11	BOD	mg/L	60.0	**100**
12	COD	mg/L	19.0	**250**

Second Monitoring
Sampling Location : **Wastewater (Inlet - CETP)**
Sampling Type: Grab Sampling
Sampling done by: Swarrnim Institute of Technology- Environmental Audit Team
Sampling Method: APHA & IS 3025

Sr. No	**Parameters**	**Unit**	**Result**	**Permissible Limit**
1	pH	-	9.8	6.0-9.0
2	Temperature	mg/L	30.0	
3	TSS	mg/L	81.0	100
4	Oil & Grease	mg/L	18.8	10
5	Fluoride	mg/L	6.1	15
6	Sulphide	mg/L	2.8	5
7	Total Residual Chlorine	mg/L	<0.1	1.0
8	Ammonical Nitrogen	mg/L	195.0	50
9	Total Kjendhal Nitrogen	mg/L	230.00	50
10	Nitrate Nitrogen	mg/L	59.0	50
11	BOD	mg/L	1250.00	100
12	COD	mg/L	5153.00	250

Second Monitoring
Sampling Location : **Wastewater (Outlet - CETP)**
Sampling Type: Grab Sampling
Sampling done by: Swarrnim Institute of Technology- Environmental Audit Team
Sampling Method: APHA & IS 3025

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No	Parameters	Unit	Result	Permissible Limit
1	pH	-	**7.4**	**6.0-9.0**
2	Temperature	mg/L	29.0	
3	TSS	mg/L	**41.0**	**100**
4	Oil & Grease	mg/L	**<2.0**	**10**
5	Fluoride	mg/L	**0.65**	**15**
6	Sulphide	mg/L	**1.9**	**5**
7	Total Residual Chlorine	mg/L	**<1.0**	**1.0**
8	Ammonical Nitrogen	mg/L	**12.7**	**50**
9	Total Kjendhal Nitrogen	mg/L	**28.9**	**50**
10	Nitrate Nitrogen	mg/L	**16.1**	**50**
11	BOD	mg/L	**59.0**	**100**
12	COD	mg/L	**22.0**	**250**

Third Monitoring
Sampling Location : **Wastewater (Inlet - CETP)**
Sampling Type: Grab Sampling
Sampling done by: Swarrnim Institute of Technology- Environmental Audit Team
Sampling Method: APHA & IS 3025

Sr. No	Parameters	Unit	Result	Permissible Limit
1	pH	-	9.7	6.0-9.0
2	Temperature	mg/L	31.0	
3	TSS	mg/L	91.0	100
4	Oil & Grease	mg/L	17.9	10
5	Fluoride	mg/L	6.7	15
6	Sulphide	mg/L	3.2	5
7	Total Residual Chlorine	mg/L	<0.1	1.0
8	Ammonical Nitrogen	mg/L	194.0	50
9	Total Kjendhal Nitrogen	mg/L	245.00	50
10	Nitrate Nitrogen	mg/L	58.0	50
11	BOD	mg/L	1310.00	100
12	COD	mg/L	5253.00	250

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Third Monitoring
Sampling Location : **Wastewater (Outlet - CETP)**
Sampling Type: Grab Sampling
Sampling done by: Swarrnim Institute of Technology- Environmental Audit Team
Sampling Method: APHA & IS 3025

Sr. No	Parameters	Unit	Result	Permissible Limit
1	pH	-	7.6	6.0-9.0
2	Temperature	mg/L	31.0	
3	TSS	mg/L	45.0	100
4	Oil & Grease	mg/L	<2.0	10
5	Fluoride	mg/L	0.75	15
6	Sulphide	mg/L	2.1	5
7	Total Residual Chlorine	mg/L	<1.0	1.0
8	Ammonical Nitrogen	mg/L	13.7	50
9	Total Kjendhal Nitrogen	mg/L	29.3	50
10	Nitrate Nitrogen	mg/L	17.1	50
11	BOD	mg/L	37.0	100
12	COD	mg/L	26.0	250

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE -16

DETAILS OF FLUE AND PROCESS GAS STACK & FUEL CONSUMPTION

Stack No.	Stack Attached To	Stack Height in Meter	Air Pollution Control Measures	Parameter	Permissible Limit
1	Boiler 175 TPH	110	**Electrostatic Precipitator + Auto Lime Dosing system**	PM SO2 Nox Hg	30 mg/Nm3 100 mg/Nm3 100 mg/Nm3 0.003 mg/Nm3
2	Boiler 35 TPH	94 (Common Stack)	**Electrostatic Precipitator**	PM SO2 Nox Hg	50 mg/Nm3 600 mg/Nm3 450 mg/Nm3 0.003 mg/Nm3
3	Boiler 35 TPH				
4	Boiler 60 TPH				
5	DG Set 500 KW (600 KVA)	11	-	Particulate Matter SO2 Nox	150 mg/Nm3 100 ppm 50 ppm
6	DG Set 500 KW (600 KVA)	11	-		
7	DG Set 840 KW (1010 KVA)	30	-		
8	DG Set 840 KW (1010 KVA)	30	-		
9	TCE/PCE Plant Thermic Fluid Heaters No. 1	50	**Efficient Burner**		
10	TCE/PCE Plant Thermic Fluid Heaters No. 2	50	**Efficient Burner**		
11	HFC 134a Plant Thermic Fluid Heaters	50	**Efficient Burner**		
12	AHF Plant Heater No. 1 (Thermic Fluid Heaters)	46	**Efficient Burner**		
13	AHF Plant Drying System No. 1	35	**Cyclone Separator / Bag Filter**		
14	AHF Plant Heaters No. 2 (Thermic Fluid Heater)	46	**Efficient Burner**		
15	AHF Plant Drying System No. 2	35	**Cyclone Separator / Bag Filter**		
16	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluid Heater)	55	**Efficient Burner**		
17	Boiler 30 TPH	63	-		
18	Boiler 30 TPH	63	-		
19	DG Sets 4200 KVA	30	-		
20	DG Sets 4200 KVA	30	-		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

21	DG Sets 4200 KVA	30	-		
22	Boiler 17 TPH	53	-		
23	Dust Collector	11	**Bag filter**	Particulate Matter	150 mg/Nm3
DETAILS OF PROCESS STACK ARE AS BELOW					
HF Plant Stack					
1	HF Plant Central Absorption System	30	**Continuous water Circulation**	HF	6mg/NM3
TCE/PCE Plant Stack					
2	TCE/PCE Plant (Central Absorption System)	20	**Continuous Alkali Circulation**	Cl2	9mg/NM3
3	TCE/PCE Plant (Central Absorption System)	30	**Continuous Water Circulation**	HCl	20mg/NM3
HFC Plant Stack					
4	R134a Plant (Central Absorption System)	30	**Continuous Water Circulation**	HCl	20mg/NM3
				HF	6mg/NM3
5	CMS plant (Methylene dichloride, Chloroform, Carbon tetrachloride) Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Cl2	9 mg/NM3
6	Chlorotrifluoroethane (HCFC 133a) Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				HF	6 mg/NM3
7	Pentafluoroethane (HFC 125) Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				HF	6 mg/NM3
8	Difluoromethane (HFC - 32) Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				HF	6 mg/NM3
Flourospeciality Plant Stacks					
9	Reactor / Vessel (10 Nos.) Central Absorption System	30	**Continuous Water Circulation**	HF	6mg/NM3
				HCl	20mg/NM3
10	Reactor / Vessel (10 Nos.) Central Absorption System	30	**Continuous Water Circulation**	HCl	20mg/NM3
11	Reactor / Vessel (04 Nos.) Central Absorption System	20	**Continuous Alkali Circulation**	Cl2	9mg/NM3
12	Reactor / Vessel (02 Nos.) Central Absorption System	20	**Continuous Alkali Circulation**	Br2	2mg/NM3
13	Trifluoro Acetic Acid Central Absorption System	30	**Continuous Water + Alkali Circulation**	HF	6 mg/NM3
				HCl	20 mg/NM3
14	Ethyldifluoroacetate Central Absorption System	30	**Continuous Water + Alkali Circulation**	HF	6 mg/NM3
				HCl	20 mg/NM3
15	Ethyltrifluroacetate Central Absorption System	30	**Continuous Water + Alkali Circulation**	HF	6 mg/NM3
16	Ethyltrifluoroacetoacetate Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
17	Pentafluorobenzoic Acid Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Cl2	9 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

18	Pyrazole Acid Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
19	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Br2	2 mg/NM3
20	Tetrafluoropropene - 1234yf Central Absorption System	30	**Continuous Water + Alkali Circulation**	HF	6 mg/NM3
				HCl	20 mg/NM3
21	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
22	Hexafluoropropylene Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
23	Difluoromethanesulphonlychloride Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Cl2	9 mg/NM3
24	Trifluoromethylbenzamide Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Cl2	9 mg/NM3
25	Bromopentafluorobenzene Central Absorption System	30	**Continuous Water + Alkali Circulation**	Br2	2 mg/NM3
26	5-Bromo-2-2-difluoro-1-3-benzodioxide Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Br2	2 mg/NM3
				HF	6 mg/NM3
27	Difluorobenzodioxole methyl ester Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
				Br2	2 mg/NM3
28	Methyl-2- Fluoroacrylate Central Absorption System	30	**Continuous Water + Alkali Circulation**	HF	6 mg/NM3
29	SCB HCl Storage Tank Farm	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
30	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone) Central Absorption System	30	**Continuous Water + Alkali Circulation**	HCl	20 mg/NM3
31	Flare Stack attached to Topramezone Plant	30	**N.A.**	-	-
32	Chlorodifluoromethane (R22) Plant Central Absorption System	30	**Continuous water Circulation**	HF	6mg/NM3
				HCl	20 mg/NM3
33	Calcium Chloride Plant Scrubber	30	**Continuous Water + Sodium Carbonate Solutions**	CO2	-
34	Methyl Hydroxy Pyrazole Central Absorption System	30	**Continuous water Circulation**	HCl	20 mg/NM3
35	TCE/PCE Acid tank farm area scrubber vent	11.7	**Continuous water Circulation**	HCl	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

36	HFC134a Acid tank farm area scrubber vent	11.4	**Continuous water Circulation**	HCl	20 mg/NM3
37	DHF Scrubber	10	**Continuous water Circulation**	HF	6 mg/NM3

MONTH WISE FUEL CONSUMPTION

Fuel Consumption				
Month	**Coal**	**FO**	**LSHS**	**HSD**
	MT	**KL**	**KL**	**KL**
Apr-23	28738	0	886	226
May-23	25358	0	725	215
Jun-23	26532	0	539	294
Jul-23	31320	0	655	274
Aug-23	28908	0	495	201
Sep-23	22537	0	895	229
Oct-23	24587	0	483	179
Nov-23	25374	0	574	191
Dec-23	28187	0	692	345
Jan-24	29292	0	712	326
Feb-24	27735	0	594	249
Mar-24	22909	0	907	248
Total	**321477**	**0**	**8157**	**2978**
Per month	**26790**	**0**	**680**	**248**
Per day	**878**	**0**	**22**	**8**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –17

ANALYSIS REPORT OF STACK EMISSIONS

1st VISIT ANALYSIS REPORT

Sr. No.	Boiler / TFH / Heaters	Stack height (mt)	Stack Dia(m)	Parameters	Results	GPCB Permissible Limit
	Boiler / TFH / Heaters					
1	DG -1 Sets 600 KVA(500 KW)	11	0.4	PM	60.5	150
				SO2	16.5	100
				NOx	17.5	50
2	DG -2 Sets 600 KVA(500 KW)	11	0.4	PM	61.2	150
				SO2	22.2	100
				NOx	16.2	50
3	DG -1 Sets 1010 KVA (840 KW)	30	0.8	PM	59.2	150
				SO2	26.5	100
				NOx	17.7	50
4	DG -2 Sets 1010 KVA (840 KW)	30	0.8	PM	58.2	150
				SO2	24.4	100
				NOx	14.3	50
5	CPP 35 TPH + 35 TPH+ 60 TPH Boiler (Common Stack)	94	2.5	PM	64.8	150
				SO2	26.1	100
				Nox	18.3	50
				Hg	<0.001	0.03
6	AHF Plant Drying System No. 1 (Thermic Fluid/ Fire Heaters)	35	0.25	PM	65.2	150
				SO2	22.1	100
				NOx	14.2	50
7	AHF Plant Thermic Fluid/ fire Heater No. 1	46	0.7	PM	62.3	150
				SO2	21.8	100
				NOx	13.5	50
8	TCE/PCE Plant Thermic Fluid/ fire Heaters No. 1	50.2	0.732	PM	63.3	150
				SO2	26.2	100
				NOx	16.9	50

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

9	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluif/ Fire Heaters)	50.8	0.75	PM	65.2	150
				SO2	22.2	100
				NOx	14.6	50
10	HFC 134a Plant Thermic Fluid/ fire Heater	50.8	0.75	PM	66.8	150
				SO2	25.2	100
				NOx	18.9	50

Sr. No.	Plant	Stack height (mt)	Stack Dia(m)	Parameters	Result	GPCB Permissible Limit
	Process Stacks					
1	HF Plant Central Absorption System	36.7	0.15	HF	1.4	6.0
2	Difluoromethane Central Absorption System	30	-	HCl	5.6	20
				HF	1.3	6.0
3	Pentafluoroethane Central Absorption System	30	-	HCl	6.2	20
				HF	1.1	6.0
4	TCE/PCE Plant Central Absorption System	20	0.15	CL2	<1.0	9.0
5	TCE/PCE Plant HCL Tank	20	0.1	HCL	5.2	20
6	TCE/PCE Plant Central Absorption System	30	0.08	HCl	5.5	20
7	R134a Plant Central Absorption System	30	0.4	HCl	4.8	20
				HF	1.3	6.0
8	CMS Plant Central Absorption System	30	0.25	HCl	6.6	20
				CL2	<1.0	9.0
9	Calcium Chloride Plant Scrubber	30	-	CO2		
				HCl	5.1	20
10	Reactor/ Vesel Central Absorption system (MPP1)	30	0.1	HCl	5.2	20
				HF	1.1	6.0
11	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	30	0.15	HCl	4.4	20
12	2-methyl-4-（ 1,1,1,2,3,3,3-heptafluoro-2-propyl aniline) Central Absorption System	30	0.15	HCl	4.2	20
				Br2	Nil	2
13	Trifluoro Acetic Acid Central Absorption System	30	0.3	HCl	4.4	20
				HF	1.2	6
14	Pyrazole Acid Central Absorption System	30	0.1	HCl	6.5	20
15	Pentafluorobenzoic Acid Central Absorption System	30	0.1	HCl	6.6	20
				CL2	Nil	9

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

16	Trifluoro methylbenzamide Central Absorption System	30	0.15	HCl	5.0	20
				CL2	Nil	9
17	Reactor/ Vesel Central Absorption system (MPP3)	30	0.1	CL2	Nil	9
18	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone) Central Absorption System	30	0.15	HCl	5.2	20
19	Reactor/ Vesel Central Absorption system (MPP2)	30	0.15	HCl	5.9	20
				HF	1.3	6
20	Reactor/ Vesel Central Absorption system (PP1)	30	0.1	Br2	Nil	2

2nd VISIT ANALYSIS REPORT

Sr. No.	Boiler / TFH / Heaters	Stack height (mt)	Stack Dia(m)	Parameters	Results	GPCB Permissible Limit
	Boiler / TFH / Heaters					
1	CPP 35 TPH + 35 TPH+ 60 TPH Boiler (Common Stack)	94	2.5	PM	68.6	150
				SO2	31.5	100
				Nox	22.6	50
				Hg	<0.001	0.03
2	AHF Plant Drying System No. 1 (Thermic Fluid/ Fire Heaters)	35	0.25	PM	65.9	150
				SO2	25.4	100
				NOx	16.5	50
3	AHF Plant Thermic Fluid/ fire Heater No. 1	46	0.7	PM	67.3	150
				SO2	23.6	100
				NOx	15.6	50
4	TCE/PCE Plant Thermic Fluid/ fire Heaters No. 1	50.2	0.732	PM	66.3	150
				SO2	25.8	100
				NOx	17.5	50
5	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluif/ Fire Heaters)	50.8	0.75	PM	64.3	150
				SO2	27.5	100
				NOx	19.3	50
6	HFC 134a Plant Thermic Fluid/ fire Heater	50.8	0.75	PM	68.3	150
				SO2	25.2	100
				NOx	19.9	50

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

9	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluif/ Fire Heaters)	50.8	0.75	PM	65.2	150
				SO2	22.2	100
				NOx	14.6	50
10	HFC 134a Plant Thermic Fluid/ fire Heater	50.8	0.75	PM	66.8	150
				SO2	25.2	100
				NOx	18.9	50

Sr. No.	Plant	Stack height (mt)	Stack Dia(m)	Parameters	Result	GPCB Permissible Limit
	Process Stacks					
1	HF Plant Central Absorption System	36.7	0.15	HF	1.6	6.0
2	Difluoromethane Central Absorption System	30	-	HCl	6.1	20
				HF	2.2	6.0
3	Pentafluoroethane Central Absorption System	30	-	HCl	6.8	20
				HF	1.4	6.0
4	TCE/PCE Plant Central Absorption System	20	0.15	CL2	<1.0	9.0
5	TCE/PCE Plant HCL Tank	20	0.1	HCL	5.5	20
6	TCE/PCE Plant Central Absorption System	30	0.08	HCl	6.9	20
7	R134a Plant Central Absorption System	30	0.4	HCl	5.3	20
				HF	2.5	6.0
8	CMS Plant Central Absorption System	30	0.25	HCl	6.9	20
				CL2	<1.0	9.0
9	Calcium Chloride Plant Scrubber	30	-	CO2	-	-
				HCl	6.3	20
10	Reactor/ Vesel Central Absorption system (MPP1)	30	0.1	HCl	5.5	20
				HF	2.6	6.0
11	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	30	0.15	HCl	5.1	20
12	2-methyl-4-（ 1,1,1,2,3,3,3-heptafluoro-2-propyl aniline) Central Absorption System	30	0.15	HCl	5.3	20
				Br2	Nil	2.0
13	Trifluoro Acetic Acid Central Absorption System	30	0.3	HCl	4.9	20
				HF	2.9	6.0
14	Pyrazole Acid Central Absorption System	30	0.1	HCl	7.1	20
15	Pentafluorobenzoic Acid Central Absorption System	30	0.1	HCl	7.6	20
				CL2	<1.0	9.0

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

17	Reactor/ Vesel Central Absorption system (MPP4)	30	0.1	CL2	<1.0	9.0
18	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone) Central Absorption System	30	0.15	HCl	6.2	20
20	Reactor/ Vesel Central Absorption system (PP1)	30	0.1	Br2	Nil	2.0

3rd VISIT ANALYSIS REPORT

Sr. No.	Boiler / TFH / Heaters	Stack height (mt)	Stack Dia(m)	Parameters	Results	GPCB Permissible Limit
	Boiler / TFH / Heaters					
1	AHF Plant Drying System No. 1 (Thermic Fluid/ Fire Heaters)	94	2.5	PM	69.6	150
				SO2	32.5	100
				Nox	21.6	50
				Hg	<0.001	0.03
2	AHF Plant Drying System No. 2 (Thermic Fluid/ Fire Heaters)	35	0.25	PM	66.9	150
				SO2	27.4	100
				NOx	15.5	50
3	AHF Plant Thermic Fluid/ fire Heater No. 1	46	0.7	PM	66.3	150
				SO2	24.6	100
				NOx	16.6	50
4	AHF Plant Thermic Fluid/ fire Heater No. 2	50.2	0.732	PM	64.7	150
				SO2	26.7	100
				NOx	18.5	50
5	TCE/PCE/Plant thermic/ Fire Heater no 1	50.8	0.75	PM	65.3	150
				SO2	28.5	100
				NOx	20.3	50
6	TCE/PCE/Plant thermic/ Fire Heater no 2	50.8	0.75	PM	66.3	150
				SO2	26.2	100
				NOx	18.9	50
7	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluif/ Fire Heaters)	50.8	0.75	PM	64.2	150
				SO2	23.2	100
				NOx	15.6	50
8	HFC 134a Plant Thermic Fluid/ fire Heater	50.8	0.75	PM	67.8	150
				SO2	26.2	100
				NOx	19.9	50

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Plant	Stack height (mt)	Stack Dia(m)	Parameters	Result	GPCB Permissible Limit
	Process Stacks					
1	HF Plant Central Absorption System	36.7	0.15	HF	1.9	6.0
2	Difluoromethane Central Absorption System	30	-	HCl	7.5	20
				HF	3.2	6.0
3	Reactor/ Vesel Central Absorption system (PP1)	30	-	HCl	6.9	20
				HF	1.9	6.0
4	TCE/PCE Plant Central Absorption System	20	0.15	CL2	<1.0	9.0
5	TCE/PCE Plant HCL Tank	20	0.1	HCL	6.1	20
6	TCE/PCE Plant Central Absorption System	30	0.08	HCl	7.3	20
7	R134a Plant Central Absorption System	30	0.4	HCl	6.2	20
				HF	3.1	6.0
8	CMS Plant Central Absorption System	30	0.25	HCl	6.4	20
				CL2	<1.0	9.0
9	Calcium Chloride Plant Scrubber	30	-	CO2	-	-
				HCl	7.1	20
10	Reactor/ Vesel Central Absorption system (MPP1)	30	0.1	HCl	6.3	20
				HF	3.1	6.0
11	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	30	0.15	HCl	6.2	20
12	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline) Central Absorption System	30	0.15	HCl	6.4	20
				Br2	Nil	2
13	Trifluoro Acetic Acid Central Absorption System	30	0.3	HCl	5.1	20
				HF	3.2	6.0
14	Pyrazole Acid Central Absorption System	30	0.1	HCl	7.8	20
15	Pentafluorobenzoic Acid Central Absorption System	30	0.1	HCl	6.6	20
				CL2	<1.0	9.0
16	Reactor/ Vesel Central Absorption system (MPP4)	30	0.1	CL2	<1.0	9.0
17	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone) Central Absorption System	30	0.15	HCl	7.0	20
18	Reactor/ Vesel Central Absorption system (MPP2)	30	0.14	Br2	Nil	2
19	Reactor/ Vesel Central Absorption system (MPP3)	30	0.12	Br2	Nil	2

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE -18

AMBIENT AIR QUALITY MONITORING

First Monitoring						
Sampling done by : Swarrnim Institute of Technology- Environmental Audit Team						
Sampling Duration: 24 hours						
Sampling Location	**Parameter**	**Test Method**	**Test Results**	**Unit**	**GPCB Limits**	**% Deviation**
Near P-32 Plant	PM_{10}	IS 5182 (part-23); 2006	80.6	$\mu g/m^3$	100	-
	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	38.2	$\mu g/m^3$	60	-
	SO_2	IS 5182 (part-2); 2001	22.5	$\mu g/m^3$	80	-
	NO_X	IS 5182 (part-6); 2006	24.1	$\mu g/m^3$	80	-
Near F-32 Plant	PM_{10}	IS 5182 (part-23); 2006	77.0	$\mu g/m^3$	100	-
	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	33.2	$\mu g/m^3$	60	-
	SO_2	IS 5182 (part-2); 2001	24.1	$\mu g/m^3$	80	-
	NO_X	IS 5182 (part-6); 2006	22.2	$\mu g/m^3$	80	-
Near CMS Plant	PM_{10}	IS 5182 (part-23); 2006	74.8	$\mu g/m^3$	100	-

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	35.5	µg/m$_3$	60	-
	SO_2	IS 5182 (part-2); 2001	28.1	µg/m$_3$	80	-
	NO_X	IS 5182 (part-6); 2006	23.7	µg/m$_3$	80	-

Second Monitoring						
Sampling done by : Swarrnim Institute of Technology- Environmental Audit Team						
Sampling Duration: 24 hours						
Sampling Location	**Parameter**	**Test Method**	**Test Results**	**Unit**	**GPCB Limits**	**% Deviation**
Near P-32 Plant	PM_{10}	IS 5182 (part-23); 2006	81.6	µg/m^3	100	-
	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	39.2	µg/m^3	60	-
	SO_2	IS 5182 (part-2); 2001	23.8	µg/m^3	80	-
	NO_X	IS 5182 (part-6); 2006	23.2	µg/m^3	80	-
Near F-32 Plant	PM_{10}	IS 5182 (part-23); 2006	80.0	µg/m^3	100	-
	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	35.8	µg/m^3	60	-
	SO_2	IS 5182 (part-2); 2001	26.2	µg/m^3	80	-
	NO_X	IS 5182 (part-6); 2006	21.5	µg/m^3	80	-
Near CMS Plant	PM_{10}	IS 5182 (part-23); 2006	78.8	µg/m^3	100	-

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	34.5	µg/m^3	60	-
	SO_2	IS 5182 (part-2); 2001	29.5	µg/m^3	80	-
	NO_X	IS 5182 (part-6); 2006	24.7	µg/m^3	80	-

Third Monitoring						
Sampling done by : Swarrnim Institute of Technology- Environmental Audit Team						
Sampling Duration: 24 hours						
Sampling Location	**Parameter**	**Test Method**	**Test Results**	**Unit**	**GPCB Limits**	**% Deviation**
Near P-32 Plant	PM_{10}	IS 5182 (part-23); 2006	85.6	µg/m^3	100	-
	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	40.3	µg/m^3	60	-
	SO_2	IS 5182 (part-2); 2001	25.4	µg/m^3	80	-
	NO_X	IS 5182 (part-6); 2006	24.2	µg/m^3	80	-
Near F-32 Plant	PM_{10}	IS 5182 (part-23); 2006	82.3	µg/m^3	100	-
	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	37.1	µg/m^3	60	-
	SO_2	IS 5182 (part-2); 2001	25.8	µg/m^3	80	-
	NO_X	IS 5182 (part-6); 2006	22.6	µg/m^3	80	-
Near CMS Plant	PM_{10}	IS 5182 (part-23); 2006	84.9	µg/m^3	100	-

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	$PM_{2.5}$	SOP (ACTEnv.lab.) Gravimetric method (Based on CPCB guideline, 2011 for the measurement of Ambient)	35.5	µg/m^3	60	-
	SO_2	IS 5182 (part-2); 2001	28.5	µg/m^3	80	-
	NO_X	IS 5182 (part-6); 2006	23.7	µg/m^3	80	-

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 19

DETAILS OF HAZARDOUS WASTE

Sr. No.	Name of Hazardous Waste	Waste Category No.	UOM	Total Hazardous Waste Quantity	Mode of disposal
1	Chemical sludge from wastewater treatment	35.3	MTA	3265	Collection, Storage, Transportation and disposal at approved TSDF or pre-processing/co-processing facility.
2	Spent Oil	5.1	MTA	600	Collection, Storage, Reuse, Transportation and disposal by sending to authorized recycler/ refiners.
3	Discarded containers / barrels / liners used for hazardous wastes/chemicals	33.1	MTA	5428	Collection, Storage, decontamination/detoxification, reuse, Transportation and disposal by sending to authorized decontamination facility.
4	Spent Catalyst	28.2	MTA	2763	Collection, Storage, Transportation and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
5	Spent Carbon	28.3	MTA	468	Collection, Storage, Transportation, and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
6	Off- Specification Product	28.4	MTA	600	Collection, Storage, Transportation, and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
7	Process Residue & Waste	36.1	MTA	15125	Collection, Storage, Transportation, and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility
8	Spent Organic Solvent	20.2	MTA	47586	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission or applied with valid CCA after making MOU
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	MTA	18553	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission or applied with valid CCA after making MOU
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	MTA	37869	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Name of Hazardous Waste	Waste Category No.	UOM	Total Hazardous Waste Quantity	Mode of disposal
11	CuCl Cake	8.2	MTA	52	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.
12	Ammonium Salt	A-10	MTA	1717	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
13	Potassium Salt	B-36	MTA	2572	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
14	Sodium Salt	B-36	MTA	4402	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
15	Zinc Compound	6.1	MTA	44	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
16	Hydrofluoricsilic acid (15-40%)	Sch II - Class C - C2	MTA	4000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
17	Sulphuric acid (30-95%)	B-15	MTA	90382	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
18	Hydrochloric Acid (10 - 33%)	B-15	MTA	411553	Collection, Storage, Transportation, Sell to Actual User / end user having rule-9 applied with valid CCA after making MOU or converted in to the Calcium Chloride and sold to actual users/ disposed off in deep sea.
19	Sodium Hypochlorite	B-7	MTA	13875	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	MTA	2593	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Name of Hazardous Waste	Waste Category No.	UOM	Total Hazardous Waste Quantity	Mode of disposal
21	Calcium Fluoride	B-10	MTA	5844	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
22	Calcium Chloride	B-10	MTA	165	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
23	Sodium methoxide Solution	C7	MTA	120	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
24	Phosphorus trichloride	B-35	MTA	934	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
25	Gypsum (CaSO4)	38.1	MTA	162400	Collection, Storage, Transportation and Disposal by sending to Cement industries or Actual Users having rule-9 applied with valid CCA after making MOU or co-processing or pre-processing facility
26	Aluminium trifluoride	36.1	MTA	1000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
27	Liquor Ammonia Solution (10-25%)	A10	MTA	1500	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	MTA	2802	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
29	Fluoroform (R23)	28.1	MTA	240	Collection, Storage, In-house treatment through thermal oxidizer/transportation and disposal at approved CHWIF/transportation , treatment through thermal oxidizer at SRF Limited, Bhiwadi/pre-processing/co-processing / CBMWTF having rotary kiln incinerator /

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Name of Hazardous Waste	Waste Category No.	UOM	Total Hazardous Waste Quantity	Mode of disposal
					authorized end user with rule-9 applied after making MOU.
30	Inorganic Sludge Generation from Calcium Chloride Plant	35.3	MTA	2034	Collection, Storage, Transportation and Disposal at approved TSDF
31	Caustic lye	Sch II - Class C - C2	MTA	36	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
32	Ash from Thermal Oxidizer and flue gas cleaning residue	37.2	MTA	40	Collection, storage, /transportation / disposed to TSD/CHWIF.
33	Exhaust air and gas cleaning residue (Mixed/lean Acid generated from Scrubber of Thermal Oxidizer)	35.1	MTA	1908	Collection, Storage, Transportation and Disposal at approved CHWIF or co-processing or pre-processing facility.
34	Insulation waste	-	MTA	300	Collection, Storage, Transportation and Disposal at approved TSDF

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 20

DETAIL OF HAZARDOUS (SOLID) WASTE GENERATION &DISPOSAL

S. No.	Name of Hazardous Waste	Waste Category No.	UOM	Disposal Limit as per CC&A MTPA	Total Generation quantity MTPA	Total Disposal quantity MTPA	Mode of disposal
1	Chemical sludge from wastewater treatment	35.3	MTA	3265	2740.53	2750.53	Collection, Storage, Transportation and disposal at approved TSDF or pre-processing/co-processing facility.
2	Spent Oil	5.1	MTA	600	7.37	8.37	Collection, Storage, Reuse, Transportation and disposal by sending to authorized recycler/ refiners.
3	Discarded containers / barrels / liners used for hazardous wastes/chemicals	33.1	MTA	5428	792.31	790.91	Collection, Storage, decontamination/detoxification, reuse, Transportation and disposal by sending to authorized decontamination facility.
4	Spent Catalyst	28.2	MTA	2763	33.58	34.58	Collection, Storage, Transportation and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
5	Spent Carbon	28.3	MTA	468	0.00	0.00	Collection, Storage, Transportation, and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
6	Off- Specification Product	28.4	MTA	600	0.00	0.00	Collection, Storage, Transportation, and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility.
7	Process Residue & Waste	36.1	MTA	15125	9540.86	9532.77	Collection, Storage, Transportation, and disposal at approved TSDF/ CHWIF or co-processing or pre-processing facility
8	Spent Organic Solvent	20.2	MTA	47586	37294.52	37294.52	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission or applied with valid CCA after making MOU

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

S. No.	Name of Hazardous Waste	Waste Category No.	UOM	Disposal Limit as per CC&A MTPA	Total Generation quantity MTPA	Total Disposal quantity MTPA	Mode of disposal
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	MTA	18553	5098.47	5166.04	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission or applied with valid CCA after making MOU
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	MTA	37869	28830.07	29606.42	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.
11	CuCl Cake	8.2	MTA	52	14.78	14.78	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.
12	Ammonium Salt	A-10	MTA	1717	51.79	51.79	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
13	Potassium Salt	B-36	MTA	2572	267.29	341.29	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
14	Sodium Salt	B-36	MTA	4402	4035.37	4035.37	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
15	Zinc Compound	6.1	MTA	44	16.89	16.89	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
16	Hydrofluoricsilic Acid (15-40%)	Sch II - Class C - C2	MTA	4000	2785.75	2793.95	Collection, Storage, Transportation and Disposal by sending to authorized Actual

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

S. No.	Name of Hazardous Waste	Waste Category No.	UOM	Disposal Limit as per CC&A MTPA	Total Generation quantity MTPA	Total Disposal quantity MTPA	Mode of disposal
							users/end-user having rule-9 applied with valid CCA after making MOU
17	Sulphuric acid (30-95%)	B-15	MTA	90382	41259.99	40888.65	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
18	Hydrochloric Acid (10 - 33%)	B-15	MTA	411553	266171.36	194346.92	Collection, Storage, Transportation, Sell to Actual User / end user having rule-9 applied with valid CCA after making MOU or converted in to the Calcium Chloride and sold to actual users/ disposed off in deep sea.
19	Sodium Hypochlorite	B-7	MTA	13875	7433.06	7249.56	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	MTA	2593	1052.93	1052.93	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
21	Calcium Fluoride	B-10	MTA	5844	0.00	0.00	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
22	Calcium Chloride	B-10	MTA	165	0.00	0.00	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
23	Sodium methoxide Solution	C7	MTA	120	37.81	37.81	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

S. No.	Name of Hazardous Waste	Waste Category No.	UOM	Disposal Limit as per CC&A MTPA	Total Generation quantity MTPA	Total Disposal quantity MTPA	Mode of disposal
							approved TSDF/CHWIF or co-processing or pre-processing
24	Phosphorus trichloride	B-35	MTA	934	0.00	0.00	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
25	Gypsum (CaSO4)	38.1	MTA	162400	129623.01	129103.01	Collection, Storage, Transportation and Disposal by sending to Cement industries or Actual Users having rule-9 applied with valid CCA after making MOU or co-processing or pre-processing facility
26	Aluminium Trifluoride	36.1	MTA	1000	0.00	0.00	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
27	Liquor Ammonia Solution (10-25%)	A10	MTA	1500	330.99	330.99	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	MTA	2802	0.00	0.00	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
29	Fluoroform (R23)	28.1	MTA	240	30.18	29.35	Collection, Storage, In-house treatment through thermal oxidizer/transportation and disposal at approved CHWIF/transportation , treatment through thermal oxidizer at SRF Limited, Bhiwadi/pre-processing/co-

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

S. No.	Name of Hazardous Waste	Waste Category No.	UOM	Disposal Limit as per CC&A MTPA	Total Generation quantity MTPA	Total Disposal quantity MTPA	Mode of disposal
							processing / CBMWTF having rotary kiln incinerator / authorized end user with rule-9 applied after making MOU.
30	Inorganic Sludge Generation from Calcium Chloride Plant	35.3	MTA	2034	1523.69	1523.69	Collection, Storage, Transportation and Disposal at approved TSDF
31	Caustic lye	Sch II - Class C - C2	MTA	36	0.00	0.00	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 applied with valid CCA after making MOU
32	Ash from Thermal Oxidizer and flue gas cleaning residue	37.2	MTA	40	0.00	0.00	Collection, storage, /transportation / disposed to TSD/CHWIF.
33	Exhaust air and gas cleaning residue (Mixed/lean Acid generated from Scrubber of Thermal Oxidizer)	35.1	MTA	1908	0.00	0.00	Collection, Storage, Transportation and Disposal at approved CHWIF or co-processing or pre-processing facility.
34	Insulation waste	-	MTA	300	176.92	180.92	Collection, Storage, Transportation and Disposal at approved TSDF

MONTHWISE SOLID WASTE GENERATION AND DISPOSAL

Month	Name of Waste: Fly Ash	
	Generation Quantity (MT)	Disposal Quantity (MT)
Apr-23	2235	2313
May-23	1124	1141
Jun-23	1032	1021
Jul-23	1134	1153
Aug-23	1222	1201
Sep-23	965	915
Oct-23	1237	1312
Nov-23	1148	1042

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Dec-23	1071	1133
Jan-24	1499	1543
Feb-24	1743	1733
Mar-24	1296	1103
Total	15706	15611

WASTE DISPOSAL
SOLID WASTE SENT TO TSDF

Sr. No.	Types of Waste	HW Category No.	Authorized Qty MT/Year	Disposal Quantity during year 2023-2024 (MT/Year)	Method of Disposal
1	Chemical sludge from wastewater treatment	35.3	3265	2750.53	Collection, Storage, Transportation and disposal at approved TSDF or pre-processing/co-processing facility.
2	Chemical sludge from wastewater treatment (MEE / ATFD Salt)	35.3	37869	29606.42	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.
3	Inorganic Sludge	35.3	2034	1523.69	Collection, Storage, Transportation and Disposal at approved TSDF
4	Insulation waste	-	300	180.92	Collection, Storage, Transportation and Disposal at approved TSDF

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 21

ANALYSIS REPORT FOR SOLID HAZARDOUS WASTE

First Monitoring			
Sampling Location: CETP sludge			
Sampling done by : Swarrnim Institute of Technology- Environmental Audit Team			
Parameter	Test Method	Test Results	Unit
pH (10 % Solution)	IS:3025 (part-11)-1983	7.19	-
Moisture Content	IS:15106 and IS:11465	6.9	**%**
Total Organic Compound	APHA 2540 E	898	g/kg
Total Inorganic Compound	APHA 2540 E	102	g/kg

Second Monitoring			
Sampling Location: CETP sludge			
Sampling done by : Swarrnim Institute of Technology- Environmental Audit Team			
Parameter	Test Method	Test Results	Unit
pH (10 % Solution)	IS:3025 (part-11)-1983	8.29	-
Moisture Content	IS:15106 and IS:11465	5.8	**%**
Total Organic Compound	APHA 2540 E	910	g/kg
Total Inorganic Compound	APHA 2540 E	105	g/kg

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Third Monitoring			
Sampling Location: CETP sludge			
Sampling done by : Swarrnim Institute of Technology- Environmental Audit Team			
Parameter	Test Method	Test Results	Unit
pH (10 % Solution)	IS:3025 (part-11)-1983	9.17	-
Moisture Content	IS:15106 and IS:11465	6.2	**%**
Total Organic Compound	APHA 2540 E	917	g/kg
Total Inorganic Compound	APHA 2540 E	106	g/kg

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 22

NOISE LEVEL DB (A) WITHIN THE PLANT PREMISES

First Monitoring

Sr. No.	Location of Monitoring Station	Time	Noise level in dB	Permissible limit in dB*
				During daytime
1	Near Main gate	1:45pm	51.2	75
2	Near Admin. office	2.00pm	58.2	75
3	Near ETP plant	2.15pm	68.9	75
4	Near Boiler	2.10pm	72.5	75

Second Monitoring

Sr. No.	Location of Monitoring Station	Time	Noise level in dB	Permissible limit in dB*
				During daytime
1	Near Main gate	1:45pm	53.2	75
2	Near Admin. office	2.00pm	59.2	75
3	Near ETP plant	2.15pm	70.9	75
4	Near Boiler	2.10pm	73.5	75

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 23

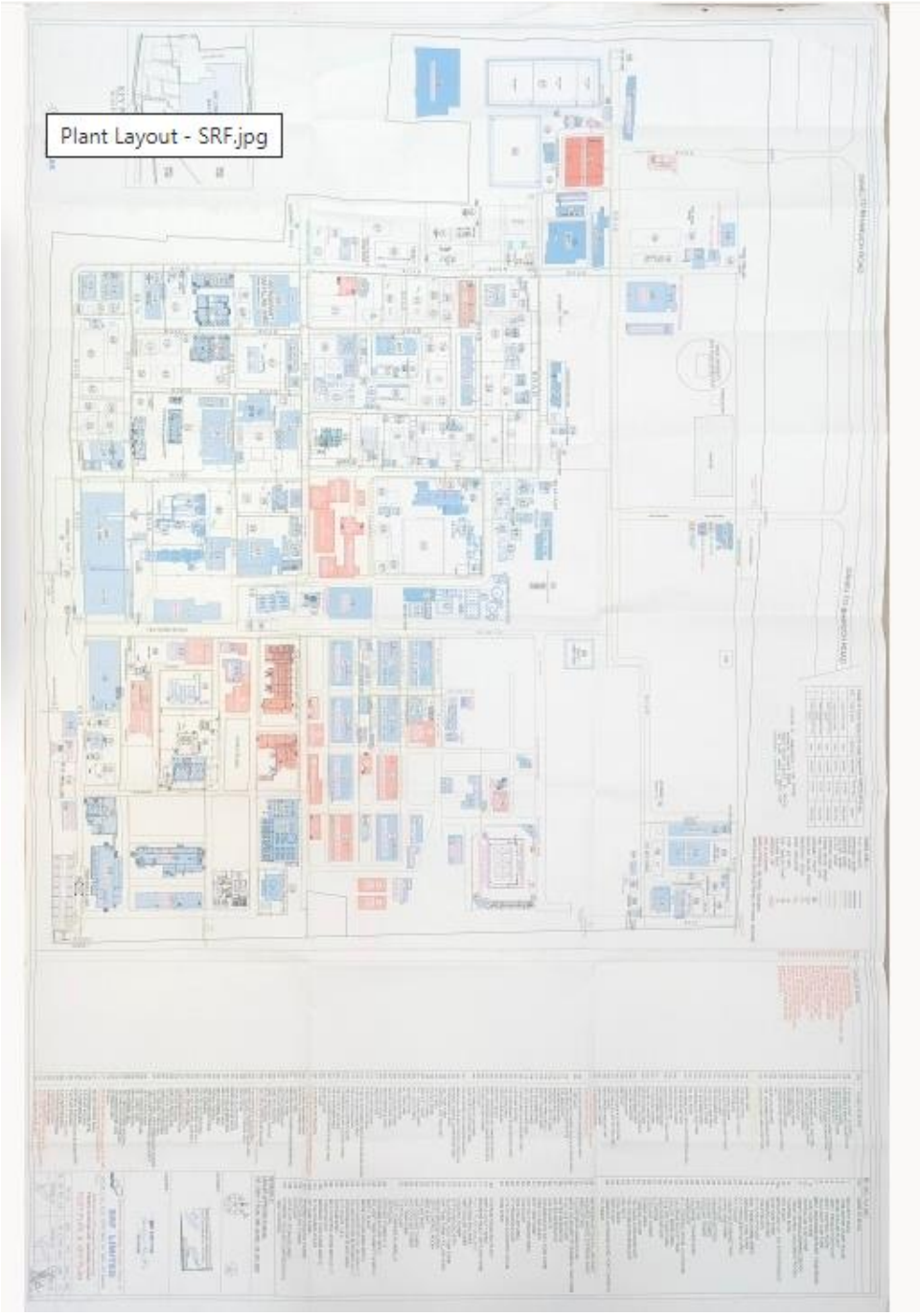
TOTAL POLLUTION LOAD

WATER

Sr. No.	Parameter	Avg. Result (mg/L)	Kg/day
1	TSS	41.33	64.18
2	BOD	52.00	80.76
3	COD	22.33	34.78
4	AMMONICAL NITROGEN	12.63	19.61

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –24
SITE PLAN



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –25

ISO CERTIFICATE

BUREAU VERITAS

Bureau Veritas Certification

SRF LIMITED

(FLUOROCHEMICALS BUSINESS & SPECIALTY CHEMICALS BUSINESS)

SRF

HEAD OFFICE: BLOCK-C, GREENWOOD CITY, SECTOR - 45, GURUGRAM – 122 003, HARYANA, INDIA.

This is a multi-site certificate, additional site(s) are listed on the next page(s)

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above Organisation has been audited and found to be in accordance with the requirements of the Management System Standards detailed below.

Standards

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Scope of certification

- **Marketing, Manufacturing, Stuffing of containers and Dispatch of:**
  - Refrigerant - R134a, R32, R125, R22
  - HFC 134a P (1, 1, 1, 2 – Tetrafluoroethane) / Norflurane / HFA – 134a / Dymel® 134a/P
  - HFC 134a Propellant Grade
  - Refrigerant Blends – R410A
  - Methyl Chloride, Methylene Chloride, Chloroform and Carbon Tetrachloride
  - Calcium Chloride
  - Trichloroethylene (TCE), Perchloroethylene (PCE)
  - Specialty Chemicals as intermediates and active substances in Pharmaceutical, Agrochemical and Polymer Industries
  - Hydrochloric Acid, Anhydrous Hydrochloric Acid, Anhydrous Hydrofluoric Acid, Dilute Hydrofluoric Acid, Sulphuric Acid and Sodium Hypochlorite
- Stuffing of R600a
- Periodic examination and testing of cylinders / tonners of Hydrogen fluoride, Mixture gas, R-134a, R22

Original cycle start date for ISO 9001 & ISO 14001: **18 April 2014**

Original cycle start date for ISO 45001: **28 May 2021**

Recertification cycle start date: **14 April 2023**

Subject to the continued satisfactory operation of the Organisation's Management System, this certificate is valid until: **17 April 2026**

Certificate No. **IND.23.5093/IM/U** Version: **1** Issue date: **14 April 2023**

For certificate authenticity, click here https://certcheck.ukas.com/

ISO 9001	IN043181
ISO 14001	IN043183
ISO 45001	IN043182

UKAS MANAGEMENT SYSTEMS 0008

Signed on behalf of BVCH SAS UK Branch
Jagdheesh N. MANIAN
Director – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

Certification body address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local office: Bureau Veritas (India) Private Limited (Certification Business) 72 Business Park, Marol Industrial Area, MIDC Cross Road "C", Andheri (East), Mumbai – 400 093, India.

Pg 1 of 2

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call **+ 91 22 6274 2000.**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Bureau Veritas Certification

SRF LIMITED

(FLUOROCHEMICALS BUSINESS & SPECIALTY CHEMICALS BUSINESS)

Standards

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Scope of certification

SITE	ADDRESS	SCOPE
HEAD OFFICE	BLOCK-C, GREENWOOD CITY, SECTOR - 45, GURUGRAM – 122 003, HARYANA, NDIA.	• **Marketing of:** ○ Refrigerant - R134a, R32, R125, R22 ○ HFC 134a P (1, 1, 1, 2 – Tetrafluoroethane) / Norflurane / HFA – 134a / Dymel® 134a/P ○ HFC 134a Propellant Grade ○ Refrigerant Blends – R410A ○ Methyl Chloride, Methylene Chloride, Chloroform and Carbon Tetrachloride ○ Calcium Chloride ○ Trichloroethylene (TCE), Perchloroethylene (PCE) ○ Specialty Chemicals as intermediates and active substances in Pharmaceutical, Agrochemical and Polymer Industries ○ Hydrochloric Acid, Anhydrous Hydrochloric Acid, Anhydrous Hydrofluoric Acid, Dilute Hydrofluoric Acid, Sulphuric Acid and Sodium Hypochlorite
SITE-1	D-2/1, GIDC PHASE-II, PCPIR, DAHEJ, BHARUCH – 392 130, GUJARAT, INDIA.	• **Manufacturing, Stuffing of containers and Dispatch of:** ○ Refrigerant - R134a, R32, R125, R22 ○ HFC 134a P (1, 1, 1, 2 – Tetrafluoroethane) / Norflurane / HFA – 134a / Dymel® 134a/P ○ HFC 134a Propellant Grade ○ Refrigerant Blends – R410A ○ Methyl Chloride, Methylene Chloride, Chloroform and Carbon Tetrachloride ○ Calcium Chloride ○ Trichloroethylene (TCE), Perchloroethylene (PCE) ○ Specialty Chemicals as intermediates and active substances in Pharmaceutical, Agrochemical and Polymer Industries ○ Hydrochloric Acid, Anhydrous Hydrochloric Acid, Anhydrous Hydrofluoric Acid, Dilute Hydrofluoric Acid, Sulphuric Acid and Sodium Hypochlorite • Stuffing of R600a • Periodic examination and testing of cylinders / tonners of Hydrogen fluoride, Mixture gas, R-134a, R22

Certificate No. **IND.23.5093/IM/U** Version: **1** Issue date: **14 April 2023**

For certificate authenticity, click here
https://certicheck.ukas.com/

ISO 9001	IN043181
ISO 14001	IN043183
ISO 45001	IN043182

UKAS MANAGEMENT SYSTEMS
0008

Signed on behalf of BVCH SAS UK Branch
Jagdheesh N. MANIAN
Director – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

Certification body address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom.

Local office: Bureau Veritas (India) Private Limited (Certification Business)
72 Business Park, Marol Industrial Area, MIDC Cross Road "C",
Andheri (East), Mumbai – 400 093, India.

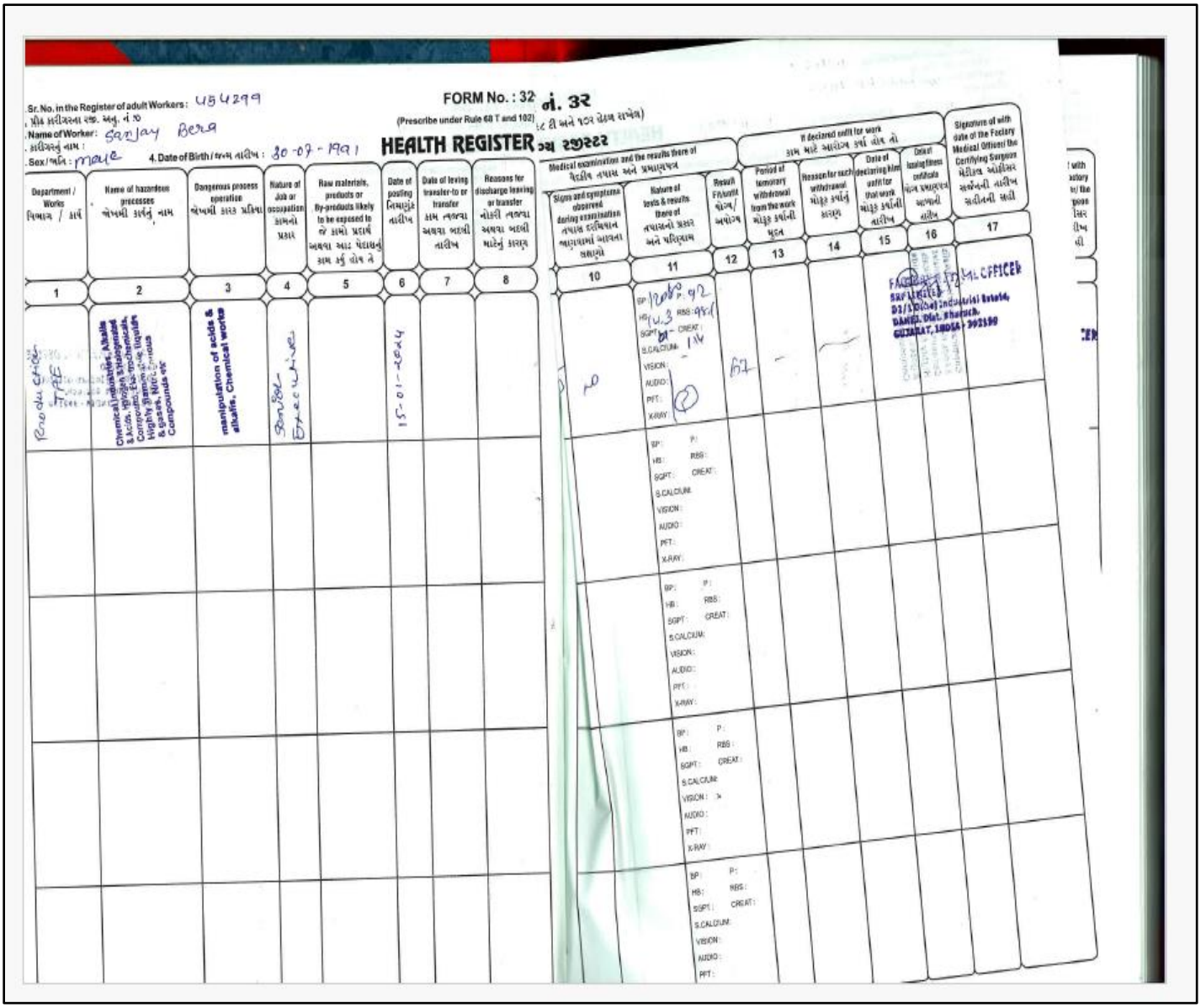
Pg 2 of 2

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call **+ 91 22 6274 2000.**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –26

DETAILS OF HEALTH RECORD



FORM No. : 32 નં. ૩૨

(Prescribe under Rule 68 T and 102) ૬૮ ટી અને ૧૦૨ હેઠળ રાખવું)

HEALTH REGISTER ગ્રા રજીસ્ટર

Sr. No. in the Register of adult Workers: 454299
. પ્રૌઢ મજૂરોના રજી. નંબર
. Name of Worker: Sanjay Bera
. કારીગરનું નામ :
. Sex / જાતિ : male 4. Date of Birth / જન્મ તારીખ : 30-07-1991

Department / Works વિભાગ / કાર્ય	Name of hazardous processes ચોખમી કારનું નામ	Dangerous process operation ચોખમી કારક પ્રક્રિયા	Nature of Job or occupation કામનો પ્રકાર	Raw materials, products or By-products likely to be exposed to જે કામો પ્રકાર અથવા આડ પેદાશનું કામ કર્યું હોય તે	Date of posting નિમણૂંક તારીખ	Date of leving transfer-to or transfer કામ તજવા અથવા બદલી તારીખ	Reasons for discharge leaving or transfer નોકરી તજવા અથવા બદલી માટેનું કારણ
1	2	3	4	5	6	7	8
Production TAPE	Chemical Industries, Alkalis & Acids, Nitrogen Manufactured Corrosive, Electrolytic Hydrolysis Highly Reactive Chemicals & gases, Misc. Chemicals Compounds etc	manipulation of acids & alkalis, Chemical works	Operator Executive		15-01-2024		

Medical examination and the results there of વૈદકીય તપાસ અને પ્રમાણપત્ર			If declared unfit for work કામ માટે અયોગ્ય કર્યા હોય તો			Signature of with date of the Factory Medical Officer/ the Certifying Surgeon મેડીકલ ઓફીસર સર્જનની તારીખ સહીનો સહી
Signs and symptoms observed during examination તપાસ દરમિયાન જાણવામાં આવતા લક્ષણો	Nature of tests & results there of તપાસનો પ્રકાર અને પરિણામ	Result Fit/unfit યોગ્ય/ અયોગ્ય	Period of temporary withdrawal from the work મોકૂફ કર્યાની મુદત	Reason for such withdrawal મોકૂફ કર્યાનું કારણ	Date of declaring him unfit for that work મોકૂફ કર્યાની તારીખ	Date of issuing fitness certificate યોગ્ય પ્રમાણપત્ર આપ્યાની તારીખ	
10	11	12	13	14	15	16	17
ND	BP: 120/P. 92 HB: 14.3 RBS: 95 SGPT: 21 CREAT: 1.1 S.CALCIUM: VISION: AUDIO: PFT: X-RAY:	Fit	-	-			

FACTORY MEDICAL OFFICER
SRF LIMITED
B2/1,GIDC Ind. Estate,
DAHEJ, Dist. Bharuch.
GUJARAT, INDIA - 392130

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

DOJ - 15/1/2024

FORM NO. 33

(Prescribed under Rule 68-T and 102)
Certificate of Fitness of employment in hazardous process and operations
(TO BE ISSUED BY FACTORY MEDICAL OFFICER)

1	Serial number in the register of adult workers પુખ્ત વયના કર્મ. નો ક્રમ નંબર	:	A154299
2	Name of the person examined નામ	:	Sanjoy Bera
3	Father's Name પિતાનું નામ	:	Late Rasbihari Bera
4	Sex જાતિ	:	Male
5	Residence રહેવાસ	:	H/No - 8/3, Kutigram, Gamaria, Baharagora, East Singbhum, Jharkhand - 832101
6	Date of birth, if available જન્મ તારીખ	:	30/07/1991
7	Name & Address of the factory ફેક્ટરી નું નામ અને સરનામું	:	SRF Limited, Dahej
8	The worker is employed/ proposed કામદારના કામ નો પ્રકાર	:	Sr. executive - Process
	(a) Hazardous process ભયજનક પ્રક્રિયા ?	:	Yes
	(b) Dangerous operation જોખમી પ્રક્રિયા ?	:	Yes

I certify that I have personally examined the above named person whose identification marks are a black mole on right chest and who is desirous of being employed in above mentioned process/operation and that his/her age as can be ascertained from my examination is 32 years.

In my opinion he/she is fit for employment in the said manufacturing process/operation.

In my opinion he/she is unfit for employment in the said manufacturing process/operation for the reason _____. He/she is referred for further examination to the Certifying Surgeon.

The serial number of previous certificate is _____

Sanjoy Bera
Signature or left thumb impression of the person examined

Signature of the Certifying Surgeon

Stamp of the Factory Medical Officer with Name of the Factory

FACTORY MEDICAL OFFICER
SRF LIMITED
Dahej Industrial Estate,
GIDC, Dahej Bharuch,
GUJARAT, INDIA - 392130

I certify that I examined the person mentioned above on (date of examination)	I extend this certificate unfit (if certificate is not extended, the period for which the worker is considered unfit for work is to be mentioned)	Signs & symptoms observed during examination	Signature of the factory medical officer with date

Note: 1. If declared unfit, referance should be made immediately to the Certifying Surgeon.
2. Certifying Surgeon should communicate his findings to the occupier with 30 days of the receipt of this reference.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –27

DETAILS OF PLI POLICY

HDFC ERGO General Insurance Company Limited

sub-rule

Branch	Ground Floor Eros Corporate Tower Nehru Place South Delhi, 110019. Tel.: +91-11-30294200

Warranties :

Warranted that there are no known losses and /or circumstances that may lead to losses or claims under this policy (except the claims and / or circumstances already reported to HDFC ERGO General Insurance Co. Ltd.)

This policy is issued basis the information and representations provided by or on behalf of the insured (whether by way of a proposal form or otherwise), and it is thus warranted that such information/representations are true, accurate, and complete, and that no other material information has been withheld.

If the policy document, schedule or endorsement contains any inadvertent error or omission in regards the information provided to us, you are requested to inform us within 15 days of receipt of the policy document so that we can correct any such error or omission.

I/ We hereby declare that though our aggregate turnover in any preceding financial year from 2017-18 onwards is more than the aggregate turnover notified under sub-rule (4) of rule 48, we are not required to prepare an invoice in terms of the provisions of the said sub-rule.

This is with reference to the KYC norms prescribed by the Authority, whereby this policy is being issued relying on the undertaking / power of attorney / letter of authorisation / Board resolution provided by the authorized signatory of your Entity. Should the signatory be not authorized to provide such a declaration, please inform the Company within 15 days from the date of receipt of this policy.

Broker Name : Prudent Insurance Brokers Pvt. Ltd.
Broker Code : 21038163

HDFC ERGO General Insurance Company Limited. IRDAI Reg.No.146 CIN : U66030MH2007PLC177117. Registered & Corporate Office: 1st Floor, HDFC House, 165/166 Backbay Reclamation, H.T.Parekh Marg, Churchgate, Mumbai - 400 020. UIN: IRDAN125CP0002V01200809 Customer Service Address: D 301, 3rd Floor, Eastern Business District (Magnet Mall), LBS Marg, Bhandup (West), Mumbai - 400078. Customer Service No.: +91 22 6754 6754 | +91-139 6754 6754 www.hdfcergo.com

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

HDFC ERGO General Insurance Company Limited

Premium & Coverage Statement

(Item. 9 of Schedule, Attached to and forming part of Policy No: **3133200263399612000**)

9.1 Premium Computation

Premium Details	Amount (Rs.)
Net Premium	10,887.00
Integrated Tax 18%	1,960.00
Add: Contribution to Environment Relief Fund	10,887.00
Total Premium	23,734.00
Invoice Number :	4032801181381
GSTN :	06AAACS0206P1ZH
Place of Supply	**Haryana**
SAC Code	**997139**

9.2 Insurance Limits & Excess

Insurance Limits

Details	Amount (Rs.)
Each Accident Insurance Limit	50,000,000.00
Aggregate Insurance Limit	150,000,000.00

Excess

Compulsory Excess	Na
Voluntary Excess	Na

HDFC ERGO General Insurance Company Limited. IRDAI Reg.No.146 CIN : U66030MH2007PLC177117. Registered & Corporate Office: 1st Floor, HDFC House, 165/166 Backbay Reclamation, H.T.Parekh Marg, Churchgate, Mumbai - 400 020. UIN: IRDAN125CP0002V01200809 Customer Service Address: D 301, 3rd Floor, Eastern Business District (Magnet Mall), LBS Marg, Bhandup (West), Mumbai - 400078. Customer Service No.: +91 22 62134734 /+91-130 6214 6214 www.hdfcergo.com

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 28

ON-SITE EMERGENCY PLAN

	Doc Title	ERP - Cover Page	Prepared By	Reviewed By	Approved By
SRF	S.O.P No.	EHS/SOP-03/ERP	Asst MGR - EHS (FCB)	AVP - EHS (FCB & SCB)	EVP & Site Head
	Issue: 02	Revision: 12	Page : 01 of 01	Revision Date: 28/08/2023	Next Review Date : 27/08/2024

SRF Limited, Dahej

On- Site Emergency Response Plan

[SCHEDULE –8-A]

Gujarat Factory Rules 68-J/12/(1)

SRF - SBU - Works	SRF - SBU - HO
Plot No. D-2/1, GIDC, Phase - II, PCPIR, Dahej, Tal - Vagra, Dist - Bharuch - 392130, Gujarat	Block C, Sector - 45, Gurgaon - 122001, Haryana
India	India
Phones: 91-2641-289201/ 202	Phone : 91-124- 4654613
e-mail: Vikas.yadav1@srf.com	-

Website : www.srf.com

This document should not be copied or reproduced in any way without the prior written permission of Site Head.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Doc.NO: EHS/SOP-03/ERP
Issue/Revision: 02/12
Revision Date: 28.08.2023
Next Review Date:29.08.2024

Amendment ERP

Amendment History

S. No.	SOP No. / Document number	Reason for change	Requested By	Revision No.	Date of Revision	Approved By
1	Full Document	Full Document modified in line with Schedule 8A.	Manager-EHS	1	5.11.12	Yogesh Mittal
2	Full Document	Full Document modified in line with Schedule 8A.	AVP - EHS	2	01.10.13	Yogesh Mittal
3	Full Document	Full Document modified in line with Schedule 8A.	Manager-EHS	3	01.07.15	Yogesh Mittal
4	Full Document	Full Document modified in line with Schedule 8A.	Manager-EHS	4	30.12.15	Dhananjay Ranade
5	Full Document	Full Document modified in line with Schedule 8A.	Manager-EHS	5	01.07.16	Dhananjay Ranade
6	Full Document	Full Document modified in line with Schedule 8A.	Manager-EHS	6	01.07.16	Dhananjay Ranade
7	Full Document	Full Document modified in line with Schedule 8A.	Manager-EHS	7	07.12.17	Dhananjay Ranade
8	Full Document	Full Document modified in line with Schedule 8A.	AVP - EHS	8	01.04.18	Ravishankar Sharma
9	Full Document	Full Document modified in line with Schedule 8A.	AVP - EHS	9	18.07.19	Ravishankar Sharma
10	Full Document	Full Document modified in line with Schedule 8A.	AVP - EHS	10	01.05.21	Yogesh Mittal
11	Full Document	Full Document modified in line with Schedule 8A.	Asst. Manager-EHS	11	29.08.22	Harendra Singh Dagur

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	Doc Title	ERP - Schedule 8 A	Prepared By	Reviewed By	Approved By
SRF	S.O.P No.	EHS/SOP-03/ERP	Asst MGR - EHS (FCB)	AVP - EHS (FCB & SCB)	EVP & Site Head
	Issue: 02	Revision: 12	Page: 01 of 02	Revision Date: 28/08/2023	Next Review Date : 27/08/2024

Schedule - 8 A, Under rule - 68 - J (12) (1) of Gujarat Factories Rules 1963
Schedule -11, Under Rule - 13 (1) of MSIHC Rules 1989 (2000)

1	Name and address of persons furnishing the information		**Factory :** SRF Limited Plot D 2/1, Phase –II, PCPIR, Dahej, Bharuch - 392130, Gujarat
			Occupier : Mr. Pramod Gopaldas Gujarathi 26,Yash Banglows, Dharmasi Park, Opp. GIDC Guest House, P.O.-GIDC Vapi, Gujarat - 396195
			Factory Manager: Mr. Sanjay Patidar SRF Limited Plot D 2/1, Phase –II, PCPIR, Dahej, Bharuch - 392130, Gujarat
2	Key personnel of the organisation and responsibilities assigned to them in case of an emergency		Pl. refer **Chapter III** & **Annexure 14, 15, 16, 17 & 18.**
3	Outside organizations if involved in assisting during on-site emergency		Pl. refer **Chapter IV, V & VI.**
	a)	Type of accidents	
	b)	Responsibility assigned	
4	Details of liaison arrangement between the organization		Pl. refer **Chapter IV, V & VI.**
5	Information on the preliminary Hazard Analysis		Pl. refer **Annexure 4, 5, 6 & 7.**
	a)	Type of accidents	
	b)	Hazards	
	c)	System elements or events that can lead to a major accident Hazards	
	d)	Safety relevant components	
6	Details about the site		-
	a)	Location of dangerous substances	Pl. refer **Annexure 1, 2 & 3**
	b)	Seat of key personnel	Pl. refer **Annexure 14, 15 & 16**
	c)	Emergency Control Room	Pl. refer **Annexure 20**
7	Description of hazardous chemicals at plant site		-
	a)	Chemicals (Qualification and toxicological data)	Pl. refer **Annexure 5**
	b)	Transformation if any which could occur	Pl. refer **Annexure 4 & 6**
	c)	Purity of hazardous chemicals	Industrial Grade Material

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	Doc Title	ERP - Schedule 8 A	Prepared By	Reviewed By	Approved By
SRF	S.O.P No.	EHS/SOP-03/ERP	Asst MGR - EHS (FCB)	AVP - EHS (FCB & SCB)	EVP & Site Head
	Issue: 02	Revision: 12	Page: 02 of 02	Revision Date: 28/08/2023	Next Review Date : 27/08/2024

8	Likely dangers to the plant		Pl. refer **Annexure 4, 6 & 7**
9	Enumerate effects of		-
	i)	Stress and strain caused during normal operations.	Pl. refer **Chapter VII**
	ii)	Fire and explosion inside the plant and effect if any, of fire and explosion out side.	Pl. refer **Annexure 4, 5, 6, 10, 11 & 12**
10	Details regarding		
	i)	Warning, alarm and safety and security systems.	Pl. refer **Annexure 26**
	ii)	Alarm and hazard control plans in line with disaster control and hazard control planning ensuring the necessary technical and organizational precautions	Pl. refer **Annexure 26**
	iii)	Reliable measuring instruments, control units and servicing of such equipments	Pl. refer **Annexure 6 & 7**
	iv)	Precautions in designing of the foundation and load bearing parts of the building	As per prevailing IS standards. All the structures, foundations of equipment, pedestals, frames, etc. are designed and erected as per relevant standards and codes of practices. Most of the foundations are erected on piling and all the Storage Tanks constructed on piling foundations.
11	Details of communication facilities available during emergency and those required for and off-site emergency		Pl. refer **Annexure 27 & 28**
12	Details of fire fighting and other facilities available and those required for an off site emergency		Pl. refer **Annexure 21**
13	Details of first-aid and hospital services available and its adequacy		Pl. refer **Annexure 22**
14	Details of numbers for contact on off-site emergency		Please refer **Annexure 28**, "List of external telephone".

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 29

The details in respect of Case/complaints under the Water Act-74, the Air Act-81 & the EPA-86

	Show cause notice issued in FY 23-24			
Sr. No.	Reference No.	Date	Compliance Letter	Status as on 31-Mar-24
1	SCN Outward No. 739744	21/04/2023	Letter dated 08/04/2023	Complied and Closed
2	SCN Outward No. 785330	04/03/2024	Letter dated 15/03/2024	Complied and Closed

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE –30

COMPLIANCE REPORT

COMPLIANCE REPORT OF CONSOLIDATED CONSENT AND AUTHORISATION

<table>
<tr><td colspan="3">CCA Letter No. GPCB/ BRCH-B/ CCA-38(19)/ ID-24521/678954, dated 26/07/2022</td></tr>
<tr><td>Sr. No.</td><td>Conditions
Consent Order No. AWH-119079 date of issue 02/06/2022</td><td>Compliance Status</td></tr>
<tr><td>1</td><td>The list of proposed products to be manufactured shall be as follows:
Name of the Products along with Quantity: -
<table>
<tr><th>Sr. No.</th><th>Name of Product</th><th>Total Proposed Capacity (MT/Annum)</th><th>Total Production</th></tr>
<tr><td>1</td><td>Trifluoro Acetic Acid</td><td>2000</td><td>1677.46</td></tr>
<tr><td>2</td><td>Speciality Products</td><td></td><td></td></tr>
<tr><td>i</td><td>Tetrafluorobenzyl Alcohol</td><td rowspan="15">9900</td><td rowspan="15">8300.66</td></tr>
<tr><td>ii</td><td>Ethyldifluoroacetate</td></tr>
<tr><td>iii</td><td>Ethyltrifluroacetate</td></tr>
<tr><td>iv</td><td>Ethyltrifluoroacetoacetate</td></tr>
<tr><td>v</td><td>Amino crotonate</td></tr>
<tr><td>vi</td><td>Trifluoroacetic anhydride</td></tr>
<tr><td>vii</td><td>Pentafluorobenzoic Acid</td></tr>
<tr><td>viii</td><td>Pyrazole Acid</td></tr>
<tr><td>ix</td><td>Chloro trichloro Methyl – Cyclopentene</td></tr>
<tr><td>x</td><td>2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline</td></tr>
<tr><td>xi</td><td>Fluoromethyl ester</td></tr>
<tr><td>xii</td><td>Diphenylphenol</td></tr>
<tr><td>xiii</td><td>Tetrafluoropropene – 1234yf</td></tr>
<tr><td>xiv</td><td>Isobutyl Acetophenon</td></tr>
<tr><td>xv</td><td>2-Bromo-5-fluorobenzotrifluoride</td></tr>
<tr><td>xvi</td><td>2,2-Difluroethylamine</td></tr>
<tr><td>xvii</td><td>2,3-Dichloro-5-trifluoromethyl-pyridine</td></tr>
</table></td><td>The actual production and power generation is well within the stipulated limit.</td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	xviii	N[1-{6-Chloro-3-pyridinyl) methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide			
	xix	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide			
	3	1,1,2,2-Tetrafluoroethyl Methyl Ether	3000	1931.25	
	4	Hexafluoropropylene	500	0.00	
	5	Ethyl Difluoroacetoacetate	300	0.00	
	6	Difluoromethanesulphonlychloride	100	0.00	
	7	3-Trifluoromethylacetophenone	1000	0.00	
	8	Trifluoromethylbenzamide	1700	1001.70	
	9	TrifluoroMethyl-2-EthoxyVinyl Ketone	1000	0.00	
	10	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid ethyl ester	1500	743.17	
	11	Pentafluorophenol	150	0.00	
	12	Monomethylhydrazine	3500	2862.60	
	13	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone)	500	328.57	
	14	Bromopentafluorobenzene	200	0.00	
	15	Methyl Hydroxy Pyrazole	100	0.00	
	16	5-Bromo-2-2-difluoro-1-3-benzodioxide	500	0.00	
	17	Difluorobenzodioxole methyl ester	20	0.00	
	18	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy) benzenamine	500		
	19	2,4,5-Trifluorophenyl acetic acid	50	10.55	
	20	Methyl-2- Fluoroacrylate	50	0.00	
	21	Ethyl-Trifluoropyruvate	50	0.00	
	22	2,3-dichloro pyridine	0	0	
	23	5-Chloro-2,3-difluoropyridine	600	0.00	
	24	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylic Acid	3500	0.00	
	25	4-methoxy cyclohexanone (4-MCH)	600	203.24	
	26	2 -Amino 3-Chloro 5-(trifluoromethyl) pyridine	600	0.00	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	27	Hydrazine Hydrate	3500	0.00		
	28	2-methylsulfonyl-5-(trifluoromethyl)-1,3,4-thiadiazole	600	179.67		
	29	1,3 Benzodioxole	500	0.00		
	30	**R&D Products**	2000	1999.27		
	31	**Chlorinated Compounds**				
	i	Trichloroethylene	150000	138473.30		
	ii	Perchloroethylene				
	iii	Methyl Chloride				
	iv	Methylene dichloride				
	v	Chloroform				
	vi	Carbon tetrachloride				
	32	Anhydrous Hydrofluoric acid	40000	30798.56		
	33	Chlorotrifluoroethane (HCFC 133a)	500	0.00		
	34	**HFC refrigerants**				
	i	1,1,1,2 Tetrafluroethane (HFC 134a)	40000	33622.82		
	ii	Pentafluoroethane (HFC 125)				
	iii	Difluoromethane (HFC - 32)				
	iv	1,1 difluoroethane (HFC-152a)				
	v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)				
	vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)				
	vii	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)				
	viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)				
	35	Butane (R600a)	1000	301.64		
	36	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	500	0.00		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

37	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	500	0.00
38	Hydrofluoric acid (20-70%)	18446	5081.16
39	Anhydrous Hydrochloric acid	900	191.42
40	Chlorodifluoromethane (R22)	12000	4253.56
41	Calcium Chloride	120000	105135.73
Total		422366	**337096.321**

Sr No.	Captive Power Plant	Existing Capacity	Additional Capacity	Proposed Capacity
1	Captive Power Plant	25 MW	-	25 MW

2.	Specific Condition	
a)	Unit shall comply with all the provisions of ozone depleting Substances Regulations and Control rules, 2000 and its amendment from time to time.	We have been complying to Ozone Depleting substances (Regulation and Control) Rules, 2000 as per column (4) of Schedule I. We have identified Ozone Depleting Substances like Carbon tetrachloride (CTC) & Chloro-difluoromethane (HCFC-22) from our product list and being used as feedstock for manufacturing of other chemicals within the premises, as per Notification of Ministry of Environment, Forest and Climate Change on Ozone Depleting Substances (Regulations and Control) Amendment Rules dated 13th March, 2014.
b)	Unit shall not carry out any construction activities and production which attracts provisions of Environment Clearance without obtaining EC from competent authority under EIA notification dated 14/09/2006 and amended thereafter	Noted and Complied.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

c)	Unit shall comply with all the conditions stipulated by SEIAA / MoEF in the order of Environment Clearance issued vide letter no. SEIAA/GUJ/EC/5(f)/1538/2020 dated_15/12/2020.	Complied. Last Half yearly EC compliance report is submitted to MoEF on 31-may-2024 and the same is available on website.
d)	Unit shall sell out their hazardous waste to authorized endusers who is having authorization with valid CCA and rule 9 permission to receive this waste. Unit shall make MoU with such authorized endusers and submit MoU.	Complied. We are selling hazardous waste to authorized actual user or end users only. All the authorized actual/end users have applied/obtained permissions from concerned authorities under Rule-9 of the Hazardous and Other Waste Management and Transboundary Movement) Rules 2016.
e)	All the efforts shall be made to send hazardous waste to cement industry for Co- processing first & there after it shall be disposed through other option.	We have agreements with various cement industries (Ambuja cement, J K Lakshmi cement, Shree Cement, Ultratech Cement) for hazardous waste usage as AFR.
f)	Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.	Complied. We have MoUs with actual end users for spent solvent recycling/re-processing.
g)	Unit shall strictly follow the Solid Fuel guideline framed by Board and shall install APCM as per guideline.	We have installed lime dosing system as APCM in our solid fuel boilers.
h)	Unit shall follow coal handling guideline framed by Board and provide close ash handling facility.	1) Coal is covered with tarpaulin during transportation. 2) Coal loading and unloading activity is being done in closed shed. 3) Handling and transportation of coal is through covered coal conveyers 4) Dust collectors are installed to abate the nuisance of dust. 5) Installation of two Silo for fly ash storage

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

i)	Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.	100% Fly ash is sent to brick manufacturers/cement industry/in construction work.
j)	Unit shall install online Continuous Emission Monitoring Systems (CEMS) and link it with the server of GPCB for real time data transfer for boiler more than 8 TPH capacity or equivalent capacity of TFH.	Continuous Emission Monitoring System for effluent discharge and stacks emissions are installed in unit. An arrangement is also available for reflecting the online monitoring results on the company's server, which can be accessed by the GPCB on real time basis.
3	CONDITION UNDER WATER ACT: -	
3.1	The quantity of total water consumption shall not exceed 19413 KL/day as per below break up as mentioned in form D submitted for consent application under the water act-1974 (a) Domestic: 429 KL/Day (b) Industrial: 18769 KL/Day (c) Gardening: 215 KL/ Day Total 19413 Kl/day	Average water consumption is 9292 KLD.
3.2	The Quantity of total water generation shall not exceed 9975 KL/day as per below break up as mentioned in form D submitted for consent application under the water act-1974 (a) Domestic: 340 KL/Day (b) Industrial: 9635 KL/Day Total: 9975 KL/day	Average wastewater generation from domestic and industrial is 217 KLD & 3204 KLD resp.
3.3	The quantity of the industrial effluent from the manufacturing process and other ancillary Industrial operations shall not exceed 9635 KL/Day, and the quantity of domestic wastewater (sewage) shall not exceed 340 KL/Day.	Average wastewater generation from domestic and industrial is 217 KLD & 3204 KLD resp.
3.4	4024 KLD of process steam condensate collected in separate collection tank and reused in cooling tower/process.	Complied. Process Steam Condensate collected separately and reused in cooling tower.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

<table>
<tr><td>3.5</td><td>3884 KLD of industrial effluent from softener/ DM Plant reject + Boiler Blow down + Cooling tower Blow down (including Captive Power Plant) shall be sent to separate ETP (UF&RO including primary treatment). After treatment 3301 KLD the treated shall be reused in cooling tower/process and 583 KLD RO reject after confirming the GPCB discharge norms shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.</td><td>Utility effluent from softener/ DM Plant reject + Boiler Blow down + Cooling tower Blow down (including Captive Power Plant) treated in separate UF & RO System and the permeate is used in cooling tower.</td></tr>
<tr><td>3.6</td><td>In that 1727 KLD (Process Effluent + Washings) of industrial effluent shall be sent to ETP for primary, secondary and tertiary treatment and Multi Effect Evaporator (MEE) followed by Agitated Thin Film Dryer. After treatment the treated shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.</td><td>Average 1044 KLD Process and Washing effluent treated in separate Effluent Treatment Plant having Primary, Secondary and Tertiary treatment & Multi Effect Evaporated (MEE) plant & ATFD. The treated effluent is sent for the disposal in to GIDC sewer line.</td></tr>
<tr><td>3.7</td><td>Total 2310 KLD treated (1727 KLD treated industrial effluent + 583 KLD RO reject after confirming the GPCB standard) shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea for final disposal at NIO designated points.</td><td>Average wastewater discharge for is 1553 KLD.</td></tr>
<tr><td>3.8</td><td>340 KLD of sewage shall be treated separately to confirm the GPCB standard shall be reuse in development of greenbelt / plantation within premises and in monsoon season it shall be reuse in cooling tower/process.
<table>
<tr><td>PARAMETER</td><td>GPCB NORMS</td></tr>
<tr><td>pH</td><td>6.5 TO 9.0</td></tr>
<tr><td>Total Suspended Solids</td><td>< 100 mg/L</td></tr>
<tr><td>Fecal Coliform (Most probable number per 100 milliliter, MPN/100ml)</td><td>< 1000 MPN/100 ml</td></tr>
<tr><td>BOD (5 days at 20-degree C)</td><td>< 20 mg/L</td></tr>
</table></td><td>The sewage is treated in STP and used for gardening purpose. IN monsoon the treated sewage is re-used in cooling tower.

Average 217 KLD sewage is treated

The STP inlet and outlet quality is tested by NABL accredited laboratory on monthly basis.</td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

3.9	The quality of treated effluent shall conform to the following standards prior to disposal GIDC Sewer Line - Dahej Vilayat Pipeline/Common Disposal System up to the sea for final disposal at NIO designated point.		The monthly monitoring of treated effluent by MoEF and NABL approved laboratory confirming the results well within the permissible limits. The continuous monitoring system for COD, TN, TOC, Ammonical Nitrogen, pH, Flow and TSS before treated effluent disposal to GIDC, Common Network.
	Parameters	Permissible Limit	
	pH	6 to 9	
	Temperature	Shall not exceed 5°C above the receiving water temperature.	
	Total Suspended Sollids	100 mg/Lit	
	Oil and Grease	10 mg/l	
	Phenolic Compounds (s C6H5OH	5 mg/l	
	Cynide (as CN)	0.2 mg/l	
	Fluorides	15 mg/l	
	Sulphides	5 mg/l	
	Ammonical Nitrogen	50 mg/l	
	Total Kjeldahl Nitrogen (TKN)	50 mg/l	
	Nitrate - Nitrogen	50 mg/l	
	Total Residual Chloride	1 mg/l	
	Arsenic (as As)	0.2 mg/l	
	Trivalent Chromium	2 mg/l	
	Chromium-Hexavalent	0.1 mg/l	
	Copper	3 mg/l	
	Lead (as Pb)	0.1 mg/l	
	Mercury (as Hg)	0.01 mg/l	
	Nickel	3 mg/l	
	Zinc	15 mg/l	
	Cadmium (as Cd)	0.05 mg/l	
	BOD (3 days at 27-degree C)	100 mg/l	
	COD	250 mg/l	
	Selenium [as Se]	0.05 mg/l	
	Vanadium	0.2 mg/l	
	Manganese [as Mn]	2 mg/l	
	Iron	3 mg/l	
	Bio-assay test	90% Survival of fish after 96 hrs in 100% effluent.	

CONDITION UNDER AIR ACT			
4.1	Condition No. 4.1 (of the CCA Amendment dated 22/02/2018) stands amended and shall be read as under,		
Sr. No.	Name Of Fuel	Total Quantity per day	Average Consumption
1	Coal	600 MT/Day	879
2	HSD	215 KL/day	8
3	Natural Gas [Alternate fuel instead of coal]	45000 Nm3/day	0

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

4	Furnace Oil (LPD)	142.5 KL/day	0
5	LSHS/LDO	110 KL/day	21

4.2 Condition No. 4.2 (of the CCA Amendment dated 22/02/2018) stands amended and shall be read as under,

The flue gas emission through stack attached to boiler / D.G.Sets / TPP shall conform to the following standard:

Sr. No.	Stack Attached To	Stack Height (meter)	APCM	Pollutant	Permissible Limit
.	Boiler 35 TPH	94 (Common Stack)	Electrostatic Precipitator + Scrubber	PM SO2 NOx Hg	50 mg/Nm3 600 mg/Nm3 450 mg/Nm3 0.03 mg/Nm3
.	Boiler 35 TPH				
.	Boiler 60 TPH				
.	DG Set 500 KW	11	-	PM SO2 NOx	150 mg/Nm3 100 ppm 50 ppm
.	DG Set 500 KW	11	-		
.	DG Set 840 KW	30	-		
.	DG Set 840 KW	30	-		
.	TCE/PCE Plant Thermic fluid/ Fire Heaters No. 1	50	Efficient Burner		
.	TCE/PCE Plant Thermic fluid/ Fire Heaters No. 2	50	Efficient Burner		
0.	HFC 134a Plant Thermic fluid/ Fire Heaters	50	Efficient Burner		
1.	AHF Plant Heater No. 1 (Thermic fluid/ Fire Heaters)	46	Efficient Burner		
2.	AHF Plant Drying System No. 1	35	Cyclone Seperator /Bag Filter		
3.	AHF Plant Heater No. 2 (Thermic fluid/ Fire Heaters)	46	Efficient Burner		
4.	AHF Plant Drying System No. 2 (Thermic fluid/ Fire Heaters)	35	Cyclone Seperator /Bag Filter		
5.	Difluoromethan (HFC 32) Plant Hot Oil	55	Efficient Burner		

Complied. Flue gas emission monitoring carried out on monthly basis by MoEF and NABL approved laboratory and its results/report is submitted to GPCB RO, Bharuch

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	Furnace (Thermic fluid/ Fire Heaters)					
6.	Boiler 30 TPH	63	-			
7.	Boiler 30 TPH	63	-			
8.	DG Set 4200 kVA	30	-			
9.	DG Set 4200 kVA	30	-			
0.	DG Set 4200 kVA	30	-			
1.	Boiler 17 TPH	53	-			
2.	Dust Collectors	11	Bag Filter	Particulate Matter	150 mg/Nm3	

4.3 Condition No. 3 (of the CCA Amendment dated 17/05/2018) stands amended and shall be read as under,

The process gas emission through various stack / vent of reactors, process vessels shall confirm to the following standards

Process gas emission monitoring carried out on monthly basis by MoEF and NABL approved laboratory and its results/report is submitted to GPCB RO, Bharuch are well within permissible limits.

Stack	Stack Attach To	Air Pollution Control System	Stack height in Meter	AIR EMISSION	
				POLLUTANT	CONCENTRATION
Existing Process Stack					
HF Plant Stack					
1	HF Plant Central Absorption System	Continuous water Circulation	30	HF	6mg/NM3
TCE/PCE Plant Stack					
2	TCE/PCE Plant (Central Absorption System)	Continuous Alkali Circulation	20	Cl2	9mg/NM3
3	TCE/PCE Plant (Central Absorption System)	Continuous Water Circulation	30	HCl	20mg/NM3
HFC Plant Stack					
4	R134a Plant (Central Absorption System)	Continuous Water Circulation	30	HCl	20mg/NM3
				HF	6mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Flourospeciality Plant Stacks					
5	Reactor / Vessel (10 Nos.) Central Absorption System	Continuous Water Circulation	30	HF	6mg/NM3
				HCl	20mg/NM3
6	Reactor / Vessel (10 Nos.) Central Absorption System	Continuous Water Circulation	30	HCl	20mg/NM3
7	Reactor / Vessel (04 Nos.) Central Absorption System	Continuous Alkali Circulation	20	Cl2	9mg/NM3
8	Reactor / Vessel (02 Nos.) Central Absorption System	Continuous Alkali Circulation	20	Br2	2mg/NM3
9	Trifluoro Acetic Acid Central Absorption	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
				HCl	20 mg/NM3
10	Ethyldifluoroacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
				HCl	20 mg/NM3
11	Ethyltrifluroacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
12	Ethyltrifluoroacetoacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
13	Pentafluorobenzoic Acid Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
14	Pyrazole Acid Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
15	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Br2	2 mg/NM3
16	Tetrafluoropropene – 1234yf Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
				HCl	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

17	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
18	Hexafluoropropylene Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
19	Difluoromethanesulphonlychloride Central Absorption System**	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
20	Trifluoromethyl benzamide Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
21	Bromopentafluorobenzene Central Absorption System	Continuous Water + Alkali Circulation	.	Br2	2 mg/NM3
22	5-Bromo-2-2-difluoro-1-3-benzodioxide Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Br2	2 mg/NM3
				HF	6 mg/NM3
23	Difluorobenzodioxole methyl ester Central Absorption System**	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Br2	2 mg/NM3
24	Methyl-2- Fluoroacrylate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
25	CMS plant (Methylene dichloride, Chloroform, Carbon tetrachloride) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
26	Chlorotrifluoroethane (HCFC 133a) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				HF	6 mg/NM3
27	Pentafluoroethane (HFC 125) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				HF	6 mg/NM3
28	Difluoromethane (HFC – 32) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				HF	6 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	29	HCl Storage Tank Farm	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
	30	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
	31	Flare Stack attached to Topramezone Plant	N.A.	30	-	-
	32	Chlorodifluoromethane (R22) plant Central Absorption System	Continuous Water Circulation	30	HF	6 mg/NM3
					HCL	20 mg/NM3
	33	Calcium Chloride Plant Scrubber	Continuous Water + Sodium Carbonate Solutions	30	CO2	-
	34	Methyl Hydroxy Pyrazole	Continuous Water Circulation	30	HCL	20 mg/NM3
	35	TCE/PCE Acid tank farm area scrubber vent	Continuous Water Circulation	11.7	HCL	20 mg/NM3
	36	HFC134a Acid tank farm area scrubber vent	Continuous Water Circulation	11.4	HCL	20 mg/NM3
	37	DHF Scrubber	Continuous Water Circulation	10	HF	6 mg/NM3

4.4 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No.	Parameters	Permissible Limit (microgram /M3)	
		Annual	24 Hours Average
1.	Particulate Matter (PM10)	60	100
2.	Particulate Matter (PM2.5)	40	60
3.	Oxides of Sulphur (SOx)	50	80
4.	Oxides of Nitrogen (NOx)	40	80

• Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

<table>
<tr><td></td><td>• 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.</td><td></td></tr>
<tr><td>4.5</td><td>Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified in condition as above.</td><td></td></tr>
<tr><td>5</td><td>CONDITIONS UNDER HAZARDOUS & OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES, 2016</td><td></td></tr>
<tr><td>5.1</td><td>Unit shall comply with provisions of Hazardous & Other Wastes (Management & Transboundary Movement) Rules-2016.</td><td></td></tr>
<tr><td>5.2</td><td>The condition No. 5 under authorization for Hazardous & other wastes of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-15121/525661, dated 25/10/2019 is amended and shall now be read as under.
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Name of Haz. Waste</th><th rowspan="2">Category Number</th><th colspan="2">Facility</th></tr>
<tr><th>Total Hazardous Waste Quantity, MT/Yr</th><th>Mode of disposal</th></tr>
<tr><td>1</td><td>Chemical sludge from wastewater treatment</td><td>35.3</td><td>3265</td><td>Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.</td></tr>
<tr><td>2</td><td>Spent Oil</td><td>5.1</td><td>600</td><td>Collection, storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners</td></tr>
<tr><td>3</td><td>Discarded containers / barrels / liners used for hazardous wastes/chemicals</td><td>33.1</td><td>5,428</td><td>Collection, storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners</td></tr>
<tr><td>4</td><td>Spent Catalyst</td><td>36.2</td><td>2,763</td><td>Collection, Storage, Transportation and Disposal at</td></tr>
</table>
</td><td>The hazardous waste generation quantity is well within allowable limit.

We are having valid membership certificate with TSDF and CHWIF.

We have MoU with actual/end users for using hazardous waste as raw material.

We have agreements with pre-processors and co-processors for using hazardous wastes as an AFR.</td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				approved TSDF/CHWIF or co-processing or pre-processing.		
5	Spent Carbon	36.2	468	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.		
6	Off- Specification Product	36.1	600	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.		
7	Process Residue & Waste	36.1	15,125	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.		
8	Spent Organic Solvent	20.2	47586	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission & valid CCA after making MOU.		
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	18,553			
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	37,504	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

11	CuCl Cake	8.2	52	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.		
12	Ammonium Salt	A-10	1,717	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing		
13	Potassium Salt	B-36	445	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing		
14	Sodium Salt	B-36	4402	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				or co-processing or pre-processing		
15	Zinc Compound	6.1	44	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing		
16	Hydrofluoricsilic acid (15-40%)	Sch II - Class C - C2	4000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU		
17	Sulphuric acid (70-95%)	B-15	90382	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU		
18	Hydrochloric Acid (10 - 33%)	B-15	4,11,553	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				CCA after making MOU		
19	Sodium Hypochlorite	B-7	13875	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU		
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	2,593	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU		
21	Calcium Fluoride	B-10	5,844	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing		
22	Calcium Chloride	B-10	165	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing		
23	Sodium methoxide Solution	C7	120	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing		
24	Phosphorus trichloride	B-35	934	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing		
25	Gypsum (CaSO4)	38.1	1,62,400	Collection, Storage, Transportation and Disposal by sending to Cement industries or Actual Users having rule-9 permission & valid CCA after making MOU or co-processing or pre-processing facility		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

26	Aluminium trifluoride	36.1	1,000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing		
27	Liquor Ammonia Solution (10-25%)	A10	1,500	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU		
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	2,802	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing		
29	Fluoroform (R23)	28.1	240	Collection, Storage, In-house treatment through Thermal Oxidizer/ Transportation and Disposal at approved CHWIF.		
30	Inorganic Sludge Generation from	35.3	234	Collection, Storage,		

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		Calcium Chloride Plant			Transportation and Disposal at approved TSDF	
	31	Caustic lye	Sch II - Class C - C2	36	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user	
	Unit shall ensure transportation of hazardous wastes through GPS mounted authorized vehicles with recording facility and online manifest system of the Board.					
6	All other conditions of the CCA order No: AWH-119079, issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ ID-24521/678954, dated 26/07/2022 shall remain same.					Complied.

CCA Letter No. GPCB/BRCH-B/CCA-38 (21)/ID-24521/738542 Dated 06/04/2023		
Sr. No.	Conditions	Compliance Status
	This has reference to the CCA Amendment issued vide letter no. GPCB/BRCH-B/CCA-38(19)/ID-24521/678954 dated 26/07/2022 under the provision of the various Environmental Act/Rules,	
2.	Specific Condition	
a)	Unit shall mentioned ZLD for wastewater generated from proposed CPP of capacity 20.1MW	Noted and Complied.
b)	Unit shall comply MoEF & CC's Notification dated 28/06/2018 and its subsequent amendment for thermal power plant.	Noted and Complied.
c)	Unit shall not carry out any construction activities and production which attracts provisions of Environment Clearance without obtaining EC from competent authority under EIA notification dated 14/09/2006 and amended thereafter	Noted and Complied.
d)	Unit shall comply with all the conditions stipulated by SEIAA / MoEF in the order of Environment Clearance issued vide letter no. SEIAA/GUJ/EC/5(f)/1538/2020 dated_15/12/2020.	Complied. Last Half yearly EC compliance report is submitted to MoEF on 31-May-2024 and the same is available on website.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

e)	Unit shall sell out their hazardous waste to authorized end users who is having authorization with valid CCA and rule 9 permission to receive this waste. Unit shall make MoU with such authorized end users and submit MoU.	Complied. We are selling hazardous waste to authorized actual user or end users only. All the authorized actual/end users have applied/obtained permissions from concerned authorities under Rule 9 of the Hazardous and Other Waste Management and Transboundary Movement) Rules 2016.
f)	All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.	We have agreements with various cement industries (Ambuja cement, J K Lakshmi cement, Shree Cement, Ultratech Cement) for hazardous waste usage as AFR.
g)	Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.	Complied. We have MoUs with actual end users for

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		spent solvent recycling/re-processing.
h)	Unit shall strictly follow the Solid Fuel guideline framed by Board and shall install APCM as per guideline.	We have installed lime dosing system as APCM in our solid fuel boilers.
i)	Unit shall follow coal handling guideline framed by Board and provide close ash handling facility.	1) Coal is covered with tarpaulin during transportation . 2) Coal loading and unloading activity is being done in closed shed. 3) Handling and transportation of coal is through covered coal conveyers 4) Dust collectors are installed to abate the nuisance of dust. 5) Installation of two Silo for fly ash storage
k)	Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.	100% Fly ash is sent to brick manufacturers/cement industry/in construction work.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

l)	Unit shall install online Continuous Emission Monitoring Systems (CEMS) and link it with the server of GPCB for real time data transfer for boiler more than 8 TPH capacity or equivalent capacity of TFH.	Continuous Emission Monitoring System for effluent discharge and stacks emissions are installed in unit. An arrangement is also available for reflecting the online monitoring results on the company's server, which can be accessed by the GPCB on real time basis.
3	CONDITION UNDER WATER ACT: -	
3.1	The quantity of total water consumption shall not exceed 20984 KL/day as per below break up as mentioned in form D submitted for consent application under the water act-1974 (a) Domestic: 429 KL/Day (b) Industrial: 20340 KL/Day Total 20984 Kl/day	Average water consumption is 9292 KLD.
3.2	The Quantity of total water generation shall not exceed 10654 KL/day as per below break up as mentioned in form D submitted for consent application under the water act-1974 (a) Domestic: 340 KL/Day (b) Industrial: 10314KL/Day Total: 10654KL/day	Average wastewater generation from domestic and industrial is 217 KLD & 3204 KLD resp.
3.3	The quantity of the industrial effluent from the manufacturing process and other ancillary Industrial operations shall not exceed 10314 KL/Day, and the quantity of domestic wastewater (sewage) shall not exceed 340 KL/Day.	Average wastewater generation from domestic and industrial is 217 KLD &

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		3204 KLD resp.
3.4	4024 KLD of process steam condensate collected in separate collection tank and reused in cooling tower/process.	Complied. Process Steam Condensate collected separately and reused in cooling tower.
3.5	4511 KLD of industrial effluent from softener/ DM Plant reject + Boiler Blow down + Cooling tower Blow down (including Captive Power Plant) shall be sent to separate ETP (UF&RO including primary treatment). After treatment 3928 KLD the treated shall be reused in cooling tower/process and 583 KLD RO reject after confirming the GPCB discharge norms shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.	Utility effluent from softener/ DM Plant reject + Boiler Blow down + Cooling tower Blow down (including Captive Power Plant) treated in separate UF & RO System and the permeate is used in cooling tower.
3.6	In that 1779 KLD (Process Effluent + Washings) of industrial effluent shall be sent to ETP for primary, secondary and tertiary treatment and Multi Effect Evaporator (MEE) followed by Agitated Thin Film Dryer. After treatment the treated shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.	Average 1044 KL Process and Washing effluent treated in separate Effluent Treatment Plant having Primary, Secondary and Tertiary treatment & Multi Effect Evaporated (MEE) plant

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

<table>
<tr><td></td><td></td><td>& ATFD. The treated effluent is sent for the disposal in to GIDC sewer line.</td></tr>
<tr><td>3.7</td><td>Total 2362 KLD treated (1779 KLD treated industrial effluent + 583 KLD RO reject after confirming the GPCB standard) shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea for final disposal at NIO designated points.</td><td>Average wastewater discharge for is 1553 KLD.</td></tr>
<tr><td>3.8</td><td>340 KLD of sewage shall be treated separately to confirm the GPCB standard shall be reuse in development of greenbelt / plantation within premises and in monsoon season it shall be reuse in cooling tower/process.
<table>
<tr><td>PARAMETER</td><td>GPCB NORMS</td></tr>
<tr><td>pH</td><td>6.5 TO 9.0</td></tr>
<tr><td>Total Suspended Sollids</td><td>< 100 mg/L</td></tr>
<tr><td>Fecal Coliform (Most probable number per 100 mililiter, MPN/100ml)</td><td>< 1000 MPN/100 ml</td></tr>
<tr><td>BOD (5 days at 20-degree C)</td><td>< 30 mg/L</td></tr>
</table></td><td>The sewage is treated in STP and used for gardening purpose. IN monsoon the treated sewage is re-used in cooling tower.

Average 217 KLD sewage is treated

The STP inlet and outlet quality is tested by NABL accredited laboratory on monthly basis.</td></tr>
<tr><td>3.9</td><td>The quality of treated effluent shall conform to the following standards prior to disposal GIDC Sewer Line - Dahej Vilayat Pipeline/Common Disposal System up to the sea for final disposal at NIO designated point.
<table>
<tr><td>Parameters</td><td>Permissible Limit</td></tr>
<tr><td>pH</td><td>6 to 9</td></tr>
<tr><td>Temperature</td><td>Shall not exceed 5°C above the receiving water temperature.</td></tr>
<tr><td>Total Suspended Solids</td><td>100 mg/Lit</td></tr>
<tr><td>Oil and Grease</td><td>10 mg/l</td></tr>
<tr><td>Phenolic Compounds (s C6H5OH</td><td>5 mg/l</td></tr>
<tr><td>Cynide (as CN)</td><td>0.2 mg/l</td></tr>
</table></td><td>The monthly monitoring of treated effluent by MoEF and NABL approved laboratory confirming the results well within</td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	Fluorides	15 mg/l	the permissible limits. The continuous monitoring system for COD, TN, TOC, Ammonical Nitrogen, pH, Flow and TSS before treated effluent disposal to GIDC, Common Network.
	Sulphides	5 mg/l	
	Ammonical Nitrogen	50 mg/l	
	Total Kjeldahl Nitrogen (TKN)	50 mg/l	
	Nitrate - Nitrogen	50 mg/l	
	Total Residual Chloride	1 mg/l	
	Arsenic (as As)	0.2 mg/l	
	Trivalent Chromium	2 mg/l	
	Chromium-Hexavalent	0.1 mg/l	
	Copper	3 mg/l	
	Lead (as Pb)	0.1 mg/l	
	Mercury (as Hg)	0.01 mg/l	
	Nickel	3 mg/l	
	Zinc	15 mg/l	
	Cadmium (as Cd)	0.05 mg/l	
	BOD (3 days at 27-degree C)	100 mg/l	
	COD	250 mg/l	
	Selenium [as Se]	0.05 mg/l	
	Vanadium	0.2 mg/l	
	Manganese [as Mn]	2 mg/l	
	Iron	3 mg/l	
	Bio-assay test	90% Survival of fish after 96 hrs in 100% effluent.	

CONDITION UNDER AIR ACT			
4.1	Condition No. 4.1 (of the CCA Amendment dated 22/02/2018) stands amended and shall be read as under,		
Sr. No.	Name Of Fuel	Total Quantity per day	Average Consumption
1	Coal	1668 MT/Day	879MT/Day
2	HSD	216 KL/day	8 KL/day
3	Natural Gas [alternate fuel instead of coal]	45203 Nm3/day	0
4	Furnace Oil (LPD)	142.5 KL/day	0 KL/day
5	LSHS/LDO	110 KL/day	21 KL/day
4.2	Condition No. 4.2 (of the CCA Amendment dated 22/02/2018) stands amended and shall be read as under, The flue gas emission through stack attached to boiler / D.G.Sets / TPP shall conform to the following standard:		Complied. Flue gas emission monitoring

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Stack Attached To	Stack Height (meter)	APCM	Pollutant	Permissible Limit	carried out on monthly basis by MoEF and NABL approved laboratory and its results/report is submitted to GPCB RO, Bharuch
3.	Boiler 35 TPH	94 (Common Stack)	Electrostatic Precipitator + Scrubber	PM SO2 NOx Hg	50 mg/Nm3 600 mg/Nm3 450 mg/Nm3 0.03 mg/Nm3	
4.	Boiler 35 TPH					
5.	Boiler 60 TPH					
6.	DG Set 500 KW	11	-	PM SO2 NOx	150 mg/Nm3 100 ppm 50 ppm	
7.	DG Set 500 KW	11	-			
8.	DG Set 840 KW	30	-			
9.	DG Set 840 KW	30	-			
0.	TCE/PCE Plant Thermic fluid/ Fire Heaters No. 1	50	Efficient Burner			
1.	TCE/PCE Plant Thermic fluid/ Fire Heaters No. 2	50	Efficient Burner			
2.	HFC 134a Plant Thermic fluid/ Fire Heaters	50	Efficient Burner			
3.	AHF Plant Heater No. 1 (Thermic	46	Efficient Burner			

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		fluid/ Fire Heaters)					
	4.	AHF Plant Drying System No. 1	35	Cyclone Separator /Bag Filter			
	5.	AHF Plant Heater No. 2 (Thermic fluid/ Fire Heaters)	46	Efficient Burner			
	6.	AHF Plant Drying System No. 2 (Thermic fluid/ Fire Heaters)	35	Cyclone Separator /Bag Filter			
	7.	Difluoro methane (HFC 32) Plant Hot Oil Furnace (Thermic fluid/ Fire Heaters)	55	Efficient Burner			
	8.	Boiler 30 TPH	63	-			
	9.	Boiler 30 TPH	63	-			
	0.	DG Set 4200 kVA	30	-			
	1.	DG Set 4200 kVA	30	-			
	2.	DG Set 4200 kVA	30	-			
	3.	Boiler 17 TPH	53	-			

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

4.	Dust Collectors	11	Bag Filter	Particulate Matter	150 mg/Nm3	
5.	Boiler 175 TPH	110	Electrostatic Precipitator + Auto Lime Dosing System	PM SO2 NOx Hg	30 mg/Nm3 100 mg/Nm3 100 mg/Nm3 0.03 mg/Nm3	
6.	Thermal Oxidizer-1	40	Quencher + Water Absorber + Alkali Scrubber	PM HCl SO2 CO Total Organic Carbon Total dioxins and durans Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V+Cd+Th+Hg and their compounds	50 mg/Nm3 50 mg/Nm3 200 mg/Nm3 100 mg/Nm3 20 mg/Nm3 0.1 TEQ/Nm3 1.5 mg/Nm3	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

<table>
<tr><td>4.3</td><td colspan="5">Condition No. 3 (of the CCA Amendment dated 17/05/2018) stands amended and shall be read as under,
The process gas emission through various stack / vent of reactors, process vessels shall confirm to the following standards</td><td>Process gas emission monitoring carried out on monthly basis by MoEF and NABL approved laboratory and its results/report is submitted to GPCB RO, Bharuch are well within permissible limits.</td></tr>
<tr><td></td><td>Stack</td><td>Stack Attach To</td><td>Air Pollution Control System</td><td>Stack height in Meter</td><td>AIR EMISSION</td><td></td></tr>
<tr><td colspan="5"></td><td>POLLUTANT</td><td>CONCENTRATION</td></tr>
<tr><td colspan="6">Existing Process Stack</td><td></td></tr>
<tr><td colspan="6">HF Plant Stack</td><td></td></tr>
<tr><td></td><td>1</td><td>HF Plant Central Absorption System</td><td>Continuous water Circulation</td><td>30</td><td>HF</td><td>6mg/NM3</td></tr>
<tr><td colspan="6">TCE/PCE Plant Stack</td><td></td></tr>
<tr><td></td><td>2</td><td>TCE/PCE Plant (Central Absorption System)</td><td>Continuous Alkali Circulation</td><td>20</td><td>Cl2</td><td>9mg/NM3</td></tr>
<tr><td></td><td>3</td><td>TCE/PCE Plant (Central Absorption System)</td><td>Continuous Water Circulation</td><td>30</td><td>HCl</td><td>20mg/NM3</td></tr>
<tr><td colspan="6">HFC Plant Stack</td><td></td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	4	R134a Plant (Central Absorption System)	Continuous Water Circulation	30	HCl	20mg/NM3
					HF	6mg/NM3
	Flourospeciality Plant Stacks					
	5	Reactor / Vessel (10 Nos.) Central Absorption System	Continuous Water Circulation	30	HF	6mg/NM3
					HCl	20mg/NM3
	6	Reactor / Vessel (10 Nos.) Central Absorption System	Continuous Water Circulation	30	HCl	20mg/NM3
	7	Reactor / Vessel (04 Nos.) Central Absorption System	Continuous Alkali Circulation	20	Cl2	9mg/NM3
	8	Reactor / Vessel (02 Nos.) Central Absorption System	Continuous Alkali Circulation	20	Br2	2mg/NM3
	9	Trifluoro Acetic Acid	Continuous Water + Alkali	30	HF	6 mg/NM3
		Central Absorption			HCl	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

			Circulation			
10	Ethyldifluoroacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
				HCl	20 mg/NM3
11	Ethyltrifluroacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
12	Ethyltrifluoroacetoacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
13	Pentafluorobenzoic Acid Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
14	Pyrazole Acid Central Absorption System	Continuous Water +	30	HCl	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

			Alkali Circulation			
15	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Br2	2 mg/NM3
16	Tetrafluoropropene – 1234yf Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
				HCl	20 mg/NM3
17	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
18	Hexafluoropropylene Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
19	Difluoromethanesulphonlychloride	Continuous	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		Central Absorption System**	Water + Alkali Circulation				
	20	Trifluoromethylbenzamide Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3	
					Cl2	9 mg/NM3	
	21	Bromopentafluorobenzene Central Absorption System	Continuous Water + Alkali Circulation	.	Br2	2 mg/NM3	
	22	5-Bromo-2-2-difluoro-1-3-benzodioxide Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3	
					Br2	2 mg/NM3	
					HF	6 mg/NM3	
	23	Difluorobenzodioxole methyl ester Central Absorption System**	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3	
					Br2	2 mg/NM3	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	24	Methyl-2-Fluoroacrylate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
	25	CMS plant (Methylene dichloride, Chloroform, Carbon tetrachloride) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
					Cl2	9 mg/NM3
	26	Chlorotrifluoroethane (HCFC 133a) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
					HF	6 mg/NM3
	27	Pentafluoroethane (HFC 125) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
					HF	6 mg/NM3
	28	Difluoromethane (HFC – 32) Central Absorption System	Continuous Water + Alkali Circ	30	HCl	20 mg/NM3
					HF	6 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		ulation			
29	HCl Storage Tank Farm	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
30	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
31	Flare Stack attached to Topramezone Plant	N.A.	30	-	-
32	Chlorodifluoromethane (R22) plant Central Absorption System	Continuous Water Circulation	30	HF	6 mg/NM3
				HCL	20 mg/NM3
33	Calcium Chloride Plant Scrubber	Continuous Water + Sodium Carbonate Solutions	30	CO2	-
34	Methyl Hydroxy Pyrazole	Continuous Wate	30	HCL	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

			r Circulation			
	35	TCE/PCE Acid tank farm area scrubber vent	Continuous Water Circulation	11.7	HCL	20 mg/NM3
	36	HFC134a Acid tank farm area scrubber vent	Continuous Water Circulation	11.4	HCL	20 mg/NM3
	37	DHF Scrubber	Continuous Water Circulation	10	HF	6 mg/NM3

4.4 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No.	Parameters	Permissible Limit (microgram /M3)	
		Annual	24 Hours Average
1.	Particulate Matter (PM10)	60	100
2.	Particulate Matter (PM2.5)	40	60
3.	Oxides of Sulphur (SOx)	50	80
4.	Oxides of Nitrogen (NOx)	40	80

• Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.
• 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

4.5 Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified in condition as above.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

<table>
<tr><td>5</td><td>CONDITIONS UNDER HAZARDOUS & OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES, 2016</td><td></td></tr>
<tr><td>5.1</td><td>Unit shall comply with provisions of Hazardous & Other Wastes (Management & Transboundary Movement) Rules-2016.</td><td></td></tr>
<tr><td>5.2</td><td>The condition No. 5 under authorization for Hazardous & other wastes of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-15121/525661, dated 25/10/2019 is amended and shall now be read as under.
<table>
<tr><th rowspan="2">Sr. No.</th><th rowspan="2">Name of Haz. Waste</th><th rowspan="2">Category Number</th><th colspan="2">Facility</th></tr>
<tr><th>Total Hazardous Waste Quantity, MT/Yr</th><th>Mode of disposal</th></tr>
<tr><td>1</td><td>Chemical sludge from wastewater treatment</td><td>35.3</td><td>3265</td><td>Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.</td></tr>
<tr><td>2</td><td>Spent Oil</td><td>5.1</td><td>600</td><td>Collection, storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners</td></tr>
<tr><td>3</td><td>Discarded containers / barrels / liners used for hazardous wastes/chemicals</td><td>33.1</td><td>5,428</td><td>Collection, storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners</td></tr>
<tr><td>4</td><td>Spent Catalyst</td><td>36.2</td><td>2,763</td><td>Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.</td></tr>
<tr><td>5</td><td>Spent Carbon</td><td>36.2</td><td>468</td><td>Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.</td></tr>
<tr><td>6</td><td>Off- Specification Product</td><td>36.1</td><td>600</td><td>Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-</td></tr>
</table>
</td><td>The hazardous waste generation quantity is well within allowable limit.

We are having valid membership certificate with TSDF and CHWIF.

We have MoU with actual/end users for using hazardous waste as raw material.

We have agreements with pre-processors and co-processors for using hazardous wastes as an AFR.</td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				processing or pre-processing.
7	Process Residue & Waste	36.1	15,125	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.
8	Spent Organic Solvent	20.2	47586	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission & valid CCA after making MOU.
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	18,553	
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	37,869	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.
11	CuCl Cake	8.2	52	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.
12	Ammonium Salt	A-10	1,717	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
13	Potassium Salt	B-36	445	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission &

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
14	Sodium Salt	B-36	4402	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
15	Zinc Compound	6.1	44	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
16	Hydrofluorosilicic acid (15-40%)	Sch II - Class C - C2	4000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
17	Sulphuric acid (70-95%)	B-15	90382	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
18	Hydrochloric Acid (10 - 33%)	B-15	4,11,553	Collection, Storage, Transportation and

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
19	Sodium Hypochlorite	B-7	13875	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	2,593	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
21	Calcium Fluoride	B-10	5,844	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
22	Calcium Chloride	B-10	165	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
23	Sodium methoxide Solution	C7	120	Collection, Storage, Transportation and

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing	
24	Phosphorus trichloride	B-35	934	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing	
25	Gypsum (CaSO4)	38.1	1,62,400	Collection, Storage, Transportation and Disposal by sending to Cement industries or Actual Users having rule-9 permission & valid CCA after making MOU or co-processing or pre-processing facility	
26	Aluminum trifluoride	36.1	1,000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing	
27	Liquor Ammonia Solution (10-25%)	A10	1,500	Collection, Storage, Transportation and Disposal by sending	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	2,802	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
29	Fluoroform (R23)	28.1	240	Collection, Storage, In-house treatment through Thermal Oxidizer/ Transportation and Disposal at approved CHWIF.
30	Inorganic Sludge Generation from Calcium Chloride Plant	35.3	234	Collection, Storage, Transportation and Disposal at approved TSDF
31	Caustic lye	Sch II - Class C - C2	36	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user
32	Ash from thermal oxidizer and flue gas cleaning residue	37.2	40	Collection, Storage, Transportation and Disposal by approved TSDF or co-processing or pre-processing
33	Exhaust air or gas cleaning residue (mixed/lean acid generated from scrubber of thermal oxidizer)	35.1	1908	Collection, Storage, Transportation and Disposal by approved CHWIF or co-processing or pre-processing
34	Insulation waste	_	300	Collection, Storage, Transportation and

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	<table><tr><td></td><td></td><td></td><td></td><td>Disposal by approved TSDF</td></tr></table> Unit shall ensure transportation of hazardous wastes through GPS mounted authorized vehicles with recording facility and online manifest system of the Board.	
6	All other conditions of the CCA order No: AWH-119079, issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ ID-24521/678954, dated 26/07/2022 shall remain same.	Complied.

CCA Letter No. GPCB/BRCH-B/CCA-38 (21)/ID-24521/738542 Dated 06/04/2023		
Sr. No.	Conditions This has reference to the CCA Amendment issued vide letter no. GPCB/BRCH-B/CCA-38(19)/ID-24521/678954 dated 26/07/2022 under the provision of the various Environmental Act/Rules,	Compliance Status
2.	Specific Condition	
a)	Unit shall mentioned ZLD for wastewater generated from proposed CPP of capacity 20.1MW	Noted and Complied.
b)	Unit shall comply MoEF & CC's Notification dated 28/06/2018 and its subsequent amendment for thermal power plant.	Noted and Complied.
c)	Unit shall not carry out any construction activities and production which attracts provisions of Environment Clearance without obtaining EC from competent authority under EIA notification dated 14/09/2006 and amended thereafter	Noted and Complied.
d)	Unit shall comply with all the conditions stipulated by SEIAA / MoEF in the order of Environment Clearance issued vide letter no. SEIAA/GUJ/EC/5(f)/1538/2020 dated_15/12/2020.	Complied. Last Half yearly EC compliance report is submitted to MoEF on 31-May-24 and the same is available on website.
e)	Unit shall sell out their hazardous waste to authorized end users who is having authorization with valid CCA and rule 9 permission to receive this waste. Unit shall make MoU with such authorized end users and submit MoU.	Complied. We are selling hazardous waste to authorized actual user or end users only. All the authorized actual/end

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		users have applied/obtained permissions from concerned authorities under Rule 9 of the Hazardous and Other Waste Management and Transboundary Movement) Rules 2016.
f)	All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.	We have agreements with various cement industries (Ambuja cement, J K Lakshmi cement, Shree Cement, Ultratech Cement) for hazardous waste usage as AFR.
g)	Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.	Complied. We have MoUs with actual end users for spent solvent recycling/re-processing.
h)	Unit shall strictly follow the Solid Fuel guideline framed by Board and shall install APCM as per guideline.	We have installed lime dosing system as APCM in our solid fuel boilers.
i)	Unit shall follow coal handling guideline framed by Board and provide close ash handling facility.	1) Coal is covered with tarpaulin during transportation.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		2) Coal loading and unloading activity is being done in closed shed. 3) Handling and transportation of coal is through covered coal conveyers 4) Dust collectors are installed to abate the nuisance of dust. 5) Installation of two Silo for fly ash storage
k)	Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.	100% Fly ash is sent to brick manufacturers/ cement industry/in construction work.
l)	Unit shall install online Continuous Emission Monitoring Systems (CEMS) and link it with the server of GPCB for real time data transfer for boiler more than 8 TPH capacity or equivalent capacity of TFH.	Continuous Emission Monitoring System for effluent discharge and stacks emissions are installed in unit. An arrangement is also available for reflecting the online monitoring results on the company's server, which can be

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		accessed by the GPCB on real time basis.
3	CONDITION UNDER WATER ACT: -	
3.1	The quantity of total water consumption shall not exceed 20984 KL/day as per below break up as mentioned in form D submitted for consent application under the water act-1974 (a) Domestic: 429 KL/Day (b) Industrial: 20340 KL/Day Total 20984 Kl/day	Average water consumption is 9292 KLD.
3.2	The Quantity of total water generation shall not exceed 10654 KL/day as per below break up as mentioned in form D submitted for consent application under the water act-1974 (a) Domestic: 340 KL/Day (b) Industrial: 10314KL/Day Total: 10654KL/day	Average wastewater generation from domestic and industrial is 217 KLD & 3204 KLD resp.
3.3	The quantity of the industrial effluent from the manufacturing process and other ancillary Industrial operations shall not exceed 10314 KL/Day, and the quantity of domestic wastewater (sewage) shall not exceed 340 KL/Day.	Average wastewater generation from domestic and industrial is 217 KLD & 3204 KLD resp.
3.4	4024 KLD of process steam condensate collected in separate collection tank and reused in cooling tower/process.	Complied. Process Steam Condensate collected separately and reused in cooling tower.
3.5	4511 KLD of industrial effluent from softener/ DM Plant reject + Boiler Blow down + Cooling tower Blow down (including Captive Power Plant) shall be sent to separate ETP (UF&RO including primary treatment). After treatment 3928 KLD the treated shall be reused in cooling tower/process and 583 KLD RO reject after confirming the GPCB discharge norms shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.	Utility effluent from softener/ DM Plant reject + Boiler Blow down + Cooling tower Blow down (including Captive Power Plant) treated in separate UF & RO System and the permeate is

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

<table>
<tr><td></td><td></td><td>used in cooling tower.</td></tr>
<tr><td>3.6</td><td>In that 1779 KLD (Process Effluent + Washings) of industrial effluent shall be sent to ETP for primary, secondary and tertiary treatment and Multi Effect Evaporator (MEE) followed by Agitated Thin Film Dryer. After treatment the treated shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea.</td><td>Average 1044 KL Process and Washing effluent treated in separate Effluent Treatment Plant having Primary, Secondary and Tertiary treatment & Multi Effect Evaporated (MEE) plant & ATFD. The treated effluent is sent for the disposal in to GIDC sewer line.</td></tr>
<tr><td>3.7</td><td>Total 2362 KLD treated (1779 KLD treated industrial effluent + 583 KLD RO reject after confirming the GPCB standard) shall be sent for disposal in to GIDC sewer line – Dahej pipeline / Common disposal system up to the sea for final disposal at NIO designated points.</td><td>Average wastewater discharge for is 1553 KLD.</td></tr>
<tr><td>3.8</td><td>340 KLD of sewage shall be treated separately to confirm the GPCB standard shall be reuse in development of greenbelt / plantation within premises and in monsoon season it shall be reuse in cooling tower/process.
<table>
<tr><td>PARAMETER</td><td>GPCB NORMS</td></tr>
<tr><td>pH</td><td>6.5 TO 9.0</td></tr>
<tr><td>Total Suspended Sollids</td><td>< 100 mg/L</td></tr>
<tr><td>Fecal Coliform (Most probable number per 100 mililiter, MPN/100ml)</td><td>< 1000 MPN/100 ml</td></tr>
<tr><td>BOD (5 days at 20-degree C)</td><td>< 30 mg/L</td></tr>
</table></td><td>The sewage is treated in STP and used for gardening purpose. IN monsoon the treated sewage is re-used in cooling tower.

Average 217 KLD sewage is treated</td></tr>
</table>

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		The STP inlet and outlet quality is tested by NABL accredited laboratory on monthly basis. The monthly monitoring of treated effluent by MoEF and NABL approved laboratory confirming the results well within the permissible limits. The continuous monitoring system for COD, TN, TOC, Ammonical Nitrogen, pH, Flow and TSS before treated effluent disposal to GIDC, Common Network.
3.9	The quality of treated effluent shall conform to the following standards prior to disposal GIDC Sewer Line - Dahej Vilayat Pipeline/Common Disposal System up to the sea for final disposal at NIO designated point.	

Parameters	Permissible Limit
pH	6 to 9
Temperature	Shall not exceed 5° C above the receiving water temperature.
Total Suspended Solids	100 mg/Lit
Oil and Grease	10 mg/l
Phenolic Compounds (s C6H5OH	5 mg/l
Cynide (as CN)	0.2 mg/l
Fluorides	15 mg/l
Sulphides	5 mg/l
Ammonical Nitrogen	50 mg/l
Total Kjeldahl Nitrogen (TKN)	50 mg/l
Nitrate - Nitrogen	50 mg/l
Total Residual Chloride	1 mg/l
Arsenic (as As)	0.2 mg/l
Trivalent Chromium	2 mg/l
Chromium-Hexavalent	0.1 mg/l
Copper	3 mg/l
Lead (as Pb)	0.1 mg/l
Mercury (as Hg)	0.01 mg/l
Nickel	3 mg/l
Zinc	15 mg/l
Cadmium (as Cd)	0.05 mg/l
BOD (3 days at 27-degree C)	100 mg/l
COD	250 mg/l
Selenium [as Se]	0.05 mg/l
Vanadium	0.2 mg/l
Manganese [as Mn]	2 mg/l
Iron	3 mg/l
Bio-assay test	90% Survival of fish after 96 hrs in 100% effluent.

CONDITION UNDER AIR ACT		
4.1	Condition No. 4.1 (of the CCA Amendment dated 22/02/2018) stands amended and shall be read as under,	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

Sr. No.	Name Of Fuel	Total Quantity per day	Average Consumption
1	Coal	1668 MT/Day	879MT/Day
2	HSD	216 KL/day	8 KL/day
3	Natural Gas [alternate fuel instead of coal]	45203 Nm3/day	0
4	Furnace Oil (LPD)	142.5 KL/day	0 KL/day
5	LSHS/LDO	110 KL/day	21 KL/day

4.2 Condition No. 4.2 (of the CCA Amendment dated 22/02/2018) stands amended and shall be read as under,

The flue gas emission through stack attached to boiler / D.G.Sets / TPP shall conform to the following standard:

Sr. No.	Stack Attached To	Stack Height (meter)	APCM	Pollutant	Permissible Limit
3.	Boiler 35 TPH	94 (Common Stack)	Electrostatic Precipitator + Scrubber	PM SO2 NOx Hg	50 mg/Nm3 600 mg/Nm3 450 mg/Nm3 0.03 mg/Nm
4.	Boiler 35 TPH				
5.	Boiler 60 TPH				
6.	DG Set 500 KW	11	-	PM SO2 NOx	150 mg/Nm3 100 ppm 50 ppm
7.	DG Set 500 KW	11	-		
8.	DG Set 840 KW	30	-		
9.	DG Set 840 KW	30	-		
0.	TCE/PCE Plant Thermic fluid/ Fire Heaters No. 1	50	Efficient Burner		
1.	TCE/PCE Plant Thermic fluid/ Fire Heaters No. 2	50	Efficient Burner		
2.	HFC 134a Plant Thermic fluid/ Fire Heaters	50	Efficient Burner		

Complied. Flue gas emission monitoring carried out on monthly basis by MoEF and NABL approved laboratory and its results/report is submitted to GPCB RO, Bharuch

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

3.	AHF Plant Heater No. 1 (Thermic fluid/ Fire Heaters)	46	Efficient Burner			
4.	AHF Plant Drying System No. 1	35	Cyclone Separator /Bag Filter			
5.	AHF Plant Heater No. 2 (Thermic fluid/ Fire Heaters)	46	Efficient Burner			
6.	AHF Plant Drying System No. 2 (Thermic fluid/ Fire Heaters)	35	Cyclone Separator /Bag Filter			
7.	Difluoromethane (HFC 32) Plant Hot Oil Furnace (Thermic fluid/ Fire Heaters)	55	Efficient Burner			
8.	Boiler 30 TPH	63	-			
9.	Boiler 30 TPH	63	-			
0.	DG Set 4200 kVA	30	-			
1.	DG Set 4200 kVA	30	-			
2.	DG Set 4200 kVA	30	-			
3.	Boiler 17 TPH	53	-			
4.	Dust Collectors	11	Bag Filter	Particulate Matter	150 mg/Nm3	
5.	Boiler 175 TPH	110	Electrostatic Precipitator + Auto Lime Dosing System	PM SO2 NOx Hg	30 mg/Nm3 100 mg/Nm3 100 mg/Nm3 0.03 mg/Nm3	
6.	Thermal Oxidizer-1	40	Quencher + Water Absorber + Alkali Scrubber	PM HCl SO2 CO Total Organic Carbon Total dioxins	50 mg/Nm3 50 mg/Nm3 200 mg/Nm3 100 mg/Nm3 20 mg/Nm3 0.1 TEQ/Nm3	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

					and durans Sb+As+ Pb+Cr+ Co+Cu+ Mn+Ni+ V+Cd+T h+Hg and their compou nds	1.5 mg/Nm3	

4.3	Condition No. 3 (of the CCA Amendment dated 17/05/2018) stands amended and shall be read as under, The process gas emission through various stack / vent of reactors, process vessels shall confirm to the following standards					Process gas emission monitoring carried out on monthly basis by MoEF and NABL approved laboratory and its results/report is submitted to GPCB RO, Bharuch are well within permissible limits.	
	S t a c k	Stack Attach To	Air Pollut ion Contr ol Syste m	Stack height in Meter	AIR EMISSION		
					POLLUTANT	CONCEN TRATION	
	Existing Process Stack						
	HF Plant Stack						
	1	HF Plant Central Absorption System	Conti nuous water Circul ation	30	HF	6mg/NM3	
	TCE/PCE Plant Stack						
	2	TCE/PCE Plant (Central Absorption System)	Conti nuous Alkali Circul ation	20	Cl2	9mg/NM3	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

3	TCE/PCE Plant (Central Absorption System)	Continuous Water Circulation	30	HCl	20mg/NM3	
HFC Plant Stack						
4	R134a Plant (Central Absorption System)	Continuous Water Circulation	30	HCl	20mg/NM3	
				HF	6mg/NM3	
Flourospeciality Plant Stacks						
5	Reactor / Vessel (10 Nos.) Central Absorption System	Continuous Water Circulation	30	HF	6mg/NM3	
				HCl	20mg/NM3	
6	Reactor / Vessel (10 Nos.) Central Absorption System	Continuous Water Circulation	30	HCl	20mg/NM3	
7	Reactor / Vessel (04 Nos.) Central Absorption System	Continuous Alkali Circulation	20	Cl2	9mg/NM3	
8	Reactor / Vessel (02 Nos.) Central Absorption System	Continuous Alkali Circulation	20	Br2	2mg/NM3	
9	Trifluoro Acetic Acid	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3	
	Central Absorption			HCl	20 mg/NM3	
10	Ethyldifluoroacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3	
				HCl	20 mg/NM3	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	11	Ethyltrifluroacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
	12	Ethyltrifluoroacetoacetate Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
	13	Pentafluorobenzoic Acid Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
					Cl2	9 mg/NM3
	14	Pyrazole Acid Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
	15	2-methyl-4-（1,1,1,2,3,3,3-heptafluoro-2-propyl aniline Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
					Br2	2 mg/NM3
	16	Tetrafluoropropene – 1234yf Central Absorption System	Continuous Water + Alkali Circulation	30	HF	6 mg/NM3
					HCl	20 mg/NM3
	17	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	Continuous Water + Alkali	30	HCl	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		Circulation			
18	Hexafluoropropylene Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
19	Difluoromethanesulphonlychloride Central Absorption System**	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
20	Trifluoromethylbenzamide Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
21	Bromopentafluoro benzene Central Absorption System	Continuous Water + Alkali Circulation	.	Br2	2 mg/NM3
22	5-Bromo-2-2-difluoro-1-3-benzodioxide Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Br2	2 mg/NM3
				HF	6 mg/NM3
23	Difluorobenzodioxole methyl ester Central Absorption System**	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Br2	2 mg/NM3
24	Methyl-2-Fluoroacrylate	Continuous Water	30	HF	6 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		Central Absorption System	+ Alkali Circulation			
25	CMS plant (Methylene dichloride, Chloroform, Carbon tetrachloride) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				Cl2	9 mg/NM3
26	Chlorotrifluoroethane (HCFC 133a) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				HF	6 mg/NM3
27	Pentafluoroethane (HFC 125) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				HF	6 mg/NM3
28	Difluoromethane (HFC – 32) Central Absorption System	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
				HF	6 mg/NM3
29	HCl Storage Tank Farm	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3
30	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl] (5-hydroxy-1-methylpyrazol-4-yl) methanone (Topramezone)	Continuous Water + Alkali Circulation	30	HCl	20 mg/NM3

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

		Central Absorption System				
	31	Flare Stack attached to Topramezone Plant	N.A.	30	-	-
	32	Chlorodifluoromethane (R22) plant Central Absorption System	Continuous Water Circulation	30	HF	6 mg/NM3
					HCL	20 mg/NM3
	33	Calcium Chloride Plant Scrubber	Continuous Water + Sodium Carbonate Solutions	30	CO2	-
	34	Methyl Hydroxy Pyrazole	Continuous Water Circulation	30	HCL	20 mg/NM3
	35	TCE/PCE Acid tank farm area scrubber vent	Continuous Water Circulation	11.7	HCL	20 mg/NM3
	36	HFC134a Acid tank farm area scrubber vent	Continuous Water Circulation	11.4	HCL	20 mg/NM3
	37	DHF Scrubber	Continuous Water Circulation	10	HF	6 mg/NM3

4.4 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No.	Parameters	Permissible Limit (microgram /M3)	
		Annual	24 Hours Average

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	1.	Particulate Matter (PM10)	60	100
	2.	Particulate Matter (PM2.5)	40	60
	3.	Oxides of Sulphur (SOx)	50	80
	4.	Oxides of Nitrogen (NOx)	40	80

• Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.
• 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

4.5	Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified in condition as above.	
5	CONDITIONS UNDER HAZARDOUS & OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES, 2016	
5.1	Unit shall comply with provisions of Hazardous & Other Wastes (Management & Transboundary Movement) Rules-2016.	
5.2	The condition No. 5 under authorization for Hazardous & other wastes of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-15121/525661, dated 25/10/2019 is amended and shall now be read as under.	The hazardous waste generation quantity is well within allowable limit. We are having valid membership certificate with TSDF and CHWIF. We have MoU with actual/end users for using hazardous waste as raw material. We have agreements with pre-

Sr. No.	Name of Haz. Waste	Category Number	Facility	
			Total Hazardous Waste Quantity, MT/Yr	Mode of disposal
1	Chemical sludge from wastewater treatment	35.3	3265	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.
2	Spent Oil	5.1	600	Collection, storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners
3	Discarded containers / barrels / liners used for hazardous wastes/chemicals	33.1	5,428	Collection, storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

	4	Spent Catalyst	36.2	2,763	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.	processors and co-processors for using hazardous wastes as an AFR.
	5	Spent Carbon	36.2	468	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.	
	6	Off- Specification Product	36.1	600	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.	
	7	Process Residue & Waste	36.1	15,125	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.	
	8	Spent Organic Solvent	20.2	47586	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing or sent to authorized actual end-user having rule-9 permission & valid CCA after making MOU.	
	9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	18,553		
	10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	37,869	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing.	
	11	CuCl Cake	8.2	52	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing.	
	12	Ammonium Salt	A-10	1,717	Collection, Storage, Transportation and Disposal by sending to authorized Actual	

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
13	Potassium Salt	B-36	445	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
14	Sodium Salt	B-36	4402	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
15	Zinc Compound	6.1	44	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
16	Hydrofluorosilicic acid (15-40%)	Sch II - Class C - C2	4000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
17	Sulphuric acid (70-95%)	B-15	90382	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				rule-9 permission & valid CCA after making MOU
18	Hydrochloric Acid (10 - 33%)	B-15	4,11,553	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
19	Sodium Hypochlorite	B-7	13875	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	2,593	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
21	Calcium Fluoride	B-10	5,844	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
22	Calcium Chloride	B-10	165	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
23	Sodium methoxide Solution	C7	120	Collection, Storage, Transportation and Disposal by sending to

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing
24	Phosphorus trichloride	B-35	934	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
25	Gypsum (CaSO4)	38.1	1,62,400	Collection, Storage, Transportation and Disposal by sending to Cement industries or Actual Users having rule-9 permission & valid CCA after making MOU or co-processing or pre-processing facility
26	Aluminum trifluoride	36.1	1,000	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing
27	Liquor Ammonia Solution (10-25%)	A10	1,500	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user having rule-9 permission & valid CCA after making MOU
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	2,802	Collection, Storage, Transportation and Disposal by sending to authorized Actual

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

				users/end-user having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing	
	29	Fluoroform (R23)	28.1	240	Collection, Storage, In-house treatment through Thermal Oxidizer/ Transportation and Disposal at approved CHWIF.	
	30	Inorganic Sludge Generation from Calcium Chloride Plant	35.3	234	Collection, Storage, Transportation and Disposal at approved TSDF	
	31	Caustic lye	Sch II - Class C - C2	36	Collection, Storage, Transportation and Disposal by sending to authorized Actual users/end-user	
	32	Ash from thermal oxidizer and flue gas cleaning residue	37.2	40	Collection, Storage, Transportation and Disposal by approved TSDF or co-processing or pre-processing	
	33	Exhaust air or gas cleaning residue (mixed/lean acid generated from scrubber of thermal oxidizer)	35.1	1908	Collection, Storage, Transportation and Disposal by approved CHWIF or co-processing or pre-processing	
	34	Insulation waste	_	300	Collection, Storage, Transportation and Disposal by approved TSDF	
	Unit shall ensure transportation of hazardous wastes through GPS mounted authorized vehicles with recording facility and online manifest system of the Board.					
6	All other conditions of the CCA order No: AWH-119079, issued vide letter no. GPCB/ BRCH-B/ CCA-38(19)/ ID-24521/678954, dated 26/07/2022 shall remain same.					Complied.

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

ANNEXURE – 34

DECLARATION

It is declared that all the information submitted in & with respect to this format is as per the data given by the client industry and collected during environment audit survey by the audit team.

Name & Signature of the recognized person of the industry / organization institute with stamp		Name & Signature of all the member of the audit team	
Mr. Harendra Singh Dagur EVP – Site Head		Dr Savan Tank Co-coordinator	
Mr. Kalpesh Jethva VP - Manufacturing		Dr. Parwathi Pillai Chemical Engineer	
Mr. Praveen Mishra AVP – Environment Head		Mr. Brinda Govani Environmental Engineer	
Mr. Mayurkumar Jadav Manager - Environment		Mr. Apeksha Brahmbhatt Microbiologist	

Date: 25.06.2024 **Place: Swarrnim Institute of Technology, Ahmedabad**

SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.