

## 1. INTRODUCTION:

**Proponent:** The project M/s Satyam Petrochemicals is located at 120/A, Wayanchiwadi, At Post Masur, Taluka Karad, District Satara, Maharashtra. The project has been developed to facilitate the production of Ethanol, Ethyl Acetate, Diethyl Phthalate and Power for captive purpose. The company has already obtained the registration as S.S.I from Directorate of Industries, Maharashtra. This project has been granted environmental clearance by the Ministry of Environment and Forests (MOEF), New Delhi, vide letter number F.No. J-1101/69/2010-1A II (I) dated 22nd March 2013. The project has also obtained Consent to Establish (NOC) from Maharashtra Pollution Control Board Consent No: BO/PCI-I/ECI-RD-1520-10/AME/-173 dtd. 29-07-2010. After completion of the project, the project has granted Consent to Operate (CTO) from Maharashtra Pollution Control Board Consent No. BO/MPCB/RO-PN-18005-13/JD (WPC)/RA/CC-13/06150 dated 22/07/2013.

## 2. ABOUT THE PROJECT:

M/s. Satyam Petrochemicals has decided to expand their existing unit by production of Di Acetone Alcohol (DAA) & Power at plot no 120/A Wayanchiwadi, At Post Masur, Taluka Karad, District Satara, Maharashtra. It is noted that the proposal involves manufacturing of Di acetone Alcohol & Power with production capacity of 2250 Mt /M & 2000 kw respectively. As per the provision of “EIA Notification No. S. O. 1533 (E)” dated 14.09.2006 & subsequent amended the project of M/s. Satyam Petrochemicals comes under schedule 5 (f) Category ‘A’. As the industry is located outside the notified MIDC area. Salient features of the Project is given in the below Table no. 1.

**Table No.1**

Sr. No	Components	Description
1	LOCATION	<b>M/s. Satyam Petrochemicals</b> 120/A, Wanyanchiwadi, At Post Masur Tal: Karad, Dist: Satara.- 415106 State: Maharashtra.
2	CO-ORDINATES OF THE LOCATION	-Latitude : 17° 25'03.08" N -Longitude : 74° 09'01.00" E -Elevation above Mean Sea Level (meters): 632 meters The industry is surrounded by In South:- Masur village at 2.23 Km (Aerial distance), In North: Kacharewadi village at 3 Km (Aerial distance), In West: Kavathe at 3 Km, In East: Chikali at 4 Km.
3	LOCATION ACCESSIBILITY	-Railway Station – Masur (5Km) from project site. -Airport – Kolhapur (100 Kms) from project site. -Nearest Road- Masur - Koregaon road -Highway – Pune - Bangalore National highway No. 4 (8.5 Km) from project site.
4	Type of Industry	Small Scale Manufacturing Unit

		Existing	Proposed	Total
5	Area	Plot area: 20,000 sq.m Total built up area : 5355 sq.m Green belt : 7000 sq.m Open space : 7645 sq.m	Proposed built up area : 2148 sq.m Green belt area: same area of existing Open area : 5497 sq.m	20,000 sq.m out of Total built up area : 7503 sq.m Green belt : 7000 sq.m Open space : 5497 sq.m
6	Products	--	Di Acetone Alcohol 2250 MT/ Month	Di Acetone Alcohol 2250 MT/ Month
		Ethanol 1800 kl / month	--	Ethanol 1800 kl / month
		Ethyl Acetate 4050 kl / month	--	Ethyl Acetate 4050 kl / month
		D E P 20 Mt / day	--	D E P 20 Mt / day
		Power 750 kw	2000 Kw	2750 Kw
7	By Products	--	Mesityl oxide (MO) 810 Kg/day	Mesityl oxide (MO) 810 Kg/day
8	Water requirement	430 m <sup>3</sup> /day	453 m <sup>3</sup> /day	883 m <sup>3</sup> /day
9	Power Generation	750 KW	2000 KW	2750 KW
10	Boiler capacity	Coal/Bagasse fired: 11T Coal/Bagasse fired: 7 T	Coal/Bagasse fired:20 T	Coal/Bagasse fired: 11T Coal/Bagasse fired: 7 T Coal/Bagasse fired:20T
11	Effluent generation	50.6 CMD	30.8 CMD	81.4 CMD
12	ETP capacity	200 m <sup>3</sup> /day	Existing ETP will be utilized	200 m <sup>3</sup> /day
13	Hazardous waste Generation	Spent catalyst:70 kg/M ETP sludge:250 Kg/M	ETP Sludge: 30Kg/M	Spent catalyst:70 kg/M ETP sludge:280 Kg/M
14	Non hazardous waste generation	Boiler ash : 800 Kg/D	Boiler ash : 880Kg/D	Boiler ash: 1680 Kg/D

15	Stack height		30 mtr for boiler 10 mtr for D.G set from Ground Level	30 mtr for boiler 10 mtr for D.G set from Ground Level	--
16	Man power		28 nos.	14 nos.	42 nos.
17	Fuel requirement	Bagasse	1920 Kg/hr	2100 Kg/hr	4020Kg/hr
		diesel	50 L/hr	50 L/hr	100 L/hr
		Coal	2250 Kg/hr	2500 Kg/hr	4750 Kg/hr
18	Utilities	D.G.Set	2 No. of D.G set of 500 KVA	1 No. of D.G set of 1500 KVA	1 No. of D.G set of 1500KVA 2 No. of D.G set of 500 KVA .
19	EMP budget		25 lakh	1.2 Cr.	1.45 Cr.
20	Project cost		5.45 Crore	12.50 crore	17.95 crore

### 3. Justification of Project

Di Acetone Alcohol has multiple end uses in local and international market. Project proponent justify it needs for expansion for narrowing the demand & supply gap. Also the project would lead to addition of foreign exchange as the product as a export potential. Overall the expansion of the unit will be having a positive impact.

**4. Baseline Environmental Status:** The study area is 10 km radial distance from centre of plant site. All the monitoring has been completed in various locations within the study area during the period of March 2014 – May 2014. The findings of the baseline environmental status on land (topography, soil quality, land use pattern), meteorology (Temperature, Humidity, rainfall, wind speed), air (ambient air quality- PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>), noise level, ecological environment (flora and fauna), socio economic conditions, are presented in the detail EIA report and interpreted with reference to environment standards

## 4.1 Ambient Air Quality

Sr. No	Sampling Location (AAQM)		M/s. Satyam Petrochemical			
			Direction	Dist. (Km)	Lat	Long
1.	A1	Project Site ( Near security gate )	Centre	--	17°25'05.48" N	74°09'03.27" E
2.	A2	Nigadi village	NE	5.50	17°26'27.30" N	74°11'14.20" E
3.	A3	Belwadi Village	N	4.21	17°27'14.76"N	74° 8'42.55"E
4.	A4	Shahapur Village	SSE	5.43	17°22'35.75"N	74°10'39.75"E
5.	A5	Umbraj Village	NWW	7.07	17°23'52.32" N	74°05'37.30" E
6.	A6	Masur Village	SEE	3.15	17°24'03.52" N	74°09'41.02" E
7.	A7	Varde Village	SSW	6.16	17°22'33.89"N	74° 6'40.40"E
8.	A8	Kharade village	NWW	2.70	17°26'13.55"N	74° 8'6.45"E

Sr. No	Sampling Location (AAQM)		M/s. Satyam Petrochemical			
			PM <sub>10</sub> ug/m <sup>3</sup>	PM <sub>2.5</sub> ug/m <sup>3</sup>	SO <sub>2</sub> ug/m <sup>3</sup>	NO <sub>x</sub> ug/m <sup>3</sup>
1.	A1	Project Site ( Near security gate )	82	26	11	17
2.	A2	Nigadi Village	54	18	9	12
3.	A3	Belwadi Village	62	17	6	12
4.	A4	Shahapur Village	64	22	12	17
5.	A5	Umbraj Village	58	19	7	14
6.	A6	Masur Village	68	26	10	15
7.	A7	Varde Village	45	14	7	11
8.	A8	Kharade Village	51	18	8	13
		<b>NAAQ Limits</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>

## 4.2 Noise Quality

Sr. No	Sampling Location	M/s. Satyam Petrochemical	
		Lat	Long
1.	Project Site ( Near security gate )	17°25'05.38" N	74°09'03.14" E
2.	Nigadi Village	17°26'27.10" N	74°11'14.41" E
3.	Belwadi Village	17°27'14.66"N	74° 8'42.14"E
4.	Shahapur Village	17°22'35.15"N	74°10'39.24"E
5.	Umbraj Village	17°23'52.22" N	74°05'37.36" E
6.	Masur Village	17°24'03.42" N	74°09'41.48" E
7.	Varde Village	17°22'33.79"N	74° 6'40.32"E
8.	Kharade Village	17°26'13.45"N	74° 8'6.44"E

Sr. No	Sampling Location	M/s. Satyam Petrochemical	
		Noise in dB(A) Leq Day Time	Noise in dB (A) Leq Night Time
1.	Project Site ( Near security gate )	69	52
2.	Nigadi village	42	39
3.	Belwadi Village	47	40
4.	Shahapur Village	51	43
5.	Umbraj Village	58	44
6.	Masur Village	53	41
7.	Varde Village	46	39
8.	Kharade village	42	40

- Limit During Day time < 75. (Day time shall mean from 6.00 am to 10.00 pm.)
- Limit During Night time < 70. (Night time shall mean from 10.00 pm to 6.00 am.)

4.3 Water Quality

Sr. No.	Parameter	Result											Unit	IS desirable Limit (As per IS 10500) 2012	Method	
			Near Industrial premises Canal Water	Canal Water-2	Near Belwadi Village Canal Water-3	Near Chikali Village Canal Water-4	Kharade Well	Masure Village	Vanaychiwadi Village	Konegaon Village	Shivdevi village	Hanbarwadi				
	Location	River Water (Krishna River)	SW-1	SW-2	SW-3	SW-4	SW-5	GW-1	GW-2	GW-3	GW-4	GW-5	GW-6			
			Chemical Parameters					Chemical Parameters								
1	pH	7.78	7.57	7.41	7.2	7.34	7.33	7.46	7.22	7.83	7.26	7.37	-	6.5 - 8.5	APHA 4500 H <sup>+</sup> - B	
2	Turbidity	3.43	1.67	1.22	1.55	1.63	0.69	0.79	0.86	1.58	0.86	1.05	NTU	1	APHA 2130 - B	
3	Total	353	144	165	170	200	297	305	345	344	235	264	mg/lit	500	APHA	

	Dissolved Solids														2540 - C
4	Color	<1.00	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	H <sup>0</sup> z	5	APHA 2120 - B
5	Dissolved Oxygen	5.06	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	mg/lit	-	APHA - 4500-0-C
6	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable	APHA 2150 - B
7	Chlorides as Cl <sup>-</sup>	20.02	15.02	17.02	19.02	25.02	14.01	17.02	20.02	22.02	12.01	16.02	mg/lit	250	APHA 4500 Cl <sup>-</sup> - B
8	Sulphate as SO <sub>4</sub> <sup>-</sup>	8.65	3.34	6.22	7.8	12.4	5.56	6.21	6.87	8.34	5.11	5.68	mg/lit	200	APHA 4500 SO <sub>4</sub> <sup>2-</sup> - E
9	Total Hardness as CaCO <sub>3</sub>	100	36	40	48	72	90	110	136	120	64	60	mg/lit	200	APHA 2340 - C
10	Nitrate as NO <sub>3</sub>	1.76	0.32	1.12	1.82	1.63	1.32	1.59	1.37	4.78	1.02	1.78	mg/lit	45	APHA 4500 NO <sub>3</sub> - B
11	BOD (27 <sup>0</sup> c 3 day)	0.6	-	-	-	-	-	-	-	-	-	-	mg/lit	100	APHA -5210 - B
12	Total Alkalinity	50	30	38	40	52	46	60	54	56	32	28	mg/lit	200	APHA -2320-

	ity														B
13	Fluoride as F <sup>-</sup>	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	mg/lit	1	APHA-4500-F - D
14	Sulfide	<0.01	<0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.05	IS:3025-1964
15	Ammonia	0.56	<0.01	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	mg/lit	0.5	Trivedi & Goel
16	Phenolic compound	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	mg/lit	0.001	APHA-5530-C
17	Cyanide	<0.01	<0.10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.05	APHA 4500 CN - D
18	Anionic Detergents	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	mg/lit	0.2	APHA-5540-C
		<b>Metal Analysis</b>						<b>Metal Analysis</b>							
19	Aluminium as Al	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/lit	0.03	APHA 3111 - D
20	Arsenic as As	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.01	APHA 3114 - B
21	Cadmium as Cd	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	mg/lit	0.003	APHA 3111 - B
22	Calcium	22.44	5.61	4.01	8.1	12.2	28.8	20.0	24.04	35.27	16.8	12.82	mg/lit	75	APHA



	m as Ca						5	4			3			3111 - D	
23	Barium as Ba	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/lit	0.7	APHA 3111 - D
24	Boron as B	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/lit	0.5	APHA 3111 - D
25	Iron as Fe	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/lit	0.3	APHA 3111 - B
26	Molybdenum as Mo	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/lit	0.07	APHA 3111 - B
27	Nickel as Ni	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/lit	0.02	APHA 3111 - B
28	Silver as Ag	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.1	APHA 3111 - B
29	Lead as Pb	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.01	APHA 3111 - B
30	Mercury as Hg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	mg/lit	0.001	APHA 3112 - B
31	Magnesium as Mg	10.72	5.36	7.31	6.77	10.13	4.37	14.62	18.53	7.78	5.35	6.82	mg/lit	30	APHA 3111 - B
32	Manganese as Mn	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.1	APHA 3111 - B

33	Selenium as Se	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/lit	0.01	APHA 3111 - B	
34	Zinc as Zn	0.76	0.23	0.18	0.22	0.29	0.54	0.89	0.46	0.79	0.26	0.55	mg/lit	5	APHA 3111 - B	
<b>Microbiological Parameters</b>							<b>Microbiological Parameters</b>									
35	Total coliforms at 37°C for 48 hrs.	1600	220	280	350	350	Absent	Absent	Absent	47	Absent	Absent	Org/100ml	Absent	APHA -9221-B	
36	Faecal coliforms at 44.5°C for 24hrs.	540	70	94	120	150	Absent	Absent	Absent	15	Absent	Absent	Org/100ml	Absent	APHA -9221-E	

## 4.4 Soil Quality

Sr.No.	Parameters	Results					Units	Method
	Location	Kharde Village	Masur Village	Project premises	Wanyachiwadi Village	Konegao Village		
		S1	S2	S3	S4	S5		
1	pH	6.63	7.23	6.32	6.54	6.89	-	IS:2720 (PART 26)-1987
2	Residual chlorine	Nil	Nil	Nil	Nil	Nil	mg/kg	Trivedi & Goel
3	Chloride as Cl <sup>-</sup>	155.15	195.19	215.21	180.18	250.25	mg/kg	Analysis by Food and Agriculture Organization
4	Sulphate as SO <sub>4</sub>	265.14	210.18	328.18	344.75	400.5	mg/kg	Analysis by Food and Agriculture Organization
5	Phosphate as P	10.5	6	13	15	18	mg/kg	Trivedi & Goel
6	Nitrate as NO <sub>3</sub> <sup>-</sup>	15.62	12.64	16.66	19.45	21.24	mg/kg	Trivedi & Goel
7	Nitrite as NO <sub>2</sub> <sup>-</sup>	7.14	4.34	8.96	10.5	11.6	mg/kg	Analytical Techniques Manual CPCB
8	Color	Gray	Gray	Brown	Brown	Brown	-	SW 846
9	Soil texture	Sandy clay	Sandy clay	Sandy clay	clay	Sandyclay	-	Analytical Techniques Manual CPCB
10	Natural	42	31	38	36	40	%	Analysis by Food

	moisture content							and Agriculture Organization
11	Bulk Density	1.12	1.04	0.82	1.35	1.56	g/cm <sup>3</sup>	IS: 2720 (Part III/Sec 1) - 1980
12	Porosity	21	18	18	24	28	%	Analytical Techniques Manual CPCB
13	Water holding capacity	42	44	42	45	44	%	Analytical Techniques Manual CPCB
14	Electrical conductivity	50	43	67	64	60	mS/cm	IS :14767 : 2000
15	Organic matter	3.77	3.77	1.99	1.84	1.72	%	Procedure for Soil Agriculture Organization
16	Calcium as Ca <sup>++</sup>	348.69	400.8	336.67	392	354	mg/kg	Analysis by Food and Agriculture Organization
17	Total Nitrogen as N	19.88	26.6	18.2	25.08	28.22	mg/kg	Analytical Techniques Manual CPCB
18	Grain size distribution							Analytical Techniques Manual CPCB
	Gravel	26	16	26	15	15	%	
	Sand	20	24	2700	25	30	%	
	Silt	16	17	14	20	20	%	
	Clay	38	43	33	40	40	%	
19	Arsenic as As	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000

20	Cadmium as Cd	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000
21	Chromium as Cr	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000
22	Copper as Cu	48	46	20	30	26	mg/kg	EPA 3050 – B 7000
23	Iron as Fe	8000	7400	10400	9600	10000	mg/kg	EPA 3050 – B 7000
24	Lead as Pb	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000
25	Manganese as Mn	140	210	160	180	172	mg/kg	EPA 3050 – B 7000
26	Magnesium as Mg	2400	3620	3340	4000	3800	mg/kg	EPA 3050 – B 7000
27	Mercury as Hg	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000
28	Nickel as Ni	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000
29	Sodium as Na	7200	8800	8400	7900	8200	mg/kg	EPA 3050 – B 7000
30	Zinc as Zn	80	68	16	34	38	mg/kg	EPA 3050 – B 7000
31	Cobalt as Co	<1.00	<1.00	<1.00	<1.00	<1.00	mg/kg	EPA 3050 – B 7000
32	Potassium as K	566	420	560	612	590	mg/kg	EPA 3050 – B 7000

#### 4.6 Ecology:

There are no ecologically sensitive receptors or endangered species within the 10 kms of the study area. No clustered green belt is found in the near vicinity, hence there will not be any kind of deforestation. No rare or endangered species of flora and fauna are present in the immediate vicinity as well as the study area. Thus, there will not be any adverse negative impact on flora and fauna.

#### 4.7 Socio-economic:

The project will provide positive impact on the economic development of the region in terms of employment opportunities. The above unit is already established in Wayanchiwadi village. Therefore no population displacement is envisaged.

### 5. PREDICTION OF IMPACTS AND ITS MITIGATION:

Sr.No	Environmental Parameters	Impact Attributes	Mitigation Measures
1.	Air Quality	Unreacted Gases from Manufacturing process, Emission from Utilities & Fugitive emission (dust) from loading and unloading activities, also from transportation.	Chilled vapours condensers are provided. Distillation columns to control unreacted gases, VOCs etc. Cyclone dust collector to control SPM and adequate stack height as per the CPCB norms. Sprinkling arrangement during loading & unloading of coal and fly ash.
2.	Noise Quality	D.G sets, Boilers & reactors	Acoustic hood for D.G set is provided. Enclosure for boiler is provided. Anti vibration pads and close room for the other noise generating equipment. Green belt development
3.	Water Quality	Process water	Full fledge ETP to maintain zero discharge.
4.	Solid Waste Management	Hazardous waste from ETP and distillation residue	Disposed through CHWTSDF (Ranjangaon)

## **6. RISK ASSESSMENT PLAN**

Risks likely to pose a risk to man, environment or property associated with various activities are addressed in this report. Such activities include transport, storage; handling and usage of fuels. All equipment vulnerable to explosion or fire would be designed to relevant IS codes and statutory regulations.

The Action plan preparedness depends largely on results of risk assessment data and includes,

- Plan for preventive as well as predictive maintenance
- Augment facilities for safety, fire fighting, medical (Both equipment and manpower) as per requirement of risk analysis.
- Evolve emergency handling procedure both onsite and offsite.
- Practice mock drill for ascertaining preparedness for tackling hazards/emergencies at any time of the day.

## **7. DISASTER MANAGEMENT PLAN**

During operational phase surrounding population shall be made aware of safety precautions to be taken in case of any mishap in plant. On-site disaster management and off-site emergency plans, commands communication and controls will be established and maintained. Adequate provisions like emergency response, response organization, response plan, material safety data sheet, command and control, capabilities, transportation, medical facilities, mitigation measures, training, education, public awareness emergency plan review etc. to control any disaster situation will be made available.

Specification & marking of safe area- assembly point to gather in emergency. Minimum two numbers of gates to escape during disaster shall be provided. Provision of adequate access ways for movement of equipment and personnel shall be kept. Fuel oil storage shall be in protected and fenced area. The tank will be housed in a dyke wall. As per regulations of CCOE its testing & certification will be performed each 1 year regularly and all record will be kept properly.

## **8. CSR ACTIVITIES**

As a part of CSR activity distributing of note books in the wayanchiwadi school. M/s Satyam Petrochemicals regularly carry out CSR activities in interval for the development of the surrounding villages.

## **9. CONCLUSION**

The existing project is in operation from 2005 with valid CTP and EC. the proponent has decided to enhance the existing activity with addition of Di acetone alcohol. The full fledged effluent treatment plant is available to maintain the zero discharge. the solid waste which is generating is disposed through common facility and the non hazardous waste which is generating in form of ash is given to the brick manufactures. the same practice will be continued for the expansion activity. The proper mitigation will be adopted for the identified impacts.