ACK COPY



#### SANDHYA ORGANIC CHEMICALS PVT. LTD.

Admn & : 101-102, Sangam CHS Ltd., 1st Floor, A Wing, S. V. Road, Santacruz (W), Mumbai - 400054

Sales Office : Tel.: +91-22-61565555 / 26104202 / 26151500 • Fax : +91-22-26104201

 $\textbf{Redg. Office} \hspace{0.2cm} : \hspace{0.2cm} \textbf{Plot No. 808/A/2, III Phase, G.I.D.C. Vapi-396 195. Gujarat, India.} \\$ 

: Tel.: +91-260-2430875 / 2400235 • Telefax : +91-260-2430875

E-mail : socpl@vsnl.com • Website : www.sandhya-group.com

(An ISO 9001: 2008 Certified Company)

Date: November 14, 2019

To,
Deputy Director General of Forest (Central)
Regional Office (Western Region),
Ministry of Environment and Forests,
"Kendriya Paryavaran Bhavan"
Link Road no.3E-5, Ravi Shankar Nagar
Bhopal – 462 016 (M.P.)

Sub: Submission of Comprehensive EC Compliance report with reply to the additional observations and present status with adequate reasoning and supporting data.

**Ref.:** MoEF&CC Letter No. 5-4/2016(ENV)/778, Dated: 14.10.2019 EC No.: J-11011/481/2011-IA II (I) dated: 25.06.2016

Dear Sir.

We are in receipt of above referred letter and noted the contents of the letter, we would like to state as under along with the required detains as attachments in compliance of the points mentioned in the letter.

i. Present status (Physical/civil) of work progress.

**Our Reply:** Presently the project is under operation as per awarded Environmental Clearance from MoEF and CCA from GPCB.

ii. A comprehensive compliance report in respect of all the conditions of EC with adequate reasoning and supporting data showing the summary of the monitored data in tabular format within the compliance status itself.

Our Reply: A comprehensive compliance report in respect of all the conditions of EC with the summary of the monitored data in a tabular format as attachment –I.

iii. Period of Compliance for which compliance report is being submitted.

**Our Reply:** We are regularly submitting EC compliance report for the period of: The Acknowledge copy of same is enclosed as EC Comp. Condition no.15.

- 1. (April'17 to Sept'17) Date: 29.11.2017.
- 2. (Octo'17 to March'18) Date: 25.05.2018
- 3. (April'18 to Sept'18) Date: 26.12.2018.
- 4. (Octo'18 to March'19) Date: 22.05.2019.

Head where WAF!



#### SANDHYA ORGANIC CHEMICALS PVT. LTD.

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#### iv. Copies of

- EIA/EMP/Form-I.

- Our Reply: The soft Copy of EIA/EMP/Form-I in CD is enclosed as attachment . - II.

- Recommendations of the Public Hearing, if any.

- Our Reply: Public hearing was exempted as per section 7(i)(III) stage (3) Para (i)(b) of the Environment Impact Assessment Notification-2006.

- Consent to Establish/Operate from GPCB

- **Our Reply:** Copy of Consent to Establish and Consent to operate is enclosed as EC Compliance Annexure - IX.

v. Details of show cause/closure notice issued by GPCB/CPCB during last 3 years.

Our Reply: The last 3 years show cause notice issued by GPCB in tabular form is enclosed as EC Compliance Annexure - XII.

vi. Details of court cases.

Our Reply: There is no court case against our company.

vii. Information about any expansion/replacement/construction work undertaken without valid approval/EC.

**Our Reply:** No any construction/expansion activity is taken up without Environmental Clearance.

viii. PA shall clarify any directions of CPCB regarding online monitoring etc.

**Our Reply:** There is no any direction issued by CPCB with regard to online monitoring etc.

ix. The information in the enclosed Data-Sheet.

**Our Reply:** The Data-Sheet with adequate details is enclosed as EC Compliance Annexure - X.

Thanking you,

Yours truly,

For Sandhya Organic Chemicals Pvt. Ltd.

celuly

(General Manager)

Encl.: A/a.

R.J Shah

# CMPREHENSIVE COMPLIANCE REPORT (IN RESPECT OF THE STIPULATED T&C) OF ENVIRONMENTAL CLEARANCE

(E.C. LETTER NO J-11011/481/2011-IA.II (I) dt. 25/06/2015.)

**FOR** 

## M/s. Sandhya Organic Chemicals PVT.LTD.



Plot No. 808 A/2, 3<sup>rd</sup> Phase, GIDC Estate, Vapi-396 195, Dist- Valsad (Gujarat).

#### **ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT**

(E.C. LETTER NO J-11011/481/2011-IA.II (I) dt. 25/06/2015.)

The compliance of Specific conditions & general conditions of Environmental Clearance are as follows:

#### **List of Finished Products:**

Sr. No.	Name of Products	Existing Production (MTPM)	Expansion Production (MTPM)	Total Production after expansion (MTPN)		
1.	Aluminum Phosphide	25	75	100		
2.	Zinc Phosphide	25	75	100		
Name of by-products:						
1.	Phosphoric Acid Un-reacted P <sub>2</sub> O <sub>3</sub>	25	75	100		

Sr. No.	Condition	Compliance status		
A.	SPECIFIC CONDITIONS:			
1.	National Emission Standards for Pesticide Manufacturing and Formulation Industry issued by the Ministry vide G.S.R. 46(E) dated 3rd February, 2006 and amended time to time shall be followed by the unit.	We regularly monitor the Ambient Air quality as per the National Emission Standard for Pesticide Manufacturing issued by the Ministry vide G.S.R 826 (E) dated 16 <sup>th</sup> November,2009 and amended time to time.  The Ambient air quality monitoring test reports (for the period of April.'19 to September'19) are enclosed as <b>Annexure-I</b> .  The results of Ambient air quality monitoring is provided in the Table no.1 mention below:		

#### Table No.1: Ambient Air Quality Monitoring Data

Ambient Air Quality Monitoring Data (Period : April - 2019 to September - 2019)						
Month & Year	Date	Parameter with Results				
wonth & Year		PM <sub>10</sub> μg/m <sup>3</sup>	$PM_{2.5} \mu g/m^3$	SO <sub>2</sub> μg/m <sup>3</sup>	NO <sub>2</sub> μg/m <sup>3</sup>	
April-2019	25/04/2019	92	37	24.1	30.3	
July-2019 24/07/2019		54	19	13.9	17.4	
CPCB Standard		100	60	80	80	

Ambient Air quality monitoring is carried out by NABL accredited laboratory M/s. UniStar Environment and Research Labs Pyt. Ltd., Vani, NABL Certificate No. T-7753, NABL Valid Until: 14.09.2020.

Labs Pvi	abs Pvt. Ltd., Vapi, NABL Certificate No. T-7753, NABL Valid Until: 14.09.2020.					
2.	Adequate stack height shall be provided to	We have provided adequate stack height @ 11 m				
	oil/gas fired boiler/thermopack.	from the ground level for effective dispersion of				
		flue gaseous during boiler operations.				
		STACK HEIGHT FOR NG BASED BOILER:				
		<ul> <li>Stack height (H) required as per GSR 176(E)</li> </ul>				
		<ul> <li>As per formula H=14Q <sup>0.3</sup> in m</li> </ul>				
		$= 14 \times (0.0023)^{0.3}$				
		= 4.51 m				
		Where;				
		Total SO <sub>2</sub> produced (Q)= 0.0023 kg/hr				
		[Fuel Consumption Rate= 16666.66 kg/hr;				
		Sulphur Content = 0.0000072%]				
		<ul> <li>Min. stack height required: 11 m</li> </ul>				
		Stack height required as per CTE: 11 m				
		Stack height provided: 11 Meter				
		Hence the stack heights attached to Boiler is				
		adequate.				
		The Flue gas emission Monitoring test reports				
		are enclosed As <b>AnnexI.</b>				

3. Water scrubber (demister and venturi) shall be We installed the Water scrubber (demister and provided to the reactors to control process venture) to the reactors to control process emissions viz. P<sub>2</sub>O<sub>5</sub> Efficiency of scrubber shall emissions viz. P<sub>2</sub>O<sub>5</sub> We regularly monitored the efficiency of scrubber be monitored regularly and maintained properly. At no time, the emission levels shall to achieve the prescribed standard. Stack go beyond the prescribed standards. monitoring test report of process emission are enclosed as Annexure-I. The Summary of last six month flue gas emission monitoring results is provided as Tale No.2. Efficiency of scrubber shall be monitored We are in process to develop the system which regularly and maintained properly. Scrubbers will be interlocked with the pollution control vent shall be provided with on-line detection equipment so that in case of any increase in and alarm system to indicate higher than pollutants beyond permissible limits, plant should permissible value of controlled parameters. be automatically stopped. At no time, the emission levels shall go beyond Monitoring of stack emission and air quality have the prescribed standards. The system should be been done on regular basis and they are well the pollution within the prescribed limits. However in the event interlocked with equipments so that in case of any increase in of failure of any pollution control system adopted pollutants beyond permissible limits, plant by the unit, the unit shall be immediately put out

Table No.2: Stack Monitoring Data

of operation and shall not restarted until the

desired efficiency has been achieved.

should be automatically stopped.

Stack Monitoring Data (Period : April - 2019 to September - 2019)							
	Date	Stack Sampling Attached to	Parameter with Results				
Month & Year			PM mg/m <sup>3</sup>	SO₂ ppm	NO₂ ppm	P <sub>2</sub> O <sub>5</sub> mg/Nm <sup>3</sup>	
		D.G. set (125 KVA)	46	22	15		
		Baby Boiler(300Kg/hr)	11	ND	7		
April-2019	25/04/2019	ALP/Zinc Reactor	-			7.6	
		Blender	51				
		Tablet Machine	46				
		D.G. set (125 KVA)	49	24	13		
		Baby Boiler(300Kg/hr)	13	ND	6		
July-2019	24/07/2019	ALP/Zinc Reactor				7.2	
		Blender	38				
		Tablet Machine	32				
	Specific Value	e	<150	<100	<50	<9	

Process gas and flue gas emission monitoring was carried out by NABL accredited laboratory M/s. UniStar Environment and Research Labs Pvt. Ltd., Vapi, NABL Certificate No. T-7753, NABL Valid Until: 14.09.2020.

4. In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided.

Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system.

We have installed the closed system for handling & transfer of Chemicals/materials. Further, we are taking care of all possible fugitive emissions from the vulnerable sources in plant. We have installed scrubbing system to control these fugitive emissions. We have hand detection system.

The quarterly work place monitoring test report (April'19 to September'19) are enclosed as Annexure-I.

The results of work place monitoring is provided in the Table no.3 mention below:

The hand detection photograph is provided as fig.no.1.

Fig.No.1: Hand Detection



Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions.

Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored and records maintained. The emissions shall conform to the limits stipulated by the GPCB.

We will provide water sprinkling system to control dust emissions at loading and unloading areas.

We are regularly monitoring, fugitive emissions in the work zone environment; product, raw materials storage area etc. and the records are maintained. The quarterly work place monitoring test report (April'19 to September'19) are enclosed as **Annexure-I.** The emissions are well within the stipulated limits prescribed by the GPCB.

The results of work place monitoring is provided in the Table no.3 mention below:

**Table No.3: Work Place Air Quality Monitoring Data** 

Work Place Air Quality Monitoring Data (Period: April - 2019 to September - 2019)					
	Date	Location of sampling/Monitoring	Parameter with Results		
Month & Year			Total Dust mg/m <sup>3</sup>		
	26/04/2019	Blending Area	1.4		
April-2019		Pot Fire Area	0.9		
		Tableting Area	0.4		
		Blending Area	1.2		
July-2019	24/07/2019	Pot Fire Area	1.0		
		Tableting Area	0.3		

Work Place monitoring was carried out by NABL accredited laboratory M/s. UniStar Environment and Research Labs Pvt. Ltd., Vapi, NABL Certificate No. T-7753, NABL Valid Until: 14.09.2020.

5. A proper Leak Detection And Repair (LDAR)
Program for pesticide industry shall be
prepared and implemented as per CPCB
guidelines.

We have leak Detection system and Repair (LDAR) Program for pesticide industry is prepared and implemented as per CPCB guidelines.

The LDAR program is provided as fig. no.2.

#### Fig.No.2: LDAR Program Sandhya Organic Chemicals Pvt. Ltd., Plot No.808/A/2, GIDC,Vapi P for Leak Detection and Repair Program for Scrubber Maintenance Department observing complete scrubber with Joint Flange etc. for any leakages during operation on day to day basis as part of their checkilly. If leakages found minor / pinhole then attaining the same within 3-4 hrs. most probably after 5 p.m. i.e. completion of working of Scrubber. und on higher side then first switch off all connected e further effect of leakages i.e. Phosphoric Acid of coming out We have provided collection tank to collect the lower percent Phosphoric acid in case of emergency like minor/ major leakapes. Once leakages is stop then collected acid reuse in Scrubber as a media. Maintenance Department Focus shall be given for prevention of fugitive Focus is given for prevention of fugitive emissions emissions for which preventive maintenance of for which preventive maintenance of pumps, pumps, valves, pipelines are required. Proper valves, pipelines are done. maintenance of mechanical seals of pumps and The pump photograph is provided as fig.no.3. valves shall be given. Fig.No.3: Pump Photographs A preventive maintenance schedule for each A preventive maintenance schedule for each unit unit shall be prepared and adhered to. is prepared and adhered to. 6. The gaseous emissions from DG set shall be We have provided Stack height of 11m attached dispersed through adequate stack height as per to D.G. Set for dispersion of gaseous emissions. CPCB standards. Acoustic enclosure shall be Stack height calculation is as under: provided to the DG sets to mitigate the noise H=h+0.2√KVA pollution. Where h = height of the building level in meters where the generator set is installed = 6 m, KVA= 125 Calculation: $H = 6 + 0.2 \sqrt{125} = 8.23 \text{ m}$ Provided stack height is 11 meters which is more than adequate. Acoustic enclosure is provided to abet noise pollution during operation of D.G. Set. The Noise Monitoring test report is enclosed as Annexure-I. The Summary of last six month flue gas emission monitoring results is provided as Tale No.2. The Noise monitoring was carried out by NABL accredited laboratory M/s. UniStar Environment and Research Labs Pvt. Ltd., Vapi, The D.G.Set chimney photograph is provided as fig.no.4.

#### Fig.No.4: D.G.Set Chimney Photographs



7. The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its website and shall update the same periodically.

We are regularly submitting the status of compliance of the stipulated environmental clearance conditions to the monitoring agencies.

It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the GPCB.

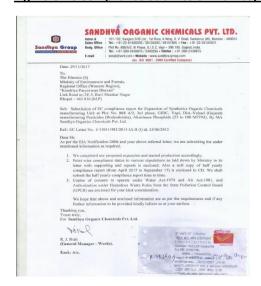
We are regularly submitting Comprehensive EC compliance report for the period of April to September and October to March to the Ministry's regional office at Bhopal well within the stipulated date.

The Six-Monthly EC Compliance Submission dates for the last three year are as under:

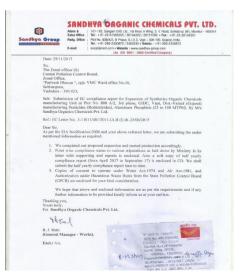
- 1. Period of April'17 to Sept'17, Date: 29.11.2017.
- 2. Period of October'17 to March'18. Date: 25.05.2018.
- 3. Period of April'18 to Sept'18, Date: 26.12.2018.
- 4. Period of October'18 to March'19. Date: 22.05.2019.

The Six Monthly EC Compliance Submission Acknowledge copies are provided as fig.no.5, 6, 7 and 8.

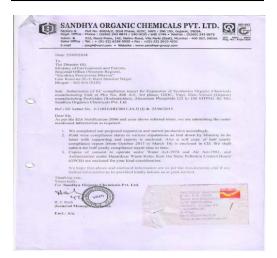
#### Fig.No.5:EC Compliance Submission Ack. copy



#### Fig.No.6:EC Compliance Submission Ack. copy



#### Fig.No.7:EC Compliance Submission Ack. copy



#### Fig.No.8:EC Compliance Submission Ack. copy



The levels of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NOx, CO and VOC in ambient air and emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

The level of  $PM_{10}$ ,  $SO_x$ , NOx, CO and VOCs in ambient air are monitored and displayed at location near the main gate of the company. The maingate displayboard photograph is provided as fig.no.9.

#### Fig.No.9:Main Gate Display Board



#### 8. Solvent management shall be carried out as follows:

- Chilled brine circulation system shall be provided to condensate solvent vapors and reduce solvent losses. It shall be ensured that solvent recovery should not be less than 95%.
- Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
- iii. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery.
- iv. Solvents shall be stored in a separate space specified with all safety measures.
- v. Proper earthling shall be provided in all the electrical equipment wherever solvent handling is done.
- vi. Entire plant shall be flame proof. The solvent storage tanks should be provided with breather valve to prevent losses.

There is no any kind of Solvent to be used in manufacturing process of phosphide products; Hence this condition is not applicable.

9. Total fresh water requirement from GIDC water supply shall not exceed 20 m<sup>3</sup>/day.

The water requirement is met from GIDC water supply, Vapi, which is not exceeding 20 m<sup>3</sup>/day.

There was some new as well as repairing of construction work therefore consumption of water appear as deviation.

The water permission letter and last six month water consumption is provided as fig.no.9 and 10. The water balance diagram is provided as fig.no.19.

The last six month water supply Bill is provided as fig. No. 10, 11, 12, 13, 14, 15, 16, 17 and 18.

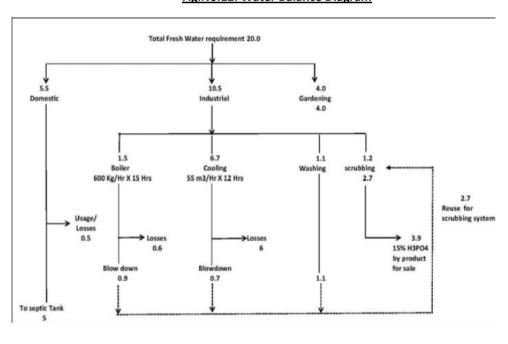
Fig.No.10: Water permission Letter

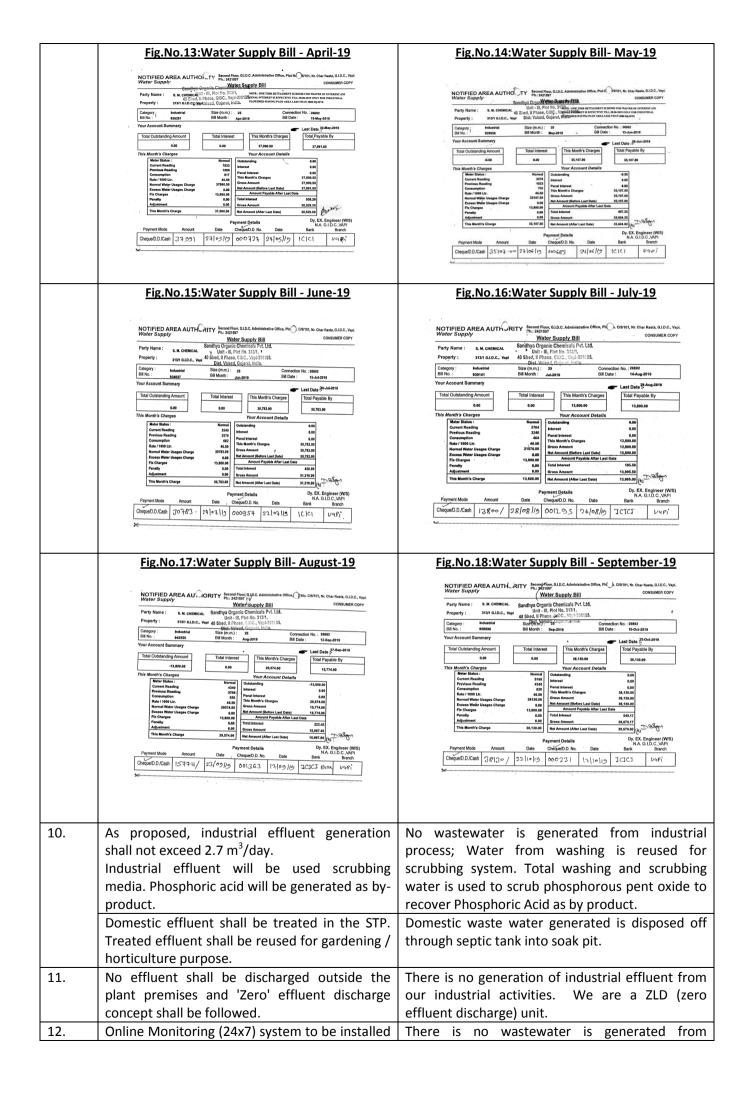


Fig.No.11: Last Six month Water consumption data

Sr.	Manth Name	Water Consu	Monthly	
No.	Month/Year	Maximum	Minimum	Consumption KL
1.	April-2019	36	9	727
2.	May-2019	32	0	547
3.	June-2019	35	1	409
4.	July-2019	Nil	Nil	Nil
5.	August-2019	31	2	366
6.	September-2019	35	0	337

Fig.No.12: Water Balance Diagram





13. Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.  14. Hazardous chemicals shall be stored in tanks in tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm.  Solvent transfer shall be by pumps.  15. The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for firefighting facilities in case of emergency. Membership of TSDF for hazardous waste disposal shall be obtained.  16. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended in October, 1994 and January, 2000.  All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.  There is no solve Applicable.  Hazardous chemical tank farm. The tank dyke v fig.no.19.  There is no solve Applicable.  Fig.No.19:  We obtained the storage and disposal of hazardous wastes and prior permission from GPCB shall be obtained.  The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIH October, 1994 and January, 2000.  All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	ss hence there is no treatment condition is Not Applicable.
tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm.  Solvent transfer shall be by pumps.  The tank dyke v fig.no.19. There is no solve Applicable.  Fig.No.19:  The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous waste in the TSDF. Measures shall be taken for firefighting facilities in case of emergency. Membership of TSDF for hazardous waste disposal shall be obtained.  The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended in October, 1994 and January, 2000.  All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.  tank farms. The tank dyke v fig.no.19. The tank dyke v fig.no.19.  We obtained on tank farm.  The tank dyke v fig.no.19.  There is no solve Applicable.  Fig.No.19:  The tank dyke v fig.no.19.  There is no solve Applicable.  Fig.No.19:  The tank dyke v fig.no.19.  There is no solve Applicable.  Fig.No.19:  The tank dyke v fig.no.19.  The tank dyke v fig.no.19.	eration of industrial effluent from activities. We are a ZLD (zero ge) unit; Hence this condition is
collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for firefighting facilities in case of emergency. Membership of TSDF for hazardous waste disposal shall be obtained.  16. The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended in October, 1994 and January, 2000.  All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.  storage and disposal the Hazardous Waste Trans-Boundary amended as on Hazardous wastes The copy of authorization is from GPCB).  • CC&A Order No.  • Valid up to: 3:  Chemicals (MSIHC) October, 1994 Transportation of the Motor Vehicle of Shall not smo.  • Shall not smo.  • We maintain sanitary cond.	icals have been stored in tanks in the arresters have been provided wall photograph is provided as tent, Hence this condition is Note:  Tank Dyke wall photograph
The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended in October, 1994 and January, 2000.  All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.  We strictly follow Manufacture, Storage and Import of Hazardous Chemicals (MSIHO) October, 1994  Transportation of the Motor Vehicle Act (MVA), 1989.  • Shall not smoon we maintain sanitary conditions.	consolidated consent and enclosed as <b>Annexure-II</b> (CC&A No: AWH-102165, at 10.06.2019.
authorization the licensing a  • We have pro the dangerou in.	w the rules and guidelines under corage and Import of Hazardous HC) Rules, 1989 as amended in and January, 2000. The of Hazardous Chemicals is as per le Act (MVA), 1989. Doke while on duty. In the vehicle in a clean and dition during its use in a public rives a transport vehicle unless and in the driving license granted by

protection of possible fire hazards during Manufacturing process in material handling. Fire fighting system shall be as per the norms.

protection of possible fire hazards during Manufacturing process in material handling. The list of Fire Extinguisher and Fire Extinguisher Photographs are provided as fig. No. 20, 21, 22, 23, 24 and 25.

Fig.No.20: List of Fire Extinguisher

Nr. (Nr.)         Type         Capacity         Hefill Date         Expiry date         Location           1         0cc         x 60         28/12/2018         28/12/2018         Office           2         0cc         x 80         0x/99/2018         28/12/2018         flew Medical Could Conference           3         0cc         x 80         0x/09/2018         0x/99/2019         Tablest Date Enery Novi           4         0cc         x 80         0x/09/2019         0x/99/2019         Tablest Date Enery Novi           5         0cc         x 80         0x/09/2019         0x/99/2019         Tablest Date Enery Novi           6         0cc         x 80         0x/09/2019         2x/92/2019         Tablest Date Enery Novi           7         0cc         x 60         2x/12/2018         2x/12/2019         New Recoder
2         OCF         8.80         OM/09/2019         07/09/2030         Bow Meteriel Genbern           3         INFF         5.80         OM/09/2019         02/09/2030         Fainhelf Gende Godzen           4         OCF         10.96         03/09/2019         03/09/2030         Tables toget Energ Neist           5         OCF         5.80         03/09/2039         03/09/2030         Tables toget (Tables Mér. J           6         OCF         5.80         03/09/2039         03/09/2030         Units Driget
3         GCP         \$ MG         ON/09/2019         C9/09/2009         Enrighted Goods Codoon           4         OCP         10 MG         Op/09/2009         Q2/09/2009         Tables to park from Print I.           5         OCP         5 MG         Op/09/2009         G2/09/2009         Tables trape (Tables M/s / I.           6         OCP         5 MG         Op/09/2009         G2/09/2009         Op/09/2009         Op/09/2009
4         OCP         10 M0         03/09/2019         03/09/2010         Tablet Dept Enery Point           5         OCP         5 KG         03/09/2019         03/09/2010         Tablet Dept Enery Point           6         OCP         5 KG         03/09/2019         03/09/2020         Unea Dryer
5 0CP 5.KG 03/06/2019 03/09/2020 Tablet Oxyl (Tablet M/c / 6 0CP 5.KG 03/06/2019 03/08/2020 Urea Bryer
6 DCP 5 KG 03/09/2019 02/09/2020 Urea Dryer
7 DCP 5 KG 29/12/2018 28/12/2019 Near Blender
8 DCP 10 KG 03/09/2019 02/09/2020 Zinc Dept (Gr. Fleor)
9 CO2 4.5 KG 03/09/2018 02/09/2020 Electric Panel Board Room
10 ABC 5 KG 03/09/2019 02/09/2020 G.S.P.C. Gas Station
11 ABC 1 KG 28/09/2019 27/09/2020 Ground Floor Office
12 ABC 1 KG 28/09/2019 27/09/2020 First Floor - QA Lab

Fig.No.21: Fire Extinguisher Photographs



Fig.No.22: Fire Extinguisher Photographs



Fig.No.23: Fire Extinguisher Photographs



Fig.No.24: Fire Bucket Photographs



Fig.No.25: Fire Bucket Photographs



18. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

Occupational health surveillance of the workers is done on a regular basis and the records (of medical examination report) are maintained as per the Factories Act. The total 49 employee people in our unit.

We have separate occupational health to carry out the different activities of occupational health

#### services.

We have appointed qualified medical officer Dr. Vipul prajapati.

The annual medical checkup details of employees are enclosed as **Annexure - II.** 

The Full time Dr. appointment letter and annual medical checkup details of employees are provided as fig.no. 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 and 37.

Fig.No.26: Full time Dr. Appointment Letter



Fig.No.27: Occupational Health Center Photographs



Fig.No.28: Occupational Health Center Photographs



Fig.No.29: Occupational Health Center Photographs



#### Fig.No.30: Appointment of Doctor- Pre/Post Fig.No.31:Employee medical Checkup report Checkup SANDHYA ORGANIC CHEMICALS PVT. LTD. ਿ To, Dr. Ketan S. Desai M. B. B. S. (G-1014BLAFIH (474) Industrial Foolih Physician Urmf Clinic Atul, Diss-Vahad Milk follow whates Feet Fig. With reference do, our personal discussion, we are pleased to appoint you as a part town finded Officer with a security of the property of the Fig.No.32:Employee medical Checkup report Fig.No.33:Employee medical Checkup report Occufitt Medical chieckUP REPORT S | S | No. | ... 2 | DE | 10-Apr-20 Name of Industry 15 BANDHYA ORDANIG CHIMIGALIS PVT I. LII 8 | No. | ... 2 | DE | 10-Apr-20 Name 15 DINESH RAMESHEHA BARI Emp. Cotol : 2 | 2 | ... 2 | DE | 10-Apr-20 Oppartment 1 Production Age : 40 | yr | ... yr | ... Male Musicile shaletal system : Pageide defonity: 58 Tanderness: Absent Earness Broat II TAN Generous Broat II TAN Generous Broat II TAN Hydrocele : Absent Shin : Morroll Other Findings : Fig.No.34:Employee medical Checkup report Fig.No.35:Employee medical Checkup report Occufitt | MEDICAL - HINDROUP - REPORT | SANCTIN CONTINUE - CENTRAL SPLIT | SPLIS | \$ 0.00 | 10-Agr-2019 | CENTRAL SPLIS | SPLI Audiometry : Not done 36 % 05 % 58 % 01 % Pulmonary Normal spirometry Function Test : ECG | Not done Blood Group : O Positive Pake yellow Quantity received 10 mt Clear Specific gravity Q.N.S. Absent Occupational Nil FOR COLOR STATORY LUC, M. Lines Ciri Pizza, First Gatz, Atul 305 520, Value. Page 2 of 3

Fig.No.36:Employee medical Checkup report

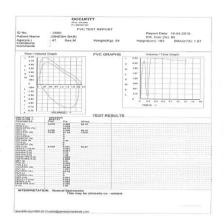
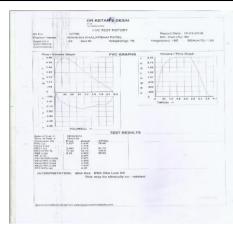


Fig.No.37:Employee medical Checkup report



19. As proposed, green belt over 1785 m2 area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.

Greenbelt has been developed as per the guidelines of CPCB, under the supervision of experienced personnel and guidance of local experts. The company has developed greenbelt in about 1785 sq. m. land out of total land of 5336 sq. m.

MoEF officer during the visit on dated 19 October 2019 he suggests for kept Flower Pot both the side on Road.

The green belt photographs and green belt layout is provided as fig. no. 38, 39, 40, 41, 42, 44 and 45.

The common GIDC Space green belt development plant letter is provided as fig.no.43.

Fig.No.38: Green Belt Photographs



Fig.No.39: Green Belt Photographs



Fig.No.40: Green Belt Photographs



Fig.No.41: Green Belt Photographs



Fig.No.42: Green Belt Photographs



<u>Fig.No.43: Common GIDC Space Green belt</u> <u>development Letter.</u>



Fig.No.44: Green Belt Photographs



Fig.No.45: Green Belt Photographs



20. The company shall make the arrangement for protection of possible fire and explosion hazards during manufacturing process in material handling.

We comply with this condition. We have taken the steps for protection of possible fire and explosion hazards during manufacturing process in material handling.

We have provided the fire-fighting facility for protection of possible fire hazards during Manufacturing process in material handling.

The list of Fire Extinguisher and Fire Extinguisher Photographs are provided in above condition no.17 as a fig. No. 28, 29, 30, 31, 32 and 33.

21. At least 2.5 % of the total cost of the project

Our unit is small scale unit. So we have been done

should be earmarked towards the Enterprise social responsibility based on need based itemwise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.

the CSR activity. The detail of CSR activity is enclosed as **Annexure-IV.** 

The CSR Activity photographs are provided as fig. No. 46, 47, 48, 49, 50 and 51.

The details of activities undertaken & financial details for same areas provided in the Table no.5 mention below:

Contribution to:

#### Table No.4: CSR Chart

Sr. No.	CSR Expenses	Amount Paid in Rs. (For the year 2017-2018)		
1.	Local School	5.00 Lac		
2.	Smasanbhumi	11.00 Lac		
3.	Cricket Tournament	50,000		
4.	Arrangement for blood donation camp.	20,000		
5.	Arrangement for Eye camp.	25,000		
6.	Development of Maroli Circle	15.00 Lac		
7.	Barricade for traffic control	15,000		
	Total	32,10,000		

#### Fig.No.46: CSR Activity Photographs



Fig.No.47: CSR Activity Photographs

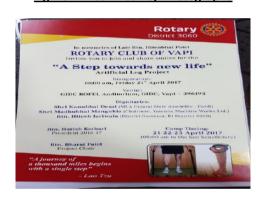


Fig.No.48: CSR Activity Photographs



Fig.No.49: CSR Activity Photographs



	Fig.No.50: CSR Activity Photographs	Fig.No.51: CSR Activity Photographs
	Sondh Sans Sans	ા કુમના દાતા ક શ્રીમતી સંધ્યા કાન્તીલાલ કોલી સંધ્યા ગૃપ ઓફ ઇન્ડ. હસ્તેઃ સ્મીત, સ્નેહલ ફ્શસા
22.	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	We had hired only the local labors during construction phase. Hence this condition was not applicable.
	All the construction wastes shall be managed so that there is no impact on the surrounding environment.	All the construction wastes was properly managed to prevent any impact on the surrounding environment.
B.	GENERAL CONDITIONS:	
1.	The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority	<ul> <li>We do comply with the conditions.</li> <li>We have started the quarterly monitoring of all applicable parameters of the process stack emissions as per the CC&amp;A issued by the GPCB.</li> <li>There is no effluent generation from process.</li> <li>Ambient Air Quality is also being monitored regularly on monthly bases as per the CPCB guidelines of AAQ monitoring.</li> <li>The CC&amp;A Compliance report and test report of Monitoring of Stack, AAQM are enclosed as Annexure- IX.</li> </ul>
2.	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.	We undertake that, we shall not carry out any expansion without prior approval of the Ministry of Environment and Forest. There is no deviation/ alternation in the project. Present manufacturing quantity is well within the sanctioned limits for the same."
3.	The locations of ambient air quality monitoring stations shall be decided in consultation with the Gujarat Pollution Control Board (GPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	<ul> <li>The location of ambient air quality monitoring station was decided in consultation with GPCB. We have set up the location of AAQ station on the near security office and near admin office.</li> <li>Ambient Air Quality is also being monitored on quarterly bases as per the CPCB guidelines of AAQ monitoring. The Test reports of AAQM are enclosed as Annexure-I.</li> </ul>

- 4. The overall noise levels in and around the plant area shall be kept well within the standards 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).
- We regularly monitor noise level within the premises through NABL accredited laboratory.
   The test report of which are enclosed herewith as Annexure: I.
- The ambient noise level are well within the permissible limit prescribed under Environment (protection) Act, 1986 Rules,1989 viz. 75 dBA (day time) and 70 dBA (night time). The Summary of noise level monitoring is provided in the Table no.5 mention below:

#### **Table No.5: Noise Monitoring Data**

Noise Monitoring Data(Period : April – 2019 to September - 2019)						
			Within Company premises  Noise Level dB (A)			
Month /Voor	Date of Monitoring	Time of Monitoring				
Month /Year		Time of Monitoring	Direction			
			East	West	South	North
	25/04/2019	Day Time	62.1	72.3	68.7	66.2
April-2019		Night Time	55.7	67.1	61.8	59.4
		Outside D.G. Set (125 KVA) (Day Time)	73.1	73.5	73.2	72.7
July-19	24/07/2019	Day Time	61.9	70.6	67.4	64.7
		Night Time	53.5	64.8	60.5	58.1
		Outside D.G. Set (125 KVA) (Day Time)	72.8	73.6	73.4	72.5

NOTE: Permissible Limit CPCB (Day Time): <75 Db(A), Permissible Limit CPCB (Night Time): <70 Db(A)

Noise monitoring was carried out by NABL accredited laboratory M/s. UniStar Environment and Research Labs Pvt. Ltd., Vapi, NABL Certificate No. T-7753, NABL Valid Until: 14.09.2020.

5. The Company shall harvest rainwater from the roof-tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.

We are harvesting rainwater. The harvested rainwater is collected in reserve tank having capacity of 50 KL and the same is used for our industrial purpose during the monsoon season. Since, our project is situated in the GIDC Industrial Area of Vapi having clusters of chemical industries; the groundwater recharge may contaminate the groundwater in due course. Hence, GIDC is not allowing groundwater recharge.

6. During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic wastewater and storm water drains.

We assure to maintain zero spillages during handling and transfer of raw materials. However we have provided garland drain to avoid mixing of accidental spillages with domestic waste water or storm water.

7. Usage of Personnel Protection Equipments by all employees1 workers shall be ensured.

We provided the PPEs to all our employees/workers. And its utilization by them is ensured. The PPES photographs are is provided as fig. No. 52 and 53.

#### Fig.No.52:Personal Protective Equipment's









Cotton Approne

Rubber Hand Glove













#### Fig.No.53:List of Personal Protective Equipments

Sandhya Group

#### SANDHYA ORGANIC CHEMICALS PVT. LTD. Adem & : 101-102. Sangam CHS Ltd., 1st Floor, A Wing, S. V. Road, Santaoruz (W), Mumbai - 400054.

Adem & : 101-102, Sargum CHS Ltd., 1st Roor, A Wing, S. V. Road, Santsorruz (W), N. Sales Office : Tett. +91-26-1686555 / 26104202 / 2615550 - Fast. > 91-22-2610402 / 2610402 / 2615550 - Fast. > 91-22-2610402 / 26104

Date: 02.05.2018

#### List of Personnel Protective Equipment (PPE)

Sr. No.	Item Name
1	Helmet
2	Chemical Filter Mask
3	Dust Mask
4	Gum Boot
5	Safety Shoes
- 6	Goggles
7	Cotton Hand Gloss
8	Use & Through Hand Gloss
9	Rubber Hand Gloss
10	Cotton Approne
11	Bubble Hood
12	Safety Belt

ior, Sandhya Organic Chemicals Pvt. Ltd.

1318-21-48

Authorized Signatory.

8. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

We are given the training about health & safety to our employees from chemicals handling and we do medical checkup of our employees on regular interval. The total 49 employee people in our unit.

At present we have given the training of Fire and safety training and material handling training by aarti industries Ltd. and the training was participated by 4 numbers of workers.

The employees' medical checkup and safety training records are enclosed as **Annexure - II.** Health & Safety training schedule is provided as fig. No. 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64 and 65.



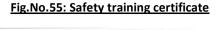




Fig.No.56: Safety training certificate



Fig.No.57: Safety training certificate



Fig.No.58:Employee Training records



Fig.No.59:Employee Training records

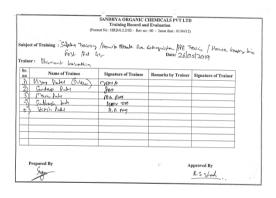


Fig.No.60:Employee Training records

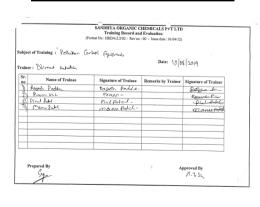


Fig.No.61:Employee medical Checkup report



# Fig. No.62: Employee medical Checkup report Dr. Keckery S. Descu Add. B.S. A. III. Granting personal persona

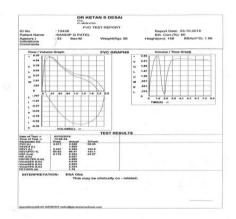
#### 

Fig.No.63:Employee medical Checkup report

#### Fig.No.64:Employee medical Checkup report



#### Fig.No.65:Employee medical Checkup report



9. The company shall also comply with all the environmental protection measures and safeguards proposed in the project report submitted to the Ministry.

All the recommendations made in the EINEMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.

- We do comply with the environmental protection measures and safeguards as proposed in the documents submitted to the Ministry.
- Risk mitigation measures relating to the project are also taken care of and are implemented.
- Since the project site is located within Notified industrial area of GIDC Vapi; public hearing was exempted to the unit.
- We are involved in community developmental measures as well as social welfare measures in our project area for the overall improvement of the environment.

#### Recommendations made in the EIA/EMP in respect of environmental management

#### > Air pollution Control

- We have provided Stack height of 11m attached to D.G. Set for dispersion of gaseous emissions.
- We have provided adequate stack height @ 11 m from the ground level for effective dispersion of flue gaseous during boiler operations.
- We have installed scrubbing system to control these fugitive emissions.
- We have provided automated closed

#### Water & wastewater

- Domestic waste water generated is disposed off through septic tank into soak pit.
- Noise
- Acoustic enclosure is provided to abet noise pollution during operation of D.G. Set.
- We regularly monitor noise level within the premises through NABL accredited laboratory.
- We provided the PPEs to all our employees/ workers. And its utilization by them is ensured.

	system for handling and transfer of chemicals.	
	system for handling and transfer of chemicals.  Hazardous Materials  We have installed the closed system for handling & transfer of Chemicals/materials.  All the materials are identified as hazardous as per MSIHC Rules (2000).  Firefighting systems are provided in storage area and maintained, to cope with emergency, in case of any fire accident occurring in the premises. Total 13 Nos. of fire extinguishers (DCP/CO2) are installed within the company premises.  Occupational Health & Safety  We are given the training about health & safety to our employees from chemicals handling and we do medical checkup of our employees on regular interval.  Occupational health surveillance of the workers is done on a regular basis and the records (of medical examination report) are maintained as per the Factories Act.  Risk Assessment & Safety Measures  Critical Safety Measures  We have provided Fire hydrant & Fire detection system within process unit	<ul> <li>Greenbelt Development</li> <li>Greenbelt has been developed as per the guidelines of CPCB, under the supervision of experienced personnel and guidance of local experts. The company has developed greenbelt in about 1785 sq. m. land out of total land of 5336 sq. m.</li> <li>Socioeconomic &amp; CSR Activities.</li> <li>We are involved in the CSR activities as mentioned in CSR plan for improving the socio-economic condition of the surrounding area and we are also involving local villages and administration for implementing social development plans.</li> <li>The detail of CSR activity is enclosed as Annexure-IV.</li> <li>We are involved in eco-developmental measures as well as community welfare measures in our project area.</li> <li>Safety Measures for Handling</li> <li>Display Boards is provided on all storage tanks which includes the name of the product, stored Material of construction, Calibration of</li> </ul>
		<ul> <li>tanks and date of Painting.</li> <li>In order to avoid the accident due to spillage or overflow is provide the level indicators which helps to know the exact liquid level inside the tank.</li> <li>All the storage tanks is provided with transferring pumps which helps to reduce the risk of tank leakages.</li> </ul>
10.	The company shall undertake CSR activities and all relevant measures for improving the socio-economic conditions of the surrounding area.	We are involved in the CSR activities as mentioned in CSR plan for improving the socio-economic condition of the surrounding area and we are also involving local villages and administration for implementing social development plans.  The CSR Activity photographs are provided in conditionno.21 as fig. No. 30, 31, 32, 33, 34 and 35.  The detail of CSR activity is enclosed as <b>Annexure-IV</b> .  The details of activities undertaken & financial details for same areas provided in the Table no.6 mention below: Contribution to:

velfare measure verall improven separate Env quipped with f nall be set up t	CSR Expenses  Local School Smasanbhumi Cricket Tournament Arrangement for blood donation ca Arrangement for Eye camp. Development of Maroli Circle Barricade for traffic control Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  Aironmental Management Cell full fledged laboratory facilities to carry out the Environmental and Monitoring functions.	Amount Paid in Rs. (For the year 2017-2018)  5.0 ac  11.00 Lac  50,000  amp.  25,000  15.00 Lac  15,000  32,10,000  We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevited.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8 recognized laboratory for conducting
2. 3. 4. 5. 6. 7.  he company evelopmental relare measure verall improven separate Enverguipped with finall be set up to	Smasanbhumi Cricket Tournament Arrangement for blood donation cate Arrangement for Eye camp. Development of Maroli Circle Barricade for traffic control Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  yironmental Management Cell full fledged laboratory facilities to carry out the Environmental	5.0 ac  11.00 Lac  50,000  amp.  25,000  15.00 Lac  15,000  32,10,000  We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevited.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
3. 4. 5. 6. 7.  he company evelopmental relfare measure verall improven separate Enverall per with finall be set up to the set of th	Cricket Tournament  Arrangement for blood donation ca  Arrangement for Eye camp.  Development of Maroli Circle  Barricade for traffic control  Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  Vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	50,000  25,000  15.00 Lac  15,000  32,10,000  We are involved in eco-developmental measure as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevitield.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
4. 5. 6. 7. he company evelopmental relfare measure verall improven separate Enveragion with finall be set up to	Arrangement for blood donation can arrangement for Eye camp.  Development of Maroli Circle  Barricade for traffic control  Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  Wironmental Management Cell full fledged laboratory facilities to carry out the Environmental	we are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chem with qualification and training in the relevited.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
5. 6. 7.  he company evelopmental relfare measure verall improven separate Enveragion with finall be set up to	Arrangement for Eye camp.  Development of Maroli Circle  Barricade for traffic control  Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  Vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	25,000  15.00 Lac  15,000  32,10,000  We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the releviteld.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
6. 7. he company evelopmental relfare measure verall improven separate Enverallipped with finall be set up to	Development of Maroli Circle  Barricade for traffic control  Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	15.00 Lac 15,000 32,10,000  We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevitield.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
he company evelopmental relfare measure verall improven separate Environmental for the company of the company o	Development of Maroli Circle  Barricade for traffic control  Total  y shall undertake ecomeasures including community es in the project area for the ment of the environment.  vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	T5,000  32,10,000  We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevitield.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
he company evelopmental relfare measure verall improven separate Env quipped with f	y shall undertake ecomeasures including community es in the project area for the ment of the environment.  Vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevitield.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
he company evelopmental relfare measure verall improven separate Env quipped with f	y shall undertake ecomeasures including community es in the project area for the ment of the environment.  Vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	We are involved in eco-developmental measures as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevitield.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
evelopmental relfare measure verall improven separate Envertall per with family be set up to the set	measures including community es in the project area for the ment of the environment.  vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	as well as community welfare measures in project area for the overall improvement of environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relevitield.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
verall improven separate Env quipped with f nall be set up t	vironmental Management Cell full fledged laboratory facilities to carry out the Environmental	environment. The measures undertaken as above point no10.  We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relev field.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
quipped with f nall be set up t	full fledged laboratory facilities to carry out the Environmental	We have established Environmental Managem Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relev field.  In-house laboratory has also been set to carry the monitoring of basic parameters.  And also have contracted with MoEF8
quipped with f nall be set up t	full fledged laboratory facilities to carry out the Environmental	Cell, and permanently appointed plant-in-char environmental manager, operators and chen with qualification and training in the relev field. In-house laboratory has also been set to carry the monitoring of basic parameters. And also have contracted with MoEF8
	Fig No 66: Environmental	monitoring of other parameters. The Environmental management cell is provious as fig.no.69. The Environmental Engineer appointment letter provided as fig.no.66. The Environmental Engineer appointment letter provided as fig.no.67.
	Mr. Snehal Pate (BE Chemical and MS C	el (Director)
	Mr. R.J Shah G.M. (B.Co	om, LLB (Sp.), DTP)
	Mr. Rinay Shetty Sr. Dro. Mar	r. (Diploma in Chem. Eng.)  Mr. Bhaumik Pathak
	Sindy Silectly, St. 110. Wigh	(Environment/Safety (BSC Chemistry, Post Diploma In fire and
	Production Supervisor in	
<b>—</b>		
perators	Helpers	Labors Fitters & Elect.
	perators	Mr. R.J Shah G.M. (B.C  Mr. Binay Shetty, Sr. Pro. Mg

#### Fig.No.67: Environmental Engineer Appointment Letter



The company shall earmark sufficient funds for recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management pollution control measures shall not be diverted for any other purpose.

We have secured funds (i.e. Rs. 40.00 Lakhs) for capital investment and Rs. 30.00 Lakhs/Annum as recurring cost to implement and maintain the conditions stipulated by the Ministry of Environment & Forests as well as the State Government. As on March 2019 the recurring cost of EMS is 9.56 Lakhs/Annum.

The Actual expenses are provided in the tale no.7 mention below:

#### Table No.7:EMS

Capital Cost						
Sr. No.	Particulars	(Rs. In Lakhs)				
1.	Pollution Control (ETP & APC)					
2.	Safety & Occupational Health	30.00				
3.	Greenbelt Development					
	EMS capital expense (actual)					
Sr. No.	Particulars	(Rs. In Lakhs)				
1	Environmental Protection measures	40.00				
<b>TOTAL</b> 40.00						
	Recurring Cost/Annum (year-2017-1	.8)				
1	Environment & Safety Management System	5.35				
2	Greenbelt Maintenance	2.00				
	Environment Monitoring expenses					
3	Air Monitoring	0.54				
5	Stack Monitoring	0.79				
	Noise Monitoring	0.28				
4	Health Checkup expenses	0.60				
	TOTAL 9.56					

14. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who

A copy of the environment clearance letter has been sent by the project proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation and Urban local Body.

suggestions/ representations, if any, were received while processing the proposal.

The EC letter submission Acknowledge copy is provided as fig.no.68.

#### Fig.No.68:EC Letter Submission Acknowledge copy



15. The project proponent shall also submit six monthly reports on the status of compliance of stipulated Environmental the Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the Gujarat Pollution Control Board. copy Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

We are regularly submitting Comprehensive EC compliance report for the period of April to September and October to March to the Ministry's regional office at Bhopal well within the stipulated date.

The Six-Monthly EC Compliance Submission dates for the last three year are as under:

- 1. Period of April'17 to Sept'17, Date: 29.11.2017.
- 2. Period of October'17 to March'18, Date: 25.05.2018.
- 3. Period of April'18 to Sept'18, Date: 26.12.2018.
- 4. Period of October'18 to March'19, Date: 22.05.2019.

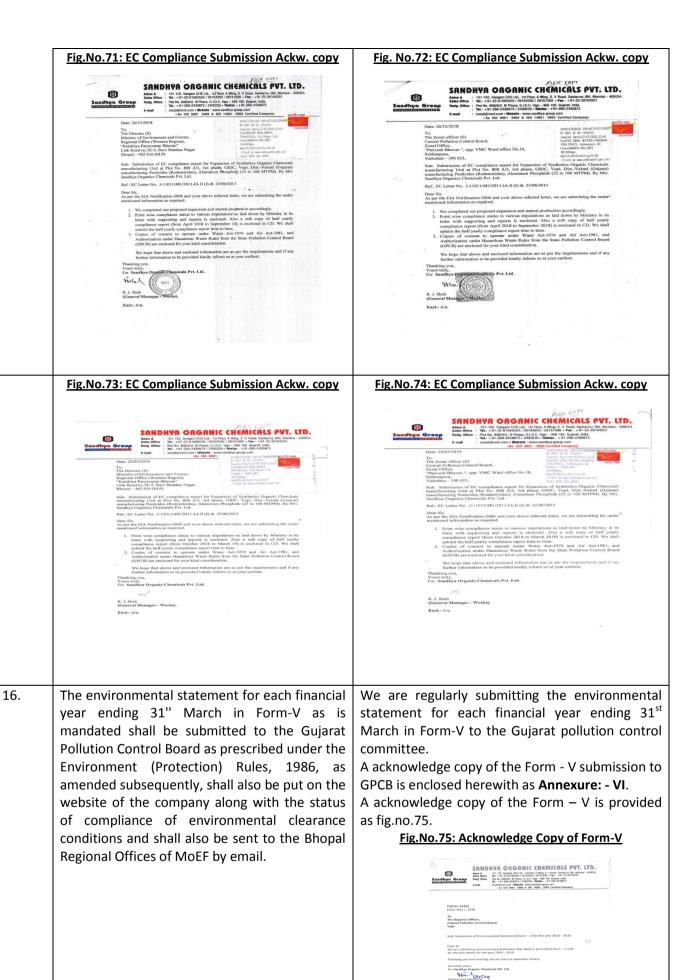
The Six Monthly EC Compliance Submission Acknowledge copies are provided as fig.no.69, 70, 71, 72, 73 and 74.

#### Fig.No.69: EC Compliance Submission Ackw. copy



#### Fig.No.70: EC Compliance Submission Ackw. copy





17. The project proponent shall inform the public the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee 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 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 concerned Regional Office of the Ministry.

We have already informed to the public by local news paper that we have accorded environmental clearance by the Ministry and copies of clearance letter are available with the state Pollutions Control Board and may also be seen at website of the Ministry of Environmental and Forests at website of the Ministry of Environmental and Forests at http/envfor.nic.in.

The advertisement (Public notice) has been made within 7 days of obtaining environment clearance. A copy of public notice in newspaper Sandesh dated 29 June 2015 is enclosed herewith as Annexure:-VIII.

The public notice is provided as fig.no.76 and 77.

#### Fig.No.76:Sandesh.dt.30.07.2015.



#### Fig.No.77:Sandesh.dt.29.07.2015.



18. The project authorities shall inform 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.

The project is self-finance by the promoters hence financial approval from the financial authorities was required., hence financial closure is not applicable.

- Date of final Approval of the project E.C. LETTER NO J-11011/481/2011-IA.II (I) dt. 25/06/2015.
- Date of start of the Project Consent Order No.: AWH-63833, Date of issue:31/07/2014

For Sandhya Organic Chemicals PVT. LTD.

(Authorized Signature)

#### **List of Annexure**

No. of Annexure	Name of Annexure
l.	Ambient air Quality, Stack monitoring, Work Place monitoring report of six month (April 2019
	to September 2019)
II.	Copy of Health check-up reports and training records.
III.	Green belt photos
IV.	CSR Activity details
V.	The membership certificate of TSDF site of Ms. VWEMCL.
VI.	Form-V
VII.	Public Notice
VIII.	Site Layout Plan
IX.	Consolidated consent & authorization compliance
X.	MoEF Data Sheet
XI.	Last Six Month Production Data
XII.	Last 3 Years show cause notice and its reply
XIII.	Reply of MoEF officer visit additional observations and present status

### Monitoring the Implementation of Environmental Safeguards Ministry of Environment & Forest Western Region, Regional Officer, Bhopal

#### **MONITORING REPORT**

#### PART – I DATA SHEET

1	Draiget type, Diver valley/ Mining/ Industry/	:	Industry			
1.	Project type: River – valley/ Mining/ Industry/ Thermal/ Nuclear/ <b>Others (specify)</b>		Industry			
			I M/s Condhus Organis Chamisals Dut Itd			
2.	Name of the project	:	M/s. Sandhya Organic Chemicals Pvt. Ltd.			
3.	Clearance letter (s) / OM No. and date	:	No. J-11011/481/2011-IA.II (I) date:			
	(-),		25/06/2015			
4.	Location	:				
	a) District (s)	-	Valsad,			
	b) State (s)	:	Gujarat			
	(c)	:				
	c) Location Latitude / Longitude		Longitude Latitude			
	,		72°55'37.61"   20°22'43.47"			
5.	Address for Correspondence					
			Mr. Kantilal M Koli			
	a) Address of the Concerned Chief Engineer	:	Plot. No. 203 & 204, Residential Bunglow			
	(with Pin Code & Mob. No./Telephone/		area, Saurabh Society, GIDC Vapi, Dist:			
	Telefax/E-mail )		Valsad.			
	b) Address of the Concerned Project		Mo No: 09725260270			
	Engineer (with Pin Code & Mob. No.	:				
	/Telephone/ Telexfax/ E-mail)					
6.	Salient Features					
0.	a) of the Project	:	Enclosed As Annexure-I			
	b) of the Environment Management	:	Enclosed As Annexure-II			
	Plant	•	Liiciosed As Aimexure-ii			
7.	Break up of the Project Area					
'`	a) Submergence area : Forest & Non-Forest	:				
	b) Others		Enclosed As Annexure-III			
8.	Break up of the project affected population	:	Not Applicable			
	with enumeration of those losing Houses /					
	Dwelling units only, Agricultural Land, Both					
	Dwelling Unit & Agricultural Land & Landless					
	Laborers / Artisans:					
	a) SC, ST / Adivasi		Not Applicable			
	b) Others		Not Applicable			
	(Please indicate whether these figures are		''			
	based on any scientific and systematic survey					
	carried out give details and year of survey)					
9.	Financial Details :	:	Pls. refer Annexure III			
	a) Project Cost as originally revised					

	estimates and the year of price reference b) Allocation made for environmental management plans with item wise and		
	year wise break-up c) Benefit cost ratio/internal rate of Return and the year of assessment (if applicable)	:	
	d) Whether above includes the cost of environmental management as shown in the above.	:	
	e) Actual expenditure incurred on the project so far.	:	
	f) Actual expenditure incurred on the environmental management plan so far	:	
10.	Forest Land Requirement		
	<ul><li>a) The status of approval for diversion of forest land for non-forestry use</li><li>b) The status of clearing felling</li><li>c) The status of compensatory afforestation,</li></ul>		The unit is located in Vapi GIDC. The unit is located in Vapi GIDC. The unit is located in Vapi GIDC.
	if any d) Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far		
11.	The Status of Clear Felling in non-forest areas (Such as submergence area or reservoir, approach Roads.), if any with quantitative information.	:	The unit is located in Vapi GIDC.
12.	Status of Construction  a) Date of Commencement (Actual & / or planned)  b) Date of Completion (Actual & / or planned)		<ul> <li>Date of final Approval of the project – E.C. LETTER NO J-11011/481/2011-IA.II (I) dt. 25/06/2015.</li> <li>Date of start of the Project – Consent Order No.: AWH-63833, Date of issue:31/07/2014</li> </ul>
13.	Reason for the delay if the project is yet to	:	None
	start.		
14.	Dates of Site Visit		
	<ul><li>a) The dates on which the project was monitored by the Regional Officer on previous occasions, if any</li><li>b) Date of site visits for this monitoring</li></ul>	:	MoEF&CC Regional office, Bhopal visited the site on 19-10-2019.
15.	report  Details of correspondence with project authorities for obtaining action plans/information on status of compliance to safeguards other than the routine letters for logistic support for site visit.  (The first monitoring report may contain the details of all the letters issued so far but the later reports may cover only the letters issued subsequently)		MoEF&CC Regional office, Bhopal visited the site on 19-10-2019.  The additional observations and present status with adequate reasoning and supporting data is enclosed as EC compliance Annexure No-XIII.

#### Annexure I

#### SAILANT FEATURES OF THE PROJECT AND ENVIRONMENT MANAGEMENT PLAN

Name of the Project : M/s. Sandhya Organic Chemicals Pvt. Ltd.

Location : Plot. No. 808 A/2, 3<sup>rd</sup> Phase,

GIDC Estate, Vapi -396 195 Dist: Valsad (Gujarat).

#### **Project**

⇒ M/s. Sandhya Organic Chemicals Pvt. Ltd. falling under Small Scale category manufacture "Pesticides(Rodenticides) compound" at Plot No. 808 A/2, 3rd Phase, GIDC Estate, Vapi- 396 195, Dist- Valsad (Gujarat).

- ⇒ Sandhya Organic Chemicals Pvt. Ltd. is located in GIDC notified industrial area falling under Small Scale category manufacturing Pesticides (Rodenticides) Aluminium Phosphide and Zinc Phosphide for which the company had obtained CC&A from Gujarat pollution Control Board. Now the company proposes to enhance the production capacity of the existing products under the category "Pesticide (Rodenticides) Products" from 50MT/M to 200MT/M.
- ⇒ The company needs to get the Environmental Clearance from Ministry of Environment and Forest prior to commissioning of the proposed expansion project. The proposed expansion project involves the production of "Pesticide (Rodenticide) Compounds" which falls under item no. 5(b) Pesticides Industry and intermediates (Category A) as per the EIA notification- 2006 (as amended).

#### **Project Proponent**

⇒ The company is a registered Private Limited company and is promoted by four Directors.

Sr.No.	Name of Proprietor	Residential Address
1.	Mr. Kantilal M Koli	Plot. No. 203 & 204, Residential Bunglow area, Saurabh Society, GIDC Vapi, Di; Valsad.
2.	Mrs. Sandhyaben K koli	area, Saurabii Society, Gibc Vapi, bi; Vaisau.
3.	Mr. Smit K Patel	
4.	Mr. Snehal K Patel	

<sup>⇒</sup> Small Scale Unit

#### **LIST OF PRODUCTS (MT / MONTH)**

Sr. No.	Name of Products	Existing Quantity (MT/M)	Proposed Quantity (MT/M)	Total Quantity after expansion (MT/M)		
1.	Aluminium Phosphide	25	75	100		
2.	Zinc Phosphide	25	75	100		
Nam	Name of by-products					
1	Phosphoric Acid (15 %)	25	75	100		

#### The following are the salient features of the proposed expansion project :

Capacity of Manufacturing Plant		Existing: 50 MT / month
	•	After Proposed: 100 MT / month
By Products	:	Phophoric Acid (15%)
Area Required	:	5336.64 m <sup>2</sup>
Green Belt Area		Existing: 432 m <sup>2</sup>
	:	Proposed:0
		Total area after proposed expansion: 432 m <sup>2</sup>
Man Power Required		Existing: 32 Persons
		Proposed:67 Persons
Water Requirement		Existing: 9.4 KL/D Domestic: 5.0 KL/D
		Industrial: 4.4 KL/D
	:	Proposed Additional: 10.6 KL/D
		Domestic: 0.5 KL/D
		Industrial: 10.1 KL/D
Effluent Generation		5.5 m <sup>3</sup> / day (Industrial)
	:	4.0 m <sup>3</sup> / day (Domestic)
Disposal of Treated Effluent		☐ Used Oil: Disposal by selling to registered
Disposar of freated Efficient		recyclers.
	:	☐ Discarded Contaioners: After decontamination
		will be
		sold to re-conditioners.
Source of Water Supply		GIDC supply Dept.
Air Pollution Control Measures		Existing Scenario:
		Steam Boiler Capacity : 300 Kg/Hr
		· PM <150 mg/Nm₃
		· SO <sub>2</sub> < 100 ppm
	:	· NOx < 50 ppm
		D.G. Set Capacity: 125 KVA
		• PM <150 mg/Nm <sub>3</sub>
		· SO <sub>2</sub> < 100 ppm
		· NOx < 50 ppm
		Proposed Scenario:
		Steam Boiler Capacity:300 Kg/Hr (stand-by)
		• PM <150 mg/Nm <sub>3</sub>
		· SO <sub>2</sub> < 100 ppm
		• NOx < 50 ppm
	:	D.G. Set Capacity: 125 KVA
		• PM <150 mg/Nm <sub>3</sub>
		· SO <sub>2</sub> < 100 ppm
		· NOx < 50 ppm
		Steam Boiler Capacity: 600 Kg/Hr
		• PM <150 mg/Nm <sub>3</sub>
	1	· SO <sub>2</sub> < 100 ppm

		· NOx < 50 ppm
Fuel Requirement	:	Existing Scenario: Natural Gas - 66.66 SCMD HSD - 16 LPH Proposed Scenario: Natural Gas - 350 SCMD HSD - 16 LPH
Environmental protection measures	:	Rs. 40 Lakhs

#### **Air Emission Control**

There are flue gas emission emitted from the stack attached to boiler, thermopak & spray dryer. The other source of flue gas emission will be from the D. G. Set. However, it will be in operation only during emergency. The fuel currently used in the boiler, hot air generator & thermopak is Natural Gas. Hence, there will not be any air pollution control system for the same. However, for process stacks, scrubbers & carbon adsorber shall be provided for gaseous emission control of SO2 & vapour of formaldehyde. The Company has proposed to install a stack of 11 m height to disperse flue gas emissions. Chimney height has been so chosen as to effectively disperse the generated pollutants, though in small quantity, effectively and ensures that the ground level concentrations of pollutants in the surrounding environment remain well within the permissible limits.

- > Flue gas :Chimney of adequate height
- > APC not required as natural gas is used.
- Process: Acid followed by alkali scrubber, carbon adsorption system.

#### **Hazardous Waste Management**

Sr. No.	Types of Waste	Quantity (MT/Year)	Packing	Storage Area In m <sup>2</sup>	Treatment	Method of Disposal
1.	Used oil (5.1)	0.040	Drum	2	Storage & disposal	Sell to registered rerefiner
2.	Discarded containers (33.3)	30	Stack on pellets	5	Washing & sell	Utilized for packing of hazardous waste or sell to authorized recycler
3.	Used filter clothes (35.1)	1.0	drum	5	Washing & disposal	Dispose off into TSDF, Vapi
4.	Sludge from wet scrubber (36.1)	0.024	drum	2	Storage & disposal	Dispose off into TSDF, Vapi
5.	Waste from ETP (34.3)	3	Bags	10	Storage & disposal	Dispose off into TSDF, Vapi
6.	Gypsum waste from the process of Naphthalene Based (Powder)(26.1)	1428	Bags	50	Storage, sell or disposal	Sell to cement industries or Dispose off into TSDF,Vapi
7.	used carbon from carbon absorber	0.1	bags	1	Storage & disposal	Dispose off into TSDF, Vapi

#### Annexure - II

#### **ENVIRONMENT MANAGEMENT PLAN:**

#### 1. GENERAL

#### 1.1. INTRODUCTION

M/s. Sandhya Organic Chemicals Pvt. Ltd. falling under Small Scale category manufacture "Pesticides(Rodenticides) compound" at Plot No. 808 A/2, 3rd Phase, GIDC Estate, Vapi- 396 195, Dist- Valsad (Gujarat).

Sandhya Organic Chemicals Pvt. Ltd. is located in GIDC notified industrial area falling under Small Scale category manufacturing Pesticides (Rodenticides) — Aluminium Phosphide and Zinc Phosphide for which the company had obtained CC&A from Gujarat pollution Control Board. Now the company proposes to enhance the production capacity of the existing products under the category "Pesticide (Rodenticides) Products" from 50MT/M to 200MT/M.

#### 1.2. PRELUDE

The Environmental Management Plan is defined as the environmental requirements and objectives of the project as well as the processes and procedures & it will govern project operational actions. The environmental management plan is mostly known in its abbreviated form as EMP. It constitutes the important part of an EIA study as the prime goal of EIA is to delineate the proper mitigation for probable impacts from the project. Basically, the EMP provides broad guidelines to minimize the potential environmental impacts from the project and to mitigate the consequences.

Adequately designed EMP serves as an essential tool & guidelines to strengthen the Environmental Management System to minimize or eliminate the predicted/identified adverse impacts during the impact assessment study. EMP also represents the commitment & efforts of the proponent to protect the environment as well as the neighbouring population to step forward with sustainable industrial development concept. EMP must ensure effective implementation, methodology & alternatives for mitigation measures planned / recommended to reduce or eliminate the adverse impacts likely or predicted to occur from various activities of the proposed project. Hence, the EMP has got high importance in formulation of EIA study report as well as in formulation of environmental management system.

It is understood that not only the study area but the region as a whole may get new economical fillip due to the proposed industrial development in an area but the company must have properly designed EMP to address all probable adverse impacts on the environment. In view of the study area and project requirements the proposed plan discusses appropriate measures to be considered during construction as well as operational phases. Mitigation measures at the source level and an overall management plan at the study area level are elicited in the present EMP so as to improve the

supportive capacity of the study area and also to preserve the assimilative capacity of the receiving bodies.

## 1.3. OBJECTIVE OF EMP

- The major objectives of the environmental management plan are:
  - To comply with all the conditions of Approved TOR/ regulations/ applicable laws stipulated by MoEF or Central/ State Pollution Control Boards.
  - To control and remediate wastewater, emission & solid waste posing adverse impacts on environment by installing appropriate pollution control technology & equipment.
  - To plan & schedule environmental conservation & protection activities for the purpose of achieving environmental standards and to improve methods of environment management practices.
  - To improve workplace conditions for employees by reducing every kind of pollution and improving workplace environment/ atmosphere.
  - To eliminate/reduce the possibility of potential hazard due to operations.
  - To make budgetary provision and allocation of funds for environment management system and to timely revision of budgetary provisions.
  - To encourage and inspire employees & contractor for highest performance and attentive response for environmental conservation, protection & improvement.
  - To contribute significantly for sustainable development by resource conservation, waste minimization/recycling/reuse and approaching to Cleaner Production practices.

The proponent industry – Sandhya Organics will adequately implement the presen environmental management plan for its proposed plant at GIDC Vapi for environmental protection, conservation & Improvement. As it has been studied & described in earlier chapters, the potential for environmental pollution during construction phase of the proposed project would not major but the operational phase would have some considerable impacts which need to be mitigated by efficient & adequate structural & operational measures. Also considering the probable impacts of construction phase, it is require implementing proper operational and some general structural measures to overcome the issues of adverse impacts on environment.

Considering these facts and the necessity of structural & operational measures for mitigation of impacts of the proposed project, the present environmental management plan with necessary procedures have been planned for control of pollution during proposed project operations. The environment management plan, thus prepared for construction & commissioning phase as well as operation phase, is presented below in subsequent sections under respective headings.

## 1.4. EHS MANAGEMENT CELL

Apart from having an environmental management plan, it is also necessary to have a permanent organisational set up charged with the task of ensuring effective

implementation. A designated team consisting of managers, officers, chemists, technicians, operators and other required personnel is formed to co-ordinate the activities concerned with environmental management and implementation of pollution control measures. The cell such formed keeps a close watch on the performance of the pollution control equipment, emissions from the sources and the quality of surrounding environment in accordance with the monitoring program. The cell undertakes the monitoring of environment pollution level internally and also by appointing external agency whenever necessary. In case the result of monitoring environment pollution found to be exceeding the prescribed value, the environmental management cell suggests remedial actions and get these suggestions implemented through the concerned plant authorities.

The cell also co-ordinates all the related activities such as safety & disaster/emergency management, hazard & risk prevention/control, collection of statistics of health of workers, population of the regions, afforestation and green belt development.

The cell also monitors for general and preventive maintenance of pollution control system done by the maintenance department to achieve optimum efficiency of the control equipment and to maintain the quality of the environment. The cell is also responsible for maintaining the records of all data, documents and information in line within the legislative requirement and will regularly furnish the same to the relevant authorities.

The setup of the Environmental Health & Safety Management Cell for proposed project will be the same as that of existing unit and as presented below in fig-1.1.

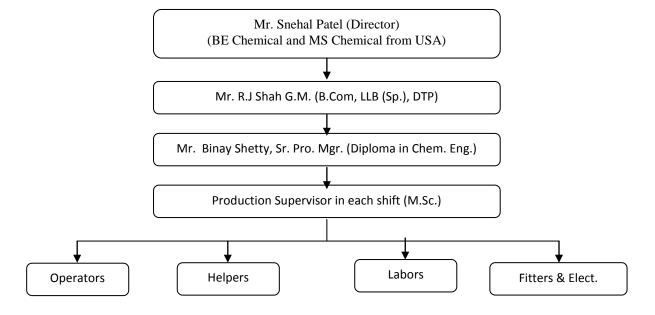


Figure 8.1: Organogram of EHS Cell

## 1.5. WATER & WASTEWATER MANAGEMENT

As described in earlier chapter, the minor quantity of water will be required temporarily during the tenure of construction activities, which will be met through GIDC water supply. Further, there would not be any kind of effluent generation and sewage will be disposed off through the sanitation facilities consist of septic tanks & soak pit. Thus, major mitigation measures are not required during construction phase. However, it is required that all possible efforts should be made to optimize the water consumption and to prevent wastage during the phase to reduce the impacts on surface water resources due to consumption.

The water requirement of after proposed project operation will be 20 KLD and wastewater generation will be 8.3 KLD. Further, as it has been planned that 100% wastewater from washing will be reused for scrubbing system. Total washing and scrubbing water is used to scrub phosphorous pent oxide to recover Phosphoric Acid as by product.

Thus, it has been noticed that the proponent has already planned & implemented major necessary mitigation measures for prevention/minimisation of the impact on water environment. Considering the planned mitigation measures & probable impacts, necessary recommendations are made below as EMP for Water & Wastewater Management including structural & non-structural measures.

Table 1.1: EMP for Water & Wastewater Management

Env. Issue	Mitigation measure	Implementation time & Responsibility
Construction & com	missioning Phase	
Load on resources	Structural measure:	During construction
by consumption of	Water Storage Tank	& Commissioning,
water	• Earthen bund/barriers around the	Construction Head
	construction sites/areas	
	• Proper material storage area, if	
	required, properly lined with	
	impervious materials	
	Non-structural measure:	During construction,
	Optimization of water consumption	Construction Head
	by avoiding unusual runoff from	
	construction activity area	
	Proper arrangement & maintenance	
and regular inspection of water supply		
	line to prevent leak from pipes & taps/	
	valves	
Wastewater	Structural measure:	During
Management &	Proper sanitation facilities with	Commissioning,
Prevention of	septic tank & soak pit for disposal of	Construction Head
water pollution	sewage	
	Adequate structural facilities for	
	prevention of any kind of	
	contaminated	

	runoff from construction area causing impacts outside premises- storm water drain along unit's boundary is already constructed to prevent runoff outside of premises  Non-structural measure:  Ensuring availability & proper utilization of sanitation facilities  Disposal of sewage through septic tank & soak pit only and regular checking & maintenance for prevention of leak & overflow  Regular inspection & management for prevention of any kind of contaminated runoff from construction area  Earthen/Temporary bunds/barriers to prevent runoff	During construction,     Construction Head
Operation Phase	to prevent runon	
Load on resources	Structural measure:	During Operations,
by consumption of	Proper arrangements for withdrawal	Utilities in-charge,
water	of GIDC water.	• HSE Head
	Metering facilities for GIDC water	
	consumption	
	Adequately designed cooling tower/	
	system with optimized cooling water	
	requirement & evaporative losses	
	Non-structural measure:	During operations,     Draduction in charge
	Reduce wastage in domestic  activities by proventing leak/spill from	<ul><li>Production In-charge</li><li>Utilities In-charge</li></ul>
	activities by preventing leak/spill from pipes,	• Othities III-charge
	taps/ valves etc.	
	<ul> <li>Use of Regular recording of water</li> </ul>	
	consumption, wastewater reuse	
	quantity	
	using flow meter	
	• Maximum possible reuse of	
	wastewater from washing and	
	scrubbing.	
	Regular inspection, control &	
	necessary maintenance for reduction of evaporation loss and blow down	
	from cooling system	
	Minimisation of steam losses from	
	boiler & steam lines and process	
	Optimisation of COC in cooling	
	system	

Treatment &	• Properly designed chemicals &	Construction Incharge
discharge/ reuse/	hazardous waste storage area with	
recycle and	properly	
prevention of	lined impervious flooring	
water pollution	• Stream Segregation	
	pipelines/channels for Wastewater	
	collection &	
	treatment	
	Proper sanitation facilities with	
	septic tank/ soak pit system for	
	domestic	
	wastewater discharge	
	Reuse of wastewater from washing	
	for scrubbing system. Total washing	
	and scrubbing water is used to scrub	
	phosphorous pent oxide to recover	
	Phosphoric Acid as by product.	
	Non-structural measure:	During operations,
	Hazardous materials & wastes to be	HSE Head
	stored in designated storage area with	Plant / Department
	impervious lining to prevent contamination of water	In-charges
	<ul> <li>Prevention of mixing of any contaminated stream with storm</li> </ul>	
	contaminated stream with storm water drainage	
	Maintaining records of water	
	consumption, reuse of wastewater	
	and	
	maintenance of wastewater	
	management system	
	<ul> <li>Maintenance of good housekeeping</li> </ul>	
	to avoid contamination of water	
	to a total containing tion of water	

## 1.6. AIR POLLUTION CONTROL & MANAGEMENT

resources.

The issue of impact on air quality during construction phase is envisaged to be minor as construction is to be done for foundation and MS Structure. However, it has been noted that the air quality will be marginally affected due to emissions from vehicles, construction equipment & machineries as well as airborne construction materials and dusting from site. As the impacts are likely to be restricted within premises & in close proximity of site, no major structural mitigation measures are required. However, implementation of general structural & operational mitigation measures will be ensured to minimize the probable impacts of construction phase. Beside these, there would be considerable impacts on air due to emission from boilers, thermopacs & GG sets during the commissioning phase of proposed project. Hence, the commissioning phase requires major structural & operational mitigation measures mainly for control of pollution due to emissions.

During operation, ongoing emissions from the said utilities are the main source of impacts on air quality, which will be reduced after commissioning phase but would be noticeable. However, as the Natural Gas is proposed as the only fuel for the utilities, no specific APCDs are required for the utilities except provision of adequate stacks. In addition to these sources, air contamination due to accidental release of vapours & particulate of raw materials has also been anticipated. Hence, it has been suggested that utmost care will be taken to avoid such chances by providing adequate storage & handling facilities for materials by providing necessary structural & operational mitigation measures. Considering all these details related with necessary mitigation for proposed project, EMP for Air Pollution Control during construction & operation phase has been formulated as presented below in tabular structure.

Table 1.2: EMP for Air Emission Management

Env. Issue	Mitigation measure	Implementation & Responsibility				
Construction &	Construction & Commissioning Phase					
Temporary increased emissions from construction & commissioning operations	Structural measure:  • Adequately designed enclosed area for reduction of particulate during materials storage & handling  • Curtaining around the construction site to prevent particulate emission from construction works	During construction,     Construction Head				
	Stacks of adequate height & internal diameter at top with sampling port.					
	Non-structural measure:  • Properly designed method & practices of transportation, storage & handling of materials will be established and maintained along with necessary facilities to reduce airborne particle of materials  • Proper ventilation & other condition in storage area will be ensured and all materials must be stored in suitable packing to prevent contamination of air due to particulates & volatile emissions from storage area  • All construction equipment, machineries & utilities will be maintained on regular basis to reduces emission  • PUC certificate in case of all vehicles engaged in construction work will be ensured  • Engines of Idle machineries, equipment, vehicles to be turned off when	<ul> <li>During construction,</li> <li>Plant /Construction</li> <li>Head</li> <li>HSE Head</li> </ul>				

not in use.

- Prior to commissioning of plant, completeness of structural measures including fuels supply system will be ensured.
- Adequate NG supply will be ensured prior to commission & throughout the commissioning of utilities.
- Stack Monitoring will be done during the commissioning phase on regular basis to prevent high emission from utilities.
- Proper functioning of allied facilities of utilities will be ensured before the commissioning of plant
- Provision of necessary PPEs for employees engaged in activities of storage, transportation & handling of materials as well as construction & commissioning operations

# **Operation Phase**

# Stationary emissions

## Structural measure:

- Stacks of adequate height & internal diameter are to be provided for efficient dispersion of emission from proposed utilities
- Sampling port & monitoring point are provided on all stacks
- Provision of ID fan with utilities/ stack to maintain desired velocity of exit gas, if required
- Provision of preventive maintenance facilities for Stacks, Utilities, Storage area/vessels, pipelines etc.
- Safety arrangements, facilities 8 equipment to prevent accidental emissions

# During construction,

• Construction Head

## Non-structural measure:

- Optimum air-fuel ratio (AFR) in the utilities as per specifications are ensured throughout operation period
- Un-interrupted functioning of FD/ID fans, if provided, are ensured to prevent back pressure in utilities as well as to keep desired velocity of emission at top of stacks efficient dispersion of gaseous pollutants in emissions.
- During operations,
- Maintenance personnel
- Plant In-charge

• Adequate NG supply will be ensured prior to commission & throughout the commissioning of utilities and no other fuel will be used the utilities except emergency conditions. • Regular monitoring is done as per the **Environmental Monitoring Plan** & CC&A for checking efficiency of control equipment. SOPs for start-up, shutdown and operation & maintenance procedures should be established and maintained. Adequate set of compatible spares, a copy of drawing and operating procedure as per design specifications should be maintained and made easily available. Provision of adequate process safety controls • Adequate greenbelt coverage, around the plant Proper implementation of safety procedures and efficient use of safety arrangements, facilities & equipment to prevent accidental emissions Provision for necessary PPEs for employee engaged with hazard prone area. Process & Structural measure: • During construction, **Fugitive**  Dust colleting systems over dust Plant in-charge emissions generation points are provided with the Construction Head help of bag filter for control of fugitive dust emissions during blending and Tableting activities. Adequately designed storage area with efficient air change ratio, handling & transport facilities are provided for raw materials & products • Phosphoric Acid Recovery System in reactor unit • Adequately designed process vents for Scrubbing system. Properly designed, installed maintained Gas skid, PRV station & NG pipelines connected to the utilities. Air handling unit /adequate ventilation system of sufficient capacity is

to be provided in the entire production plant

- Gravity charging from enclosed containers, and enclosed vacuum, pressure, and pumping systems during charging and discharging operations to minimize fugitive emissions;
- Installation of local exhaust ventilation (LEV) at Tablet machine to capture fugitive dusts.

## Non-structural measure:

- Properly designed method & practices of transportation, storage & handling of materials are established and maintained along with necessary facilities to reduce airborne particle of materials
- Proper ventilation & other condition in storage & production area are ensured and all materials are stored in suitable packing to prevent
- contamination of air due to particulates & emissions from storage area
- Closed materials charging and sampling practices are established & ensured.
- Adequate function of P2O5 recovery system in reaction unit are ensured all the time
- Proper velocity & function of Process vents are ensured all the timet
- SOPs for start-up, shut down, operation & maintenance procedures are established & maintained in all relevant area of works.
- Work place monitoring for AAQM are done as per 'Post project monitoring plan' as well as regulatory requirement as per factory act.
- Regular maintenance & operations of all process vent, P2O5 recovery system & gas pipeline for efficient functioning
- Proper implementation of safety procedures and efficient use of safety arrangements, facilities & equipment are ensured at all time of operation to prevent accidental release of

- During operations,
- Plant in-charge

	materials & fuels as well as	
	prevent fire hazard.	
	• Provision for necessary PPEs for	
	employee engaged with hazard	
	prone area	
	Regular occupation health check-up	
	program for all employee	
Vehicular	Structural measure:	During construction,
emissions	• Low emission vehicles are preferred for	Construction Head
	transportation	
	Non-structural measure:	<ul> <li>During operations,</li> </ul>
	• Requirement of PUC are compulsory for	• Site President,
	all vehicle engaged in proposed	Security person
	project activities	HSE Head
	• Checking of PUC certificate for validity &	
	emission level in exhaust of all	
	entering vehicles	
	• All vehicles are maintained in well	
	condition by regular preventive	
	maintenance to reduce the exhaust level	

# 1.7. HAZARDOUS / NON-HAZARDOUS WASTE MANAGEMENT

During construction phase, earthen materials as well as construction wastes like concrete waste, waste, metal scrap and empty bags/containers are likely to be generated, which are nonhazardous & recyclable. As per the Hazardous Waste Management, Handling and Transboundary movement Rules – 2008; Used Oil & empty containers/drums/carboys are the Hazardous waste, to be generated from the unit during operational phase. The hazardous wastes are mendatory to manage as per statutory requirements and proponent has already made provision of the hazardous waste management system in their project planning. Hence, no major structural mitigation is required except proper waste storage area. All waste, is recycled/reused directly or indirectly so additional mitigation is not required.

The Company has made provision of well designed and adequate hazardous & non-hazardous waste storage area as per CPCB / MoEF guidelines. All wastes are disposed off through the proper disposal modes including the disposal through TSDF, authorised recycler/dealers as well as sell of non-hazardous waste to actual users &/or manufactures. The company has already acquired membership of TSDF for disposal of hazardous waste. These planned waste management system is adequate to manage the load from proposed project and thus this mitigation measures are efficient to prevent impacts of waste from proposed project. However, to ensure proper handling, storage and disposal of hazardous/non-hazardous wastes, the following measures have been proposed by the industry or suggested by the EIA agency.

**Table 1.3: EMP for Waste Management** 

Env. Issue	Mitigation Measure	Implementation & Responsibility			
Construction & Co	Construction & Commissioning Phase				
Construction Waste management.	<ul> <li>Structural measure:</li> <li>A separate designated storage area for each category of wastes and excavated earthen material/soil.</li> <li>Proper handling &amp; transportation system for construction wastes</li> </ul>	<ul><li>During construction,</li><li>Construction Head</li></ul>			
	Non-structural measure:  • Proper storage of construction & other waste and excavated earthen material/soil.  • Use of excavated soil for landscaping & gardening/greenbelt development  • Sell of empty containers/bags and scrap to scrap dealer.	During construction,     Construction Head			
<b>Operation Phase</b>					
Hazardous/ Non- Hazardous waste management.	<ul> <li>Structural measure:</li> <li>Provision of designated storage area as per MoEF/CPCB guidelines are provided with sign boards/labels for each category of hazardous &amp; nonhazardous wastes generated from the unit.</li> <li>Proper Handling &amp; Transportation system /facilities for hazardous/nonhazardous wastes</li> </ul>	<ul><li>During operation,</li><li>Plant In-charge</li><li>HSE Head</li></ul>			
	<ul> <li>Non-structural measure:</li> <li>Proper storage of all hazardous wastes in their designated storage area.</li> <li>Transportation of hazardous waste to the TSDF governed as per the guidelines and accompanied with Form-9 as per statutory provisions.</li> <li>Annual returns of the disposal of wastes in Form- 4 and Form-13 are submitted regularly to the office of local pollution control authority.</li> <li>Proper handling, loading &amp; unloading of waste are monitored during waste handling, storage &amp; transportation to avoid spillage/leak causing contamination of soil / environment</li> <li>Adequate utilization of non-toxic/non-hazardous wastes and reusable/recyclable waste (especially empty</li> </ul>	<ul> <li>During operation,</li> <li>Maintenance personnel</li> <li>Plant In-charge</li> <li>HSE Head</li> </ul>			

containers & bags and used oil) are
ensured by promoting recycler or end-
users of products derived from such
wastes.

#### 1.8. OISE CONTROL & MANAGEMENT

As noticed, the noise generation during the construction will be temporary and restricted within premises. Only operations of construction equipment, machineries and installation works will be the main sources of noise and the issue of noise pollution from these sources can be reduced to acceptable level by proper mitigation measures. During operation phase, operation of D.G. Set & equipment like Ball Mill etc. will generate considerable noise, which will be significant only in the particular area of source. For noise reduction and attenuation, following measures have been proposed by the industry or suggested by the EIA agency.

Table 1.4: FMP for Noise Control

Table 1.4: EMP for Noise Control				
Env. issue	Mitigation measure	Implementation &		
		Responsibility		
Construction Ph	ase			
Noise	Structural measure:	During construction,		
	Noise generating & vibrating equipments	Construction Head		
	will be mounted on sturdy concrete			
	foundations with rubber padding to reduce			
	vibrations.			
	All rotating equipment/equipment or			
	part thereof will be dynamically balanced			
	and provided with proper non/low			
	vibrating enclosures			
	Suitable barrier around the construction			
	site wherever/ whenever required			
	to reduce noise level outside the project			
	premises			
	Adequate greenbelt shall be developed			
	to help in attenuation of noise			
	Non-structural measure:	During operations,		
	Regular lubrication & preventive	Maintenance		
	maintenance will be done to reduce noise	personnel,		
	generation.	• Env. & Safety		
	Ear plugs/muff will be provided to all	Manager		
	construction workers/employees at			
	place of high noise levels			
	All vehicles shall maintain speed limit			
	inside the premises & loud horns &			
	unusual acceleration of engine will be			
	prohibited			
Operation Phase				
Noise	Structural measure:	During construction,		
	Noise generating equipments like D.G	Construction Head		

_		
	set, Ball Mill etc. are kept in isolated	
	closed room.	
	<ul> <li>Adequate greenbelt will be developed</li> </ul>	
	and maintained around high noise	
	area as well as plant premises to help in	
	attenuation of noise.	
	Non-structural measure:	During operations,
	Regular lubrication & preventive	• Site President,
	maintenance are done to reduce noise	Maintenance personnel
	generation	• Env. & Safety
	Use of PPE like ear plugs and ear muffs is	
	made compulsory near the high noise	
	generating machines. Moreover, the	
	personnel are provided breaks in their	
	working hours, with the continuous	
	exposure not increasing three.	
	(3) hours.	
	<ul> <li>Periodic monitoring of noise levels as per</li> </ul>	
	post-project monitoring plan will	
	be done on regular basis	

## 1.9. PROTECTION & CONSERVATION OF ECOLOGY

The proposed project would be sited in an industrial land situated in the notified industrial estate of Vapi, which is considerably away from ecologically sensitive area of the region. Besides, there is no settlement in the proximity of the plant and the nearest ecologically sensitive areas – forest & agriculture land are situated far away from the core impacts zone. Besides, it has been noticed that the emissions, noise generation and water pollution as well as hazardous waste management would not have any potential to cause any damage to the ecologically sensitive areas of the region. Hence, the proposed project would not have any direct impact on ecological layout during both phases. Therefore, major mitigation measures are not required for construction phase & operation phase except the pollution control measures suggested in other sections. Besides, it is also planned by proponent to develop greenbelt area in & around the construction site as per greenbelt development plan described in this chapter. This greenbelt will slightly improve the ecological status of the project site area.

Considering, the potential impacts on ecology, the following mitigation measures and action plan for conservation, protection & improvement of ecology of the area are suggested by the EIA agency for construction & commissioning and operation phases as common EMP.

Table 1.5: EMP for Conservation of Ecology

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Env. issue	Mitigation measure	Implementation & Responsibility	
Construction & Commissioning Phase and Operation Phase			
Ecological Structural measure:		<ul> <li>During construction,</li> </ul>	
Conservation &	• Enclosed storage area for reduction of	<ul> <li>Construction Head</li> </ul>	

# protection particulate emission. Proper arrangement for materials storage & handling to prevent emissions from construction site/operation area Stacks of adequate height & internal diameter are e provided for existing & proposed utilities. All necessary structural mitigation measures suggested/planned for control & water pollution, management and noise control and safety &emergency management Non-structural measure: • During operations, Regular monitoring of stack for Emission Maintenance personnel • Env. & Safety Manager & Ambient air quality as per monitoring plan. No disposal of effluent & waste on land or in water bodies Noise level outside premises will not exceed stipulated standards for industrial area Proper safety measures & emergency management plan to prevent impacts of major hazards on ecology Major transpiration through highway networks & main approach road Proper & efficient implementation of mitigation measures & EMP suggested for Air, Water & Noise environment.

## 1.10. MATERIAL STORAGE & HANDLING

Company has provided adequate facilities for storage & handling of the materials within the premises. As described in earlier chapter company has provided designated areas for chemical storage. Also it has been planned to provide impervious flooring as well as proper ventilation in the area. Considering the planned & existing facilities & measures as well as probable impacts from material storage & handling as identified in current study, following environmental management plan has been suggested to prevent impacts on environment due to material storage & handling.

- Standard Operating Procedures (SOPs) are adopted for all aspects of material handling and operation of the system.
- Bulk materials are transported in truck loads and are unloaded & stacked in the designated storage area.
- Necessary PPEs like hand gloves, gumboot, goggles, helmet etc., fire fighting arrangements like - Portable fire extinguishers, Sprinkler system, External hydrant system, fire tender etc. and medical facilities like - First aid boxes, etc. are/will be provided in the unit to meet emergency in case of an accident.

- In addition to the above, all necessary measures for material storage and handling as incorporated in the Risk assessment report & onsite emergency plan are implemented & monitored.
- Phosphorus being Dangerous goods of Class 4.2 (Spontaneously Combustible) is transported in air-tight M.S. Barrel and under Water. It is stored in cool place, Out of direct sunlight and away from oxidizing agents and sources of heat or ignition.
- Handling of Phosphorus is done either by Hand Trolley or by way of lifting arrangement and is transferred by way of Gravity System in close Circuit. Cover with WET earth, sand or other non-combustible material.
- To control the Hazards of Phosphine, Aluminium Phosphide is packed in Air Tight condition and is stored in proper ventilated godown.
- Zinc Phosphide is packed in Well Sealing Tin / Pouch in double packing.

#### 1.11. OCCUPATION HEALTH & SAFETY MANAGEMENT

Achieving high standards in Health, safety and environment management is one of the key targets /goals of the company. Company is committed towards ensuring high level of health & safety of its employee. To maintain high standard in Health, Safety and Environment, necessary key mitigation measures & action plan as EMP has been suggested as described below.

- Management has provided necessary PPEs, safety equipments/materials to ensure healthy & safe work conditions. Regular inspection for the safety procedures and use of PPEs & Safety equipments/material is done by the management/safety cell. Proponent will practice similar practices after proposed project & also ensure that all necessary PPEs, Safety materials/equipments are/will be in place.
- Workplace monitoring are carried out on regular basis. All records & documents related with the workplace monitoring & health check-up program are maintained by the proponent on regular basis. Especially, the workplace monitoring for P2O5 is done on regular. Necessary documents, reports & records of this monitoring are maintained & reviewed to avoid any impacts on human health.
- Safety documents, procedures, guidelines along with MSDS are provided to the associated/concerned personnel engaged in respective operational activities.
- Training programs & safety audit are done on regular basis to prevent impacts of the operational activities on occupational health as well as to improve workplace condition & safe work system.
- The proponent ensures implementation of emergency management plan with provision of fire fighting equipment / facilities, first aid & medical facilities, evacuation procedures etc. Proponent will also ensure proper implementation & functioning as well as assess effectiveness of this safety & emergency system on regular basis throughout the project operation phase.

## 1.12. LANDSCAPING & GREENBELT DEVELOPMENT

The plantation and green belt development in an area functions as foreground and background landscape features resulting in harmonizing and amalgamating the physical structures of the plant with surrounding environment but also acts as pollution sink. Plantation also replenishe the air and improves the water and soil quality. It also acts as a noise barrier and it is a crucia interface in the management of the environment. The

greenbelt enhances the aesthetic values of the site and provides healthy environment. Proper design of greenbelt around the pollution sources could play a significant role in abatement of pollution.

The proponent M/s. Sandhya Organics has already allocated land for greenbelt area within the existing premises. The allotted land admeasures 432 m2 for greenbelt in the premises. The greenbelt development program has already been started by the proponent. The details are depicted in the plant layout plan (Figure 2.3). The list of species selected for plantation and proposed to be planted in the greenbelt area is presented in subsequent Table.

## General Guidelines followed for Green Belt Development

- 1. Trees growing up to 5 m. or more in height shall be planted around the installation.
- 2. Trees shall be planted along roadsides, to arrest auto-exhaust and noise pollution, and in such a way that there is no direct line of sight to the installation when viewed from a point outside the foliage perimeter.
- 3. Since tree trunks are normally devoid of foliage (up to 3 mtr.), it will be appropriate to have shrubbery in form of such trees to give coverage to this portion. Fast growing trees with thick perennial foliage shall be grown, as it will take many years for trees to grow to their full height.
- 4. Canopy size & height of the plant/tree shall be considered to provide thick multi-tier plantation
- 5. For re-plantation, the plants and saplings suitable for the soils of project site regional conditions shall be considered. It is recommended to plant fast growing local plant species, which can adapt to the local climate.

**Table 1.6: Floral Species Recommended for Greenbelt** 

Sr. No.	Scientific Name	Common Name Family	
1.	Rosa berberifolia	Rose Rosaceae	
2.	Jasminum sambac	sambac Mogra Jasminum sambac	
3.	Ocimum sanctum	Tulsi	Lamiaceae
4.	Ficus elastica	Rubber	Moraceae
5.	Nelumbo nucifera	Lotus	Nelumbonaceae
6.	Helianthus annuus	Sun Flower	Asteraceae

#### 1.13. CORPORATE SOCIAL RESPONSIBILITY

Numerous activities are being conducted by the company in various sectors of social development. The company has provided donation of Rs. 5, 00,000/- to Shah Bhikhamchandji Ghambhirmalji Chhajed Education Society, Phansa, Bhilad, Gujarat. Similar activities through the company will be conducted by the proponent after proposed project to fulfil its commitments & duties towards the society. The company intends to donate 2% of the profit to agencies like educational facilities, religious institutes or social welfare societies for projects carried out in nearby village for their welfare and upliftment.

## 1.14. CLEANER PRODUCTION ACTIVITIES

Reduction of waste at source by adoption of cleaner processes/ technologies/ operations, resource optimization, energy conservation and reduce/ reuse /recycle of waste are the principal approaches of Cleaner production activities. With adequate Implementation of necessary & suitable actions of cleaner production approaches, cost of production as well as pollution potential of the manufacturing process can be reduced significantly. The proponent has already planned & implemented some action in terms of energy conservation, resource recovery & reuse and direct/indirect waste (used oil, empty bags/drums/containers) recycling/reuse. Following are some considerable action plan implemented & proposed for development & implementation of "Cleaner Production Action Plan" as a part of project management.

## 1.14.1. CLEAN FUEL USAGE

For the existing project Boiler and D.G. Set are installed and for the proposed project, an additional boiler will be installed. These utilities needs fuel as main raw materials for heat & power requirement of the proposed project. As it has been planned, the Compressed Natural Gas is and will be used as fuel. As the NG is defined & accepted as cleaner fuel, it will have negligible potential of pollution of air. Thus the GHG emission would be significantly low from the proposed project, which will be very good step towards sustainable & cleaner development.

## 1.14.2. RESOURCE CONSERVATION, RECOVERY & RECYCLING

Water is an important resource and recovery, recycling & reuse of the water is the essential practice of an industry if it is possible. The proponent recovers Phosphoric Acid from the wastewater generated from Washing and Scrubbing system. This action is very step towards protection of environment as well as resource conservation and at last but not least towards cleaner production goal.

## 1.14.3. WASTE RECYCLING & REUSE

Hazardous wastes like discarded containers/drum/carboys & used oils will be recycled through appropriate arrangements as per GPCB/CPCB guidelines.

# Annexure III

# **Financial Details**

Sr. No.	Particulars	Existing, Rs. Lakhs	Proposed, Rs. Lakhs	Total, Rs. Lakhs
1	Land	9.09		9.09
2	Building and Civil works	55.81	20.00	75.81
3	Plant & Machinery and other fittings	104.21	90.00	194.21
4	Environmental protection measures	10.00	30.00	40.00
	Total :	179.11	140.00	319.11

(Source: Sandhya Organics - Vapi)