3 ANNEXURES

Annexure 1: Production Details

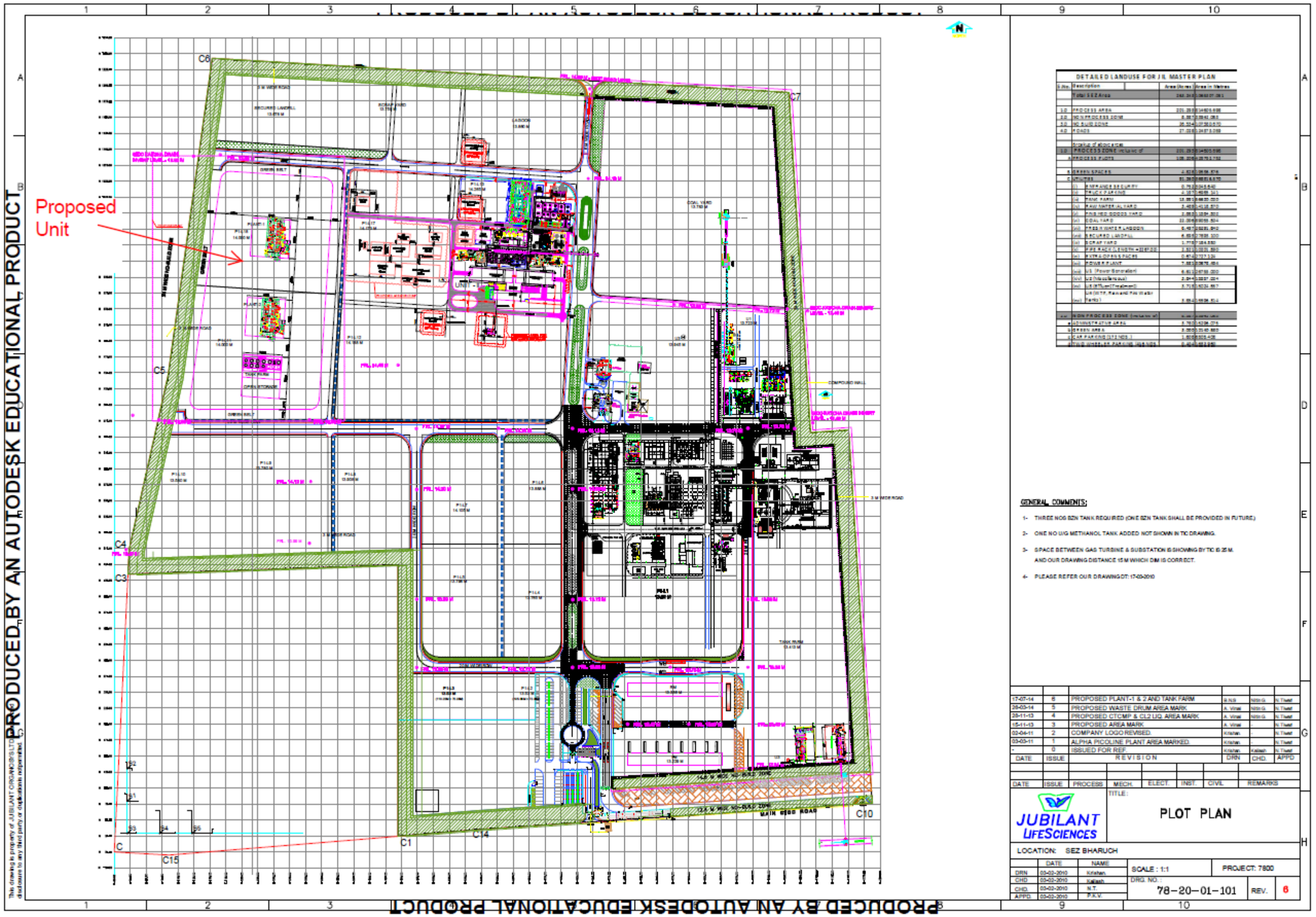
S. No.	Name of Product	Quantity in MT/Annum
1	Mepiquat Chloride	160
2	Chlormequat Chloride	2000
3	Chlorpyrifos & its derivatives	10000
4	Imidacloprid	1000
5	Acetamiprid	500
6	Thiamethoxam	500
7	Thiacloprid	200
8	Chlorfluazuron	100
9	Chlorantraniliprole	1000
10	Cyantraniliprole	1000
11	Triclopyr	220
12	Triclopyr butoxy ethyl ester	220
13	Fluroxypyr-meptyl	1000
14	Clodinafop Propargyl	200
15	Diquat dibromide	1500
16	Haloxyfop-P-methyl	100
17	Fluazifop-P-butyl	50
18	Diflufenican	100
19	Nicosulfuron	150
20	Picloram	300
21	Clopyralid	300
22	Paraquat & its derivatives	5000
23	Trifloxystrobin	400
24	Imazethapyr	100
25	Pyroxsulam	150
26	Picoxystrobin	2000
27	Boscalid	100
28	Azoxystrobin	1000
29	Intermediates of all above (#1 to #28)	
30	2-Chloro-6-(trichloromethyl)pyridine	3000
	TOTAL	**32350**

Annexure 2: Site Location Map

Table 3-1: Co-ordinates of SEZ Area

Point	Latitude	Longitude
A	21°46'57.57"N	72°53'32.47"E
B	21°47'16.48"N	72°53'26.66"E
C	21°47'15.74"N	72°53'24.42"E
D	21°47'32.08"N	72°53'18.85"E
E	21°47'27.27"N	72°52'47.49"E
F	21°47'2.77"N	72°52'49.23"E
G	21°46'46.42"N	72°52'52.89"E

Annexure 3: Site Layout Map of SEZ



Annexure 4: Site Layout Map of Proposed Unit 3 (Technical Grade Pesticides manufacturing Unit)

Area Break up at Site

S. No.	Title	Area, m^2	% of total Area
1	Industrial Buildings	45000	22.50
2	Raw Material, Finished Goods, Waste Storage Yard	55000	27.50
3	Utility Infrastructure	20000	10.00
4	Roads and Infrastructure	30000	15.00
5	Green Belt	16000	8.00
6	Open Spaces	34000	17.00
	Total	**200000**	**100.00**

Annexure 5: Manufacturing Processes

Attached below is the general process flow diagram and description for the manufacturing process. Depending on the type of product produced suitable operation will be employed.

Description of Unit Operations

Reactors

The most common type of reactor vessel is the kettle-type reactor. These reactors typically range in capacity from 50-litre to several thousand liters. The vessels are made of either stainless steel or glass-lined carbon steel. Reactors are equipped to provide a range of capabilities that may be required during the batch reaction step. This equipment may include: A jacket for heating and cooling, hook-ups for charging raw materials and for discharging the contents of the reactor, an agitation and recycle line for mixing, control systems for temperature and pressure, a condenser system for controlling vent losses, return line for refluxing condensable, a steam ejector for vacuum operation, a nitrogen supply for padding and purging the reactor, and a man way for taking samples and adding solid catalysts, reactants, and other solid materials to the reactor.

Raw materials or ingredients, including solvents, used to produce the intermediate or bulk substances are charged into the reactor vessel. Liquid ingredients are drawn into the reactor either by pumping or through vacuum from drums and storage tanks. Solids may be charged manually or via mechanical means such as through a vacuum system.

Once the reactor vessels are charged with the raw materials, the reaction takes place. The reactor can be operated at atmospheric pressure, elevated pressure, or under vacuum. Because of their flexibility, reactors may be used in a variety of ways. Besides hosting chemical reactions, they can act as mixers, heaters, holding tanks, crystallizers, and evaporators. Typical reactions performed include alkylations, hydrogenations, brominations etc. Temperature, pressure and the degree of mixing are carefully monitored to achieve the desired product and to ensure worker safety.

Reaction

A chemical compound is a pure chemical substance consisting of two or more different chemical elements that can be separated into simpler substances by chemical reactions. Chemical reaction is a process that leads to the transformation of one set of chemical substances to another. Classically, chemical reactions encompass changes that only involve the positions of electrons in the forming and breaking of chemical bonds between atoms, with no change to the nuclei (no change to the elements present), and can often be described by a chemical equation.

Neutralization

Neutralization is a chemical reaction in which an acid and a base react to form a salt. Water is frequently, but not necessarily, produced as well. Neutralizations with Arrhenius acids and bases always produce water where acid–alkali reactions produce water and a metal salt.

Separation

Several separation mechanisms are employed by the pharmaceutical industry including extraction, decanting, centrifugation and filtration. These mechanisms may be employed jointly or individually, in multiple stages, to separate the intermediate or bulk substance from the reaction solution and to remove impurities.

Extraction

Extraction is used to separate liquid mixtures by taking advantage of differences in the solubility of the mixture components. Absolvent that preferentially combines with only one of the components is added to the mixture.

Decanting

Decanting is a simple process used to separate mixtures of liquid and insoluble solid that has settled to the bottom of a reactor or settling vessel. The liquid over the solid is either pumped out of the vessel or poured from the vessel leaving behind the insoluble solid and a certain amount of liquid.

Scrubber

Scrubber systems are a diverse group of air pollution control devices that can be used to remove some particulates and/or gases from industrial exhaust streams. Traditionally, the term "scrubber" has referred to pollution control devices that use liquid to wash unwanted pollutants from a gas stream. Scrubbers are one of the primary devices that control gaseous emissions, especially acid gases. Scrubbers can also be used for heat recovery from hot gases by flue-gas condensation.

Condensation

Condensation is the change of the physical state of matter from gas phase into liquid phase, and is the reverse of vaporization. It can also be defined as the change in the state of water vapor to liquid water when in contact with any surface.

Absorption

Absorption is a physical or chemical phenomenon or a process in which atoms, molecules, or ions enter some bulk phase – gas, liquid or solid material. This is a different process from adsorption, since molecules undergoing absorption are taken up by the volume, not by the surface (as in the case for adsorption). A more general term is sorption, which covers absorption, adsorption, and ion exchange. Absorption is a condition in which something takes in another substance.

Mixing

Mixing is a unit operation that involves manipulation of a heterogeneous physical system with the intent to make it more homogeneous. Mixing is performed to allow heat and/or mass transfer to occur between one or more steams, components or phases. Modern industrial processing almost always involves some form of mixing. Some classes of chemical reactors are also mixers. With the right equipment, it is possible to mix a solid, liquid or gas into another solid, liquid or gas.

Distillation

Distillation is a process of separating component substances from liquid mixtures through vaporization and condensation, based on different volatility point of components in the mixture. Distillation is a unit operation, or a physical separation process, and not a chemical reaction.

Centrifugation

Centrifuges are used to remove the intermediate or product solids from a liquid stream. Centrifuges work on the principle of centrifugal force, in which an outward force is exerted on rotating object. Centrifuges are cylinders with rotating baskets within them. The sides of the basket are perforated and covered with filter medium such as woven fabric or metal.

Filtration

Filtration is the separation of fluid-solids mixture-involving passage of most of the fluid through a porous barrier (the filter medium), which retains most of the solid particulates, contained in the mixture. In the pharmaceutical industry, filtration is used to remove solids from a liquid, whether these solids be product, process intermediates, catalysts or carbon particulates (e.g., from a discoloring step).

Crystallization

After the reaction takes place, the intermediate or final bulk substance (which is usually in solid form) can be separated from the reaction solution by crystallization. Crystallization is one of the most common separation techniques and is often used alone or in combination with one or more of the separation techniques described above. In crystallization, a supersaturated solution is created in which crystals of the desired compound are formed. Super saturation depends on the solubility of the desired compound.

Purification

Once the intermediate or the bulk substance has been separated, it may need to be purified. Depending on the intermediate or the bulk substance produced, there may be several purification steps involved to produce the desired active ingredient. In vitamin production, for example, there are at least three to four purification steps. Purification typically is achieved through additional separation steps such as those described above. Purification is often achieved through re-crystallization. Washing with additional solvents and filtration may also be used.

Vacuum System

Vacuum system has a wide range of applications like evacuation, evaporation and pumping of gases and vapors in chemical, biological and pharmaceutical Molecules. Vacuum System is ideal for high boiling solvents. Typical applications are High Boiler distillation or Heat sensitive Product Drying.

Drying

The final step in the chemical synthesis process is drying of the intermediate or final bulk substance. Drying is done by evaporating the solvents from the solids. Solvents released from

drying operations may be condensed for reuse or disposal. There are various types of dryers used by the pharmaceutical industry including tray dryers, rotary dryers, drum or tumble dryers, or pressure filter dryers. The selection of the dryer type depends primarily on the characteristics of the solid.

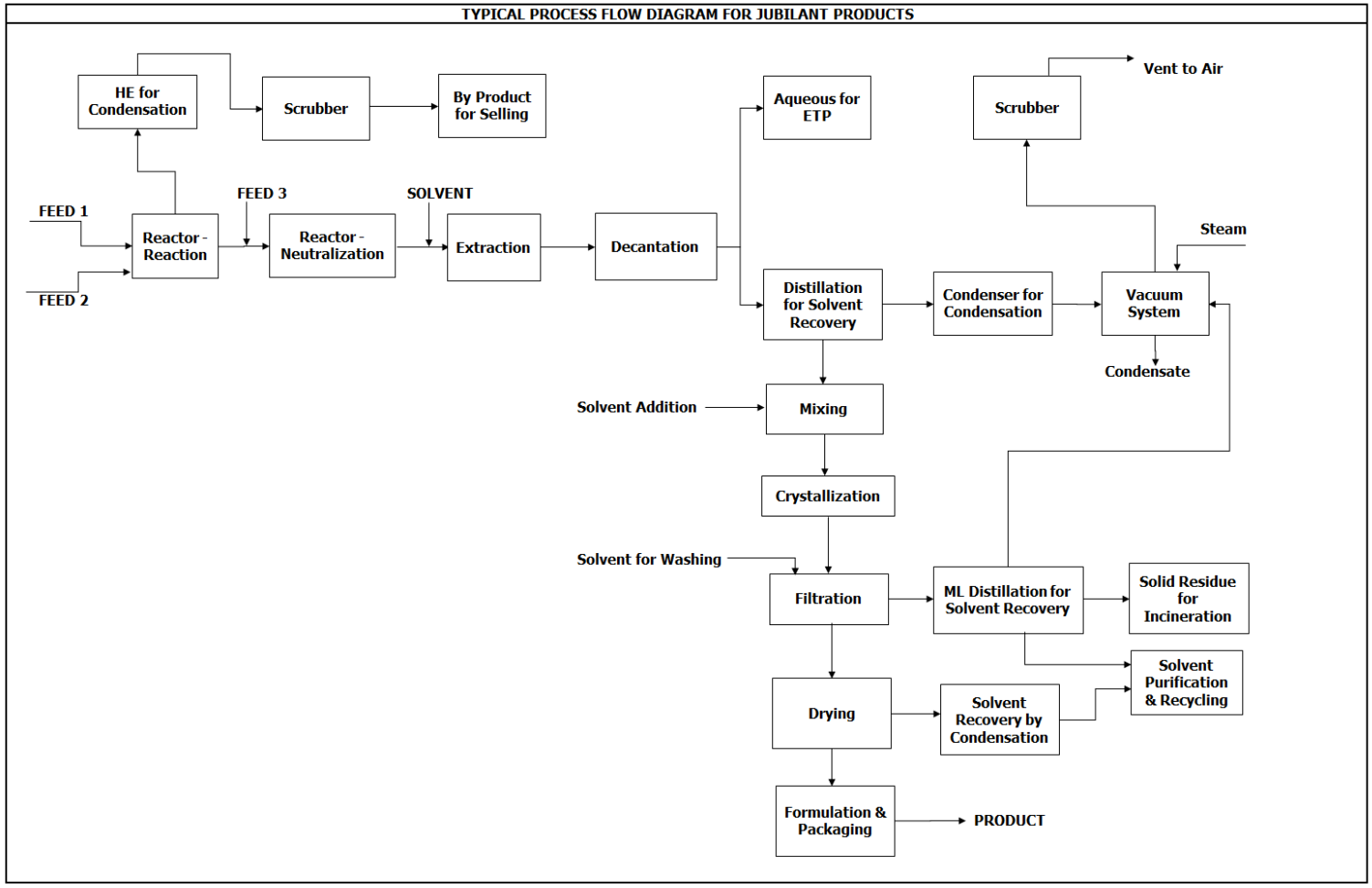
Bulk Manufacturing

Wide variation in bulk manufacturing makes prediction of typical or annual average emissions difficult. This is because emissions generated are predicated based on type of bulk substance or intermediate manufactured, duration of manufacturing time, type of equipment used and raw materials used.

Dryers are one of the largest sources of VOC emissions in bulk manufacturing. In addition to the loss of solvent during drying, manual loading and unloading of dryers can release solvent vapors into ambient air, especially when tray dryers are used. VOCs are also emitted from reaction and separation steps via reactor vents and man ways. Centrifuges may be source of VOC emissions, especially in top loading types, where solids are manually scooped out.

Typical controls for these emission sources, excluding storage and transfer operations, include condensers, scrubbers, carbon absorbers and occasionally incinerators. Storage and transfer emissions can be controlled by vapor return lines, vent condensers, conservation vents, vent scrubbers, pressure tanks and carbon absorbers. Floating roofs may be feasible controls for large vertical storage tanks.

Figure 3-1: Typical Flow Diagram for Jubilant Products



Annexure 6: Raw Material Storage Details

S. No.	Name of the Raw Materials	State	Quantity, MT/Annum	Storage Capacity, MT
1	(R)-(+)-2-(4-Hydroxyphenoxy) propionic acid	Solid	130	20
2	1,2,3-Trichloro-5-nitrobenzene	Solid	82	15
3	1-Chloro-2-nitro benzene	Solid	184	20
4	2- chloro -5 (methylaminomethyl) pyridine	Liquid	420	25
5	2,3,4,5,6 - Penta chloropyridine	Solid	1330	25
6	2,3,5,6-Tetrachloropyridine	Solid	7564	50
7	2,3-dichloro-5-trifluoromethyl pyridine	Liquid	40.5	5
8	2,3-Dichlorpyridine	Solid	2440	25
9	2,4-Difluoroaniline	Liquid	47	8
10	2,6-diflurobenzamide	Solid	112.5	15
11	25% Sodium hydroxide soln.	Liquid	270	20
12	2-amino-2,3-dimethyl butyronitrile	Liquid	53	5
13	2-Amino-3-methyl benzoate	Solid	680	5
14	2-amino-4,6-dimethoxy pyrimidine	Solid	277.5	10
15	2-aminoethanethiol hydrochloride	Solid	196	15
16	2-butoxy ethanol	Liquid	88	10
17	2-Chloro nicotinic acid	Solid	418	15
18	2-chloro Pyridine	Liquid	1575	25
19	2-Chloro-5-(Trifluoromethyl) Pyridine	Liquid	30	6
20	2-chloro-5chloromethyl pyridine	Liquid	992	25
21	2-chloro-5-nitro-phenol	Solid	32	5
22	2-Chloro nicotinic acid	Solid	68	10
23	2-Coumaranone	Solid	315	15
24	2-cyanophenol	Solid	485	25
25	2-fluoro-3-Chloro-5-(Trifluoromethyl) Pyridine	Liquid	58	5
26	2-Fluro-6-trifluro methyl pyridine	Liquid	1400	5
27	2-hydroxy phenyl acetic acid	Solid	390	15
28	2-methoxy-4-(Trifluoromethyl) pyridine-3-sulfonyl chloride	Solid	132	10
29	2-Octanol	Liquid	410	20
30	3-(Trifluoromethyl) phenol	Liquid	70	10
31	3,4,5,6-Tetra choropyridine-2-carboxylic acid	Solid	603	20
32	3-Chloro-5-(trifluoromethyl) pyridin-2-	Solid	72	5

S. No.	Name of the Raw Materials	State	Quantity, MT/Annum	Storage Capacity, MT
	ol			
33	3-Isochromanone	Solid	1700	5
34	3-trifluoroacetophenone	Liquid	340	15
35	4,6-dichloropyrimidine	Solid	835	25
36	40% ethanol	Liquid	2260	15
37	4-Chloro phenyl boronic acid	Solid	27	5
38	5-Chloro-2 3-difluoropyridine	Liquid	124	10
39	5-ethyl-pyridine dicarboxylic acid	Solid	83	5
40	Acetic acid	Liquid	1440	15
41	Acetic Anhydride	Liquid	317	20
42	Acetone	Liquid	1941.8	50
43	Acetonitrile	Liquid	2406.5	50
44	Activated charcoal	Solid	18	5
45	Cat- CS-I	Solid	24	5
46	Alfa picoline	Liquid	3381	100
47	Ammonium hydroxide	Liquid	550	50
48	Anhydrous potassium fluoride	Solid	880	50
49	N,N-dimethyl formamide	Solid	33	7
50	Aq. sodium hydroxide	Liquid	392	30
51	Benzyl chloride	Liquid	556	50
52	Butyl (R)-(+)-2-(4-hydroxyphenoxy) propionate	Solid	37	5
53	Catalyst-CS-E	Solid	20	4
54	Chlorine gas	Gas	485	50
55	Conc. Sulphuric acid	Liquid	4533	50
56	Conc. HCl (30-35%)	Liquid	246	20
57	Conc. HCl (30%)	Liquid	1127	40
58	Conc. HCl (30-35%)	Liquid	1785	40
59	Water	Liquid	6634.6	20
60	Cu(I)CN	Solid	350	70
61	Catalyst-F	Solid	11.5	2
62	Methylene dichloride	Liquid	690	30
63	Diethyl meleate	Liquid	2200	20
64	Diisopropyl ether	Liquid	1396	40
65	Diisopropylethylamine	Liquid	147	10
66	Dimethyl amine	Liquid	79.5	10
67	Dimethyl carbonate	Liquid	10	2

S. No.	Name of the Raw Materials	State	Quantity, MT/Annum	Storage Capacity, MT
68	Dimethyl sulphate	Liquid	1340	8
69	Diphenyl carbonate	Solid	124.5	10
70	Dipotassium salt of N-cyanodithioiminocarbonate	Solid	386	30
71	Dimethyl sulphate	Liquid	485	30
72	Dry HCl gas	Gas	3346	15
73	Ethanol	Liquid	1140	20
74	Ethoxycarbonyl isothiocyanate	Oily Liquid	121.5	10
75	Ethyl acetate	Liquid	713	20
76	Ethylene diamine	Liquid	290	20
77	Ethylene dibromide	Liquid	1665	30
78	Formic acid	Liquid	204.8	20
79	H2O2 (30%)	Liquid	500	100
80	HBr (48%)	Liquid	710	142
81	Conc. HCl (30-35%)	Liquid	231	100
82	Hydrazine (95%)	Liquid	84	15
83	Hydrazine hydrate (85%)	Liquid	1700	40
84	Hydrochloric acid	Liquid	200	20
85	Hydrochloric acid (12%)	Liquid	153	20
86	Hydrogen peroxide (25%)	Liquid	84	10
87	Hydroxylamine hydrochloride	Solid	40.5	5
88	K2S2O8	Solid	2380	20
89	Potassium hydroxide	Solid	1560	10
90	Liq. Ammonia (12%)	Liquid	1950	20
91	Liquid Ammonia	Liquid	273	25
92	Methylene dichloride	Liquid	661.5	30
93	Methane sulfonyl chloride	Liquid	730	10
94	Methanol	Liquid	10781	50
95	Methy 2-amino-3-methyl benzoate	Solid	550	15
96	Methyl (R)-(+)-2-(4-hydroxyphenoxy) propionate	Solid	63	10
97	Methyl amine (40%)	Liquid	390	10
98	Methyl amine (40%) in methanol	Liquid	730	10
99	Methyl chloride gas	Gas	1892.4	30
100	Methyl chloroacetate	Liquid	547.6	30
101	Methyl Formate	Liquid	2195	40
102	Methyl isobutyl ketone	Liquid	1088	30

S. No.	Name of the Raw Materials	State	Quantity, MT/Annum	Storage Capacity, MT
103	Methylene chloride	Liquid	780	30
104	Methylene dichloride	Liquid	4426	40
105	Methyl isobutyl ketone	Liquid	900	2
106	N,N'-Dimethyl formamide	Liquid	583.2	20
107	Sodium carbonate	Solid	955	20
108	Sodium bicarbonate	Solid	40	5
109	10% Sodium hypochlorite soln.	Liquid	2990	15
110	Sodium hydroxide soln. (30%)	Liquid	219	15
111	N-bromosuccinamide	Solid	524	15
112	N-cynomethyl acetamidate	Liquid	290	15
113	Ammonia gas	Gas	30	5
114	N-Hydroxyamine hydrochloride	Solid	124	10
115	Nitroguanadine	Solid	490	15
116	N-Methoxyamine hydrochloride	Solid	344	15
117	N-methyl-2-Pyrrolidone	Liquid	1190	40
118	N-methyl pyrrolidone	Liquid	100	1
119	O,O-Di ethyl thiophosphorous chloride	Liquid	6300	50
120	O-Xylene	Liquid	580	1
121	O-Toluic acid	Solid	772	20
122	Oxalyl chloride	Liquid	68	10
123	O-Xylene	Liquid	853	30
124	Para formaldehyde	Solid	68.8	10
125	Piperidine	Liquid	142.4	15
126	POBr3	Solid	1160	10
127	Potassium hydroxide	Solid	1396	20
128	Potassium carbonate	Solid	2649.5	20
129	Propargyl chloride	Liquid	76	5
130	Pyridine	Liquid	4870	40
131	Sodium Amide	Solid	1950	15
132	Sodium bicarbonate	Solid	2696	30
133	Sodium carbonate	Solid	1035	15
134	Sodium cyanide	Solid	356	10
135	Sodium ethoxide soln. (21% in ethanol)	Liquid	1180	5
136	Sodium hydride	Solid	120.5	10
137	Sodium hydroxide	Solid	6222.3	30
138	Sodium hydroxide soln. 20%	Liquid	717	10

S. No.	Name of the Raw Materials	State	Quantity, MT/Annum	Storage Capacity, MT
139	20% sulphuric acid soln.	Liquid	283.8	20
140	Sodium methoxide Powder	Solid	660	5
141	Sodium methoxide(28%)	Liquid	105	10
142	S-phenyl	Solid	835	20
143	Sulfur	Solid	45	5
144	Triethyl amine	Liquid	247	15
145	Catalyst-CS-D	Liquid	3.3	1
146	Tetrachloroethylene [TCE]	Liquid	180	1
147	Tetrahydrofuran	Liquid	102	1
148	Tetramethylene sulfone	Liquid	300	15
149	Tetrahyrofuran	Liquid	135	15
150	Thionyl Chloride	Liquid	3588	25
151	Titanium tetrachloride	Liquid	945	15
152	Toluene	Liquid	799	20
153	Triclopyr	Solid	193.6	15
154	Trimethyl ortho formate	Liquid	615	30
155	Triphosgene	Solid	23	5

Annexure 7: Water Consumption and Waste Water Generation Details

S. No.	Description	Water Consumption in KLD	Wastewater generation in KLD	Treatment & Disposal
1	DM Plant	275	9	To ETP
i	Process	266	345	To MEE after primary treatment. Then contaminated condensate to ETP and clear condensate will recycle and reuse in plant area
2	Cooling Tower	1150	100	To ETP
3	Washing	150	150	To ETP
4	Others (Safety showers, fire fighting, Laundry & Bathing)	200	200	To ETP
5	Domestic	50	45	To STP
6	Gardening	35	0	
	Total Water Consumption	**1860**	**849**	**599 KLD to ETP including Utilities effluent and Contaminated water from MEE, 200 KLD clear condensate from MEE will recycle in plant premises and 45 KLD sewage to STP**
	Total Recycled water from MEE	**200**	-	-
	Total Fresh Water Consumption	**1660**	-	-

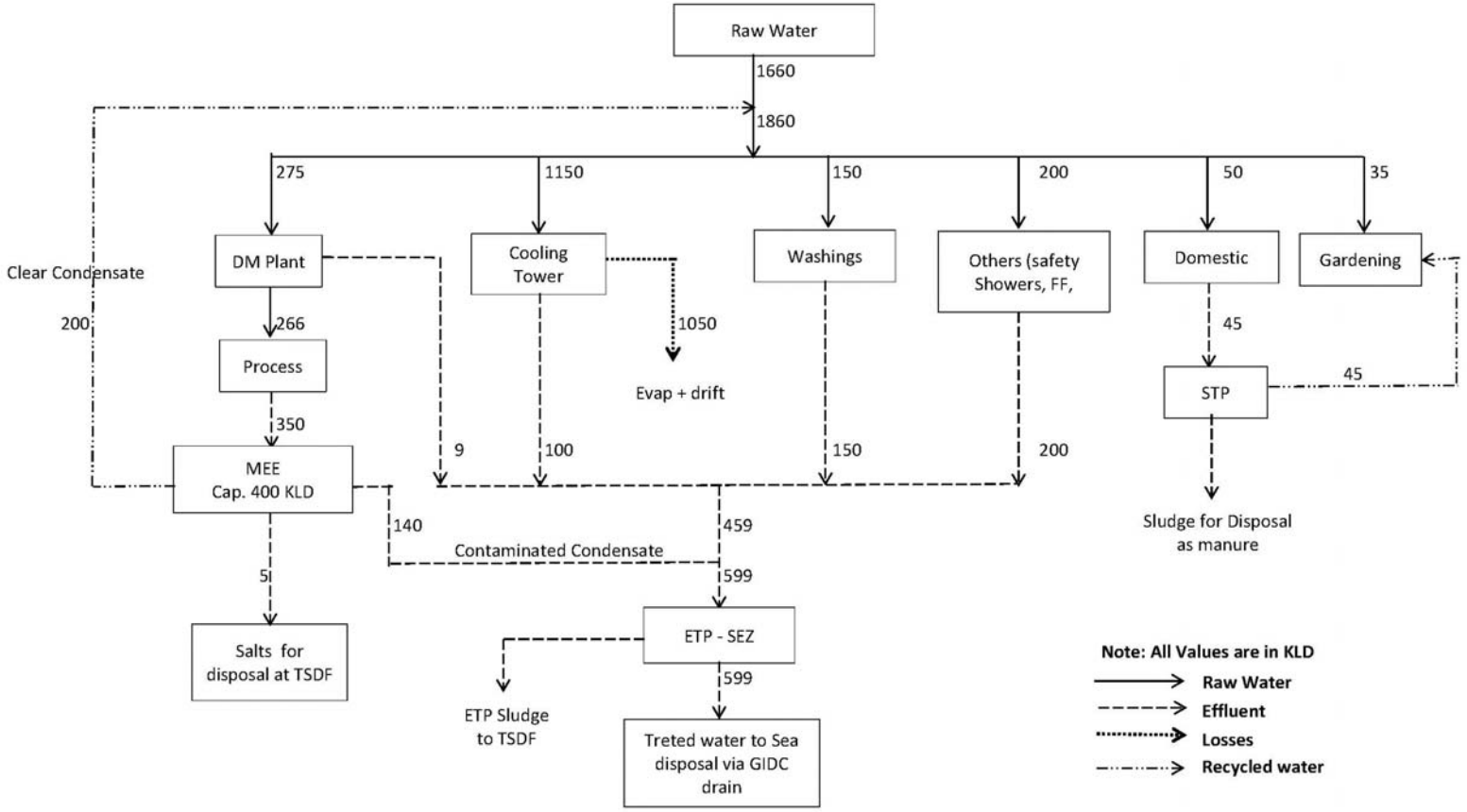


Figure 3-2: Water Balance Diagram

Annexure 8: Details of ETP

Effluent Generation & Segregation

The effluents generation will take place from various areas such as:

- Process
- Domestic use
- Utility Blow downs
- Laundry, bathing area etc.

Stream Segregation at source will be carried out for segregation of High Pollution level and low pollution Level of streams.

Wastewater Treatment Methodology

- High TDS & High COD streams shall be collected separately and provided primary treatment followed by multiple effect evaporation will be set up in JLSL premises. The contaminated Condensate from MEE pumping to ETP which will be proposed in JIL – SEZ premises while clear condensate will be recycled and reused in plant area.
- Low TDS streams i.e. utilities blow downs, wastewater from washings along with contaminated condensate from MEE as a combined stream shall be treated in ETP consisting of Primary treatment, Two Stage Secondary Biological Treatment and Tertiary Treatment will be set in JIL – SEZ area.
- Domestic sewage will be separately treated in STP which will be proposed in JLSL premises and treated sewage will be used for gardening/horticulture purpose.

Treated Water Disposal Facility

Treated effluent from the ETP will be disposed into GIDC pipeline for sea disposal after achieving norms for sea disposal and treated sewage from the STP will be used for gardening. Sludge generated from the wastewater treatment plants will be disposed suitably as per norms.

Clear condensate from the MEE will be recycled and reused in plant area to reduce fresh water consumption.

Waste water Treatment

- Equalization Tank
- Flash Mixer
- Flocculator
- Primary Clarifier
- Feed Tank
- 1st Stage Aeration Tank-I
- Secondary Clarifier
- 2nd Stage Aeration Tank
- Final Clarifier
- Intermediate Collection Tank
- Pressure Sand Filter
- Activated Carbon Filter

- Final Collection Tank
- Sludge Collection Sump
- Filter Press
- MEE feed Tank
- Collection Sump for MEE condensate
- ATFD

Figure 3-3: Block diagram of effluent treatment Plant for High TDS stream set up in JLSL Premises

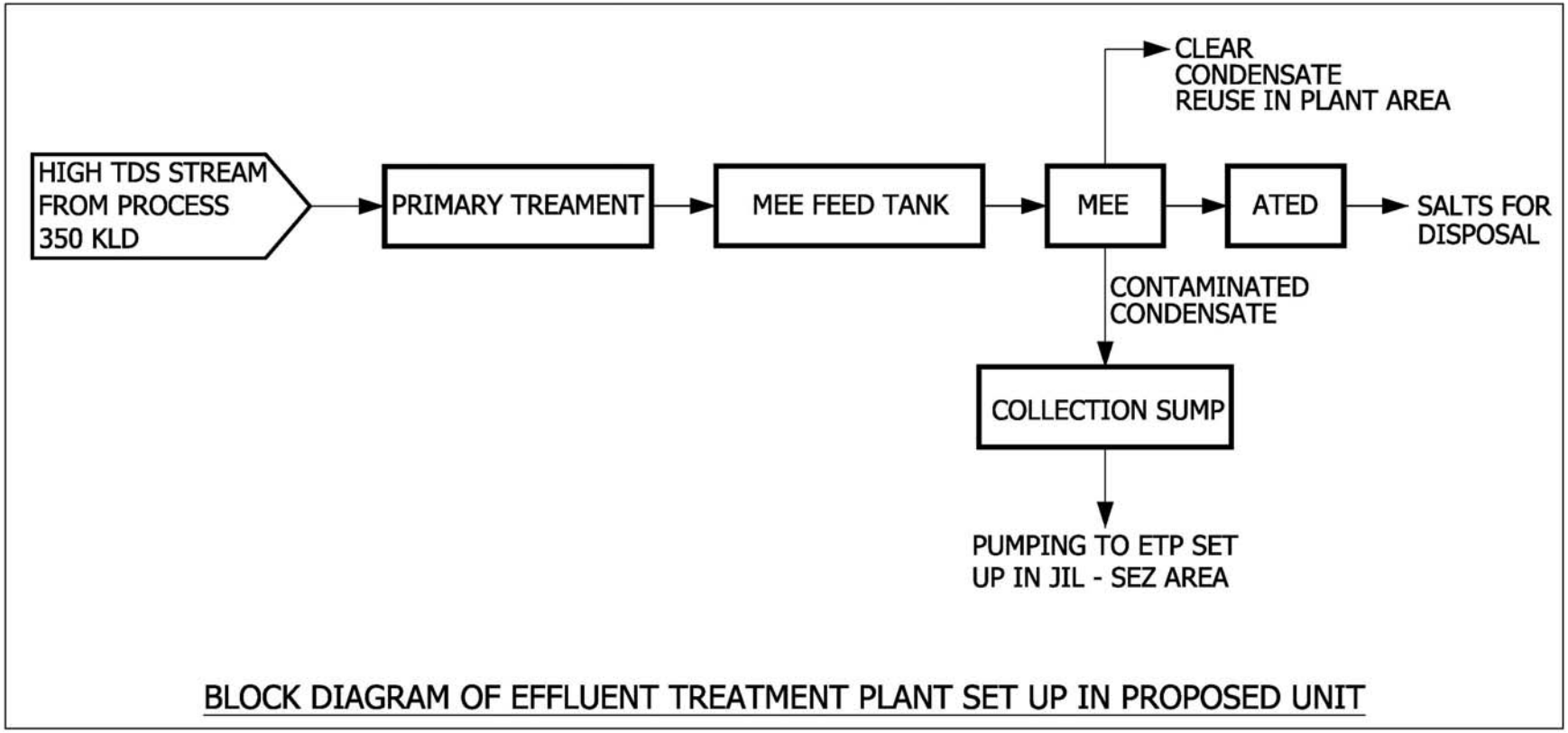
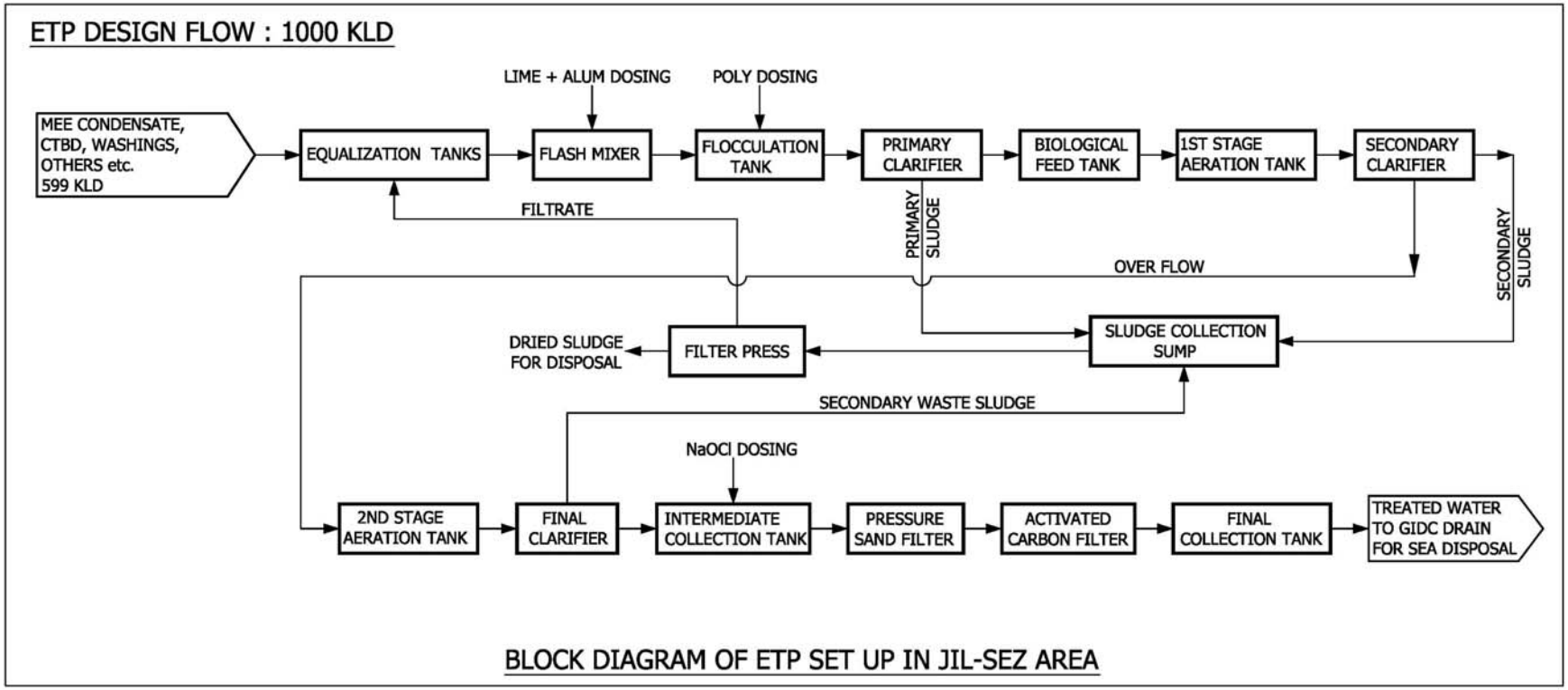


Figure 3-4: Block diagram of ETP set up in JIL-SEZ Premises



Annexure 9: Fuel Consumption

Sr. No.	Stack Attached to	Capacity of each unit	Stack Nos.	Type of Fuel used	Fuel consumption
1	DG Sets (4 Nos.)	500 kVA	4	Diesel	500 Lit/Hr.
2	Thermic Fluid Heater (3 Nos.)	2,00,000 kcal	3	Coal	18 MT/Day

Note:

1. Steam will be supplied by SEZ operator M/s. Jubilant Infrastructure Limited
2. Solid waste and liquid waste incinerator shall be installed by SEZ operator M/s. Jubilant Infrastructure Limited
3. DG Sets will be used only during Power failure.

Annexure 10: Hazardous Waste Generation

S. No.	Type of Waste	Hazardous Waste Category	Quantity in MT/Month	Method of Collection	Treatment / Disposal
1	ETP Sludge	34.4	9	Poly bags	To TSDF for Landfill
2	Discarded containers / barrels/ liners contaminated with hazardous waste / chemicals	33.3	400 Nos.	As is	Decontamination and Sold to authorized vendor
3	Used/Spent Oil from D.G sets, machineries	5.1	5	Drums	Sold to CPCB/GPCB authorize Reprocessor
4	Process Residue	29.1	575	Drums	To incinerator
5	Process Residue	29.1	170	Drums	To TSDF for Landfill
6	Spent Catalyst	28.2	24	Poly Bag	To TSDF for Landfill
7	MEE Salt	34.3	1800	Loose	To TSDF for Landfill
8	Off-spec or obsolete raw materials or products	29.3	10	Poly Bag / Drums	Incineration
9	Spent Solvents	20.2	20 KL	Drums	Sold to CPCB/GPCB authorize Reprocessor
10	Used Filter Media	35.1	30	Poly Bags	Solid Incinerator
11	Scrubber Sludge	36.1	2	Drums	Landfill

Annexure 11: Stack Details

Flue Gas Stacks

Stack Attached to Sources	Capacity of each unit	Nos. of Stacks	Stack Height, m
DG Set (4 Nos.)	500 kVA	4	5
Thermic Fluid Heater (3 Nos.)	2 million kcal	3	30

Note:

1. Steam will be supplied by SEZ operator M/s. Jubilant Infrastructure Limited
2. Solid waste and liquid waste incinerator shall be installed by SEZ operator M/s. Jubilant Infrastructure Limited
3. DG Sets will be used only during Power failure.

Details of Process Vents

Stack Attached to	Nos. of Stacks	Stack Height in m	Pollutants Emitted	Air Pollution Control Measures Attached
Common Vent for all Reactors	1	20	VOC	Condensation and Chilling
Chlorination Reactor	2	20	Cl_2 & HCl	Water Scrubber + Caustic Scrubber
Sulphonation Reactor	1	20	SO_2	Caustic Scrubber
Bromination Reactor	1	20	HBr	Caustic Scrubber
Flourination Reactor	1	20	HF	Caustic Scrubber

Details of Air Pollution Control Measures

- Condensation and Chilling
- Water Scrubber
- Caustic Scrubber

Annexure 12: SEZ Notification of Government of Gujarat

रजिस्ट्री सं० डी० एल०-33004/99 REGD. NO. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

असाधारण
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वाणिज्य एवं उद्योग मंत्रालय

(वाणिज्य विभाग)

अधिसूचना

नई दिल्ली, 11 फरवरी, 2008

का.आ. 290(अ).—यत: मै. जुबिलेंट इन्फ्रास्ट्रक्चर लि., जो गुजरात राज्य में एक निजी संगठन है, ने गुजरात राज्य में गांव विलायत और वोरसामनी गाँवों, तालुक वागरा, जिला भरूच में रसायन के लिए एक क्षेत्र विशिष्ट विशेष आर्थिक जोन की स्थापना हेतु विशेष आर्थिक जोन अधिनियम, 2005 (2005 का 28) (जिसे एतद्पश्चात् उक्त अधिनियम कहा गया है) की धारा 3 के अंतर्गत प्रस्ताव किया है;

और यत: केन्द्र सरकार इस बात से संतुष्ट है कि उक्त अधिनियम की धारा 3 की उप-धारा (8) के अंतर्गत अपेक्षाओं तथा अन्य संबंधित अपेक्षाओं को पूरा कर लिया गया है और उसने गुजरात राज्य में जिला भरूच में रसायन के लिए विशेष आर्थिक जोन के विकास, प्रचालन एवं रखरखाव हेतु उक्त अधिनियम की धारा 3 की उप-धारा (10) के अंतर्गत दिनांक 21 अगस्त, 2006 को अनुमोदन पत्र प्रदान कर दिया है;

अत: अब विशेष आर्थिक जोन अधिनियम, 2005 की धारा 4 की उप-धारा (1) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए और विशेष आर्थिक जोन नियम, 2006 के नियम 8 के अनुसरण में केन्द्र सरकार एतद्द्वारा गुजरात राज्य में विलायत और वोरसामनी गाँवों, तालुक वागरा, जिला भरूच में निम्नलिखित क्षेत्र को एक विशेष आर्थिक जोन के रूप में अधिसूचित करती है जिसमें निम्नलिखित तालिका में उल्लिखित सर्वेक्षण संख्याएं और क्षेत्र शामिल हैं, अर्थात् :—

तालिका

क्रम. सं.	गाँव	सर्वेक्षण सं.	क्षेत्र (हैक्टेयर में)
(1)	(2)	(3)	(4)
1	विलायत	380 (भाग)	0.57.04
2		373	2.58.00
3		372 (भाग)	0.18.36
4		381 (भाग)	0.36.00
5		383 (भाग)	3.98.00
6		384	4.83.00
7		385	1.59.00
8		386	0.95.00
9		387	2.63.00
10		388	1.49.00
11		389	2.24.00
12		390	4.18.00
13		391	6.07.00
14		392	1.09.00
15		393	1.01.00
16		394	0.56.00
17		395	0.58.00
18		396	2.46.00
19		397	2.46.00
20		398 (भाग)	1.54.52
21		399	1.15.00
22		400 (भाग)	0.20.00

(1)	(2)	(3)	(4)
23	विलायत	401 (भाग)	0.33.80
24		402	0.57.00
25		403	0.51.00
26		404 (भाग)	0.29.48
27		405 (भाग)	0.75.20
28		435 (भाग)	3.16.88
29		436 (भाग)	1.46.60
30		440 (भाग)	0.60.00
31		441 (भाग)	0.50.00
32		442 (भाग)	0.99.27
33		457 (भाग)	0.76.45
34		458 (भाग)	0.63.72
35	वोरसामनी	558 (भाग)	0.00.48
36		559 (भाग)	0.12.88
37		560 (भाग)	1.29.90
38		561	0.31.00
39		562	0.39.00
40		563	0.66.00
41		564	0.40.00
42		565	0.11.00
43		566	0.50.00
44		567	0.51.00
45		568	0.98.00
46		569	1.01.00
47		570	1.92.00
48		571	0.30.00
49		572	0.59.00
50		573	0.85.00
51		574	0.18.00
52		575	0.86.00
53		576	0.53.00
54		577	0.50.00
55		578	0.55.00
56		579	0.13.00
57		580 (भाग)	0.35.20
58		582 (भाग)	0.20.12
59		583 (भाग)	0.49.18
60		584 (भाग)	0.43.52
61		585 (भाग)	0.19.28
62		586	1.22.00
63		587 (भाग)	0.30.72
64		588 (भाग)	0.04.04
65	वोरसामनी	589	0.97.00
66		590	1.75.00
67		591	0.78.00
68		592	0.57.00
69		593	0.52.00
70		594	0.47.00
71		595	0.49.00
72		596	3.16.00
73		597	0.84.00
74		598	0.59.00
75		599	0.79.00
76		600	1.18.00
77		601	2.21.00
78		602	0.60.00
79		603 (भाग)	0.11.40
80		605 (भाग)	0.11.56
81		606 (भाग)	0.10.20
82		607 (भाग)	0.12.24
83		608 (भाग)	0.10.80
84		610 (भाग)	0.37.44
85		611	0.20.00
86		612	0.61.00
87		613	0.42.00
88		614	0.40.00
89		615	0.31.00
90		616	0.81.00
91		617	0.55.00
92		618 (भाग)	0.84.00
93		624 (भाग)	0.04.80
94		625 (भाग)	1.13.84
95		626	0.29.00
96		627	2.39.00
97		628 (भाग)	0.58.00
98		629	0.37.00
99		630	0.43.00
100		631	0.90.00
101		632	0.68.00
102		633	1.34.00
103		635 (भाग)	0.39.44
104		636 (भाग)	1.73.40
105		637	0.33.00
106		638	0.34.00
107		639	0.66.00
108		640	0.46.00
109		641 (भाग)	1.08.60
110		642 (भाग)	0.03.96

(1)	(2)	(3)	(4)
111	वोरसामनी	655 (भाग)	0.25.50
112		823 (भाग)	0.35.32
113		824 (भाग)	0.41.40
114		825	0.62.00
115		826 (भाग)	0.76.96
116		827	0.76.00
117		828	1.53.00
	कुल		**107.16.50**

[फा. सं. 2/270/2006-ईपीजेड]

अनिल मुकीम, संयुक्त सचिव

MINISTRY OF COMMERCE AND INDUSTRY

(Department of Commerce)

NOTIFICATION

New Delhi, the 11th February, 2008

S. O. 290(E).—Whereas M/s. Jubilant Infrastructure Ltd., a Private Organization in the State of Gujarat, has proposed under Section 3 of the Special Economic Zones Act, 2005 (28 of 2005), (hereinafter referred to as the said Act), to set up a sector specific Special Economic Zone for chemicals at Villages Vilayat and Vorasamni in Taluka Vagra, District Bharuch, in the State of Gujarat;

And whereas the Central Government is satisfied that requirements under sub-section (8) of Section 3 of the said Act, and other related requirements are fulfilled and it has granted letter of approval under sub-section (10) of Section 3 of the said Act for development, operation and maintenance of the Special Economic Zone for chemicals at the District Bharuch, in the State of Gujarat on 21st August, 2006;

Now, therefore, in exercise of the powers conferred by sub-section (1) of Section 4 of the Special Economic Zones Act, 2005 and in pursuance of rule 8 of the Special Economic Zones Rules, 2006, the Central Government hereby notifies the following area at Villages Vilayat and Vorasamni in Taluka Vagra, District Bharuch, in the State of Gujarat, comprising of the Survey numbers and the area given below, as a Special Economic Zone :—

TABLE

S.No.	Village	Survey Number	Area (in hectares)
(1)	(2)	(3)	(4)
1	Vilayat	380 (Part)	0.57.04
2		373	2.58.00
3		372 (Part)	0.18.36
4		381 (Part)	0.36.00
5		383 (Part)	3.98.00
6		384	4.83.00
7		385	1.59.00
8	Vilayat	386	0.95.00
9		387	2.63.00
10		388	1.49.00
11		389	2.24.00
12		390	4.18.00
13		391	6.07.00
14		392	1.09.00
15		393	1.01.00
16		394	0.56.00
17		395	0.58.00
18		396	2.46.00
19		397	2.46.00
20		398 (Part)	1.54.52
21		399	1.15.00
22		400 (Part)	0.20.00
23		401 (Part)	0.33.80
24		402	0.57.00
25		403	0.51.00
26		404 (Part)	0.29.48
27		405 (Part)	0.75.20
28		435 (Part)	3.16.88
29		436 (Part)	1.46.60
30		440 (Part)	0.60.00
31		441 (Part)	0.50.00
32		442 (Part)	0.99.27
33		457 (Part)	0.76.45
34		458 (Part)	0.63.72
35	Vorasamni	558 (Part)	0.00.48
36		559 (Part)	0.12.88
37		560 (Part)	1.29.90
38		561	0.31.00
39		562	0.39.00
40		563	0.66.00
41		564	0.40.00
42		565	0.11.00
43		566	0.50.00
44		567	0.51.00
45		568	0.98.00
46		569	1.01.00
47		570	1.92.00
48		571	0.30.00
49		572	0.59.00
50		573	0.85.00
51		574	0.18.00
52		575	0.86.00

(1)	(2)	(3)	(4)
53	Vorasamni	576	0.53.00
54		577	0.50.00
55		578	0.55.00
56		579	0.13.00
57		580 (Part)	0.35.20
58		582 (Part)	0.20.12
59		583 (Part)	0.49.18
60		584 (Part)	0.43.52
61		585 (Part)	0.19.28
62		586	1.22.00
63		587 (Part)	0.30.72
64		588 (Part)	0.04.04
65		589	0.97.00
66		590	1.75.00
67		591	0.78.00
68		592	0.57.00
69		593	0.52.00
70		594	0.47.00
71		595	0.49.00
72		596	3.16.00
73		597	0.84.00
74		598	0.59.00
75		599	0.79.00
76		600	1.18.00
77		601	2.21.00
78		602	0.60.00
79		603 (Part)	0.11.40
80		605 (Part)	0.11.56
81		606 (Part)	0.10.20
82		607 (Part)	0.12.24
83		608 (Part)	0.10.80
84		610 (Part)	0.37.44
85		611	0.20.00
86		612	0.61.00
87	Vorasamni	613	0.42.00
88		614	0.40.00
89		615	0.31.00
90		616	0.81.00
91		617	0.55.00
92		618 (Part)	0.84.00
93		624 (Part)	0.04.80
94		625 (Part)	1.13.84
95		626	0.29.00
96		627	2.39.00
97		628 (Part)	0.58.00
98		629	0.37.00
99		630	0.43.00
100		631	0.90.00
101		632	0.68.00
102		633	1.34.00
103		635 (Part)	0.39.44
104		636 (Part)	1.73.40
105		637	0.33.00
106		638	0.34.00
107		639	0.66.00
108		640	0.46.00
109		641 (Part)	1.08.60
110		642 (Part)	0.03.96
111		655 (Part)	0.25.50
112		823 (Part)	0.35.32
113		824 (Part)	0.41.40
114		825	0.62.00
115		826 (Part)	0.76.96
116		827	0.76.00
117		828	1.53.00
	Total		**107.16.50**

[F. No. 2/270/2006-EPZ]

ANIL MUKIM, Jt. Secy.

Annexure 13: EC received for SEZ operated by JIL

By Speed Post

No. 21-1087/2007-IA III
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110 510

Dated: July 03, 2008

To

M/s. Jubilant Infrastructure Ltd.
Plot 1-A, Sector-16 A, Institutional Area,
Noida-201 301

Subject: Environmental Clearance for setting up of SEZ for chemicals at vilayat GIDC in Taluka Vagra, district Bharuch, Gujarat

Dear Sirs,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the mandatory documents enclosed with the application viz. the Form 1, EIA/EMP report, Public hearing proceedings and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee (EAC) constituted by the competent authority in its 30th meeting held on May 23-24, 2008.

2. The project proponent is proposing for setting up of SEZ for chemicals in vilayat GIDC in Taluka Vagra, district Bharuch, Gujarat. The total cost of the project is 100 crores. The total plot area is 250 acres. The proposed SEZ is mainly for exports manufacturing products viz. fine chemicals, specialty chemicals, bulk organic chemicals, packing units, etc. The above industrial estate will have 15-20 plots for chemical manufacturing units. The provision for development of green belt is Rs. 50 lacs and estimated recurring cost is expected to be Rs. 10 lac/yr. Total water requirement will be 5600 m3/day and 2830 m3/day of wastewater will be generated from the SEZ, which will be treated by the individual industries to the required standards before discharging to common conveyance channel, which will be connected to the common effluent treatment plant (Capacity-2500 m3/day). The treated wastewater, conforming to

marine outfall standards, along with industrial effluents from other industrial units shall be discharged into already installed GIDC effluent disposal pipeline for deep-sea disposal. The domestic sewage will be collected & treated in common STP (Capacity-200 m3/day) and treated wastewater will be used for greenbelt development within the SEZ. A TSDF for Hazardous waste disposal will include 9 TPD solid waste and 200 cu.m/day liquid waste incinerator and 22,000 MT X5 cells of secured landfill facility as per CPCB guidelines will be developed. The solid waste generated (52.7 T/day) from the SEZ will be segregated into biodegradable and non-biodegradable waste. The recyclable solid waste will be handed over to authorized vendors for recovery of recyclable material and biodegradable waste will be composted at site for organic manure.

3. Public hearing meeting was held on 20th September 2007 at Primary school, Near Panchvati Baug, village Vilayat, Taluka Vagra, district Bharuch, Gujarat.

4. The EAC after due consideration of the EIA/EMP and Public hearing report submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the EIA/EMP and other stipulated conditions. Accordingly, the Ministry hereby accords necessary environmental clearance for the project under category 7 (c) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

PART A- SPECIFIC CONDITIONS

i. Solvent recovery plant shall be installed to recover the solvents and recovery shall not be less than 95 percent. All the solvents shall be handled in closed conditions and chillers shall be provided for chilled brine circulation to condensate the solvent vapors and reduce solvent losses. The solvents generated from the vents and in the work zone environment shall be monitored periodically and reports submitted to the APPCB, CPCB and Ministry's Regional Office at Bangalore.

ii. Volatile Organic Compounds (VOCs) shall be assessed, controlled and monitored in solvent storage areas alongwith other parameters and reports submitted to the SPCB / CPCB and Regional Office of the Ministry.

iii. The scrubbers shall be provided to control fugitive emissions in the workplace environment, product, raw material storage areas and regularly monitored.

iv. Arrangements shall be made to control and monitor the odorous chemicals.

v. The gaseous emissions (SO_2, NO_x, *CO, VOC* and HC) and Particulate matter along with RSPM levels from various process units shall

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conform to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.

vi. All the solid/hazardous waste including ETP sludge shall be sent to Treatment, Storage and Disposal Facility (TSDF). The toxic/ hazardous solid and liquid waste shall be incinerated in incinerator.

vii. Liquid effluent emanating from different units will be treated to conform to the prescribed standards before discharging to common conveyance channel, which will be connected to the ETP.

viii. Adequate measures will be taken to control fugitive emissions from the industries in SEZ.

ix. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

x. Noise should be controlled to ensure that it does not exceed the prescribed standards.

xi. The STP/ CETP shall be installed for the treatment of sewage and trade effluent generated to the prescribed standards including odour and treated effluent will be re-cycled to the maximum extent possible for horticulture.

xii. For disinfection of waste water ultra violet radiation shall be used in place of chlorination.

xiii. Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.

xiv. The solid waste including biomedical and e-waste generated should be properly collected, segregated and disposed off as per prevailing regulations. Wet garbage should be composted and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.

xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from STP and incinerator.

PART – B. GENERAL CONDITIONS

i) The environmental safeguards contained in the EIA/EMP should be implemented in letter and spirit.

ii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

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5. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

6. The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board.

7. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

8. The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the up wind and downwind direction as well as where maximum ground level concentrations are anticipated.

9. Regular monitoring of ground water for all relevant parameters shall be periodically monitored and report shall be submitted to the concerned Regional Office of the Ministry, CPCB and SPCB.

10. The project authorities shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 *as* amended in October 1994 and January 2000 and Hazardous Waste (Management and Handling) Rules, 1989, as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes. All Transportation of Hazardous Chemicals shall be as per the MVA, 1989.

11. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

12. Necessary permission shall be obtained from the State Fire Department for providing fire safety measures. If any forest land is involved in the proposed site, clearance under the Forest Conservation Act, 1980 from the Competent Authority shall be taken.

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

14. The Company shall harvest rainwater from surface *as* well *as* from the rooftops of the buildings and storm water drains to recharge the ground water and use the same water for the various activities of the project to *conserve fresh* water.

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15. The project proponent shall also comply with all the environmental protection measures and safeguards proposed in the EIA/EMP report. All the recommendations made in respect of environmental management and risk mitigation measures relating to the project shall be implemented.

16. The company shall undertake eco-developmental measures including community welfare measures in the project *area* for the overall improvement of the environment.

17. A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

18. The open spaces inside the SEZ should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the SEZ preferably with local species to reduce noise and dust level.

19. The project authorities shall earmark adequate funds 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 provided shall not be diverted for any other purpose.

20. The implementation of the project vis-a-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.

21. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

22. The project proponent shall enter in to MOU with all buyers of the plot to ensure operation and maintenance of the ETP/STP/CETP/TSDF and other assets.

23. The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry at http://envfor.nic.in. This shall be advertised within *seven* days from the date of issue of the clearance letter, at least in two local 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

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concerned Regional Office of the Ministry.

24. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Principal Secretary, Department of Environment, Government of Gujarat, U.D & Urban Housing Department, Sachivalaya, 9th Floor, Block No.- 14, Gandhinagar, Gujarat-382010
2. The Chairman, State Environment Impact Assessment Authority, Department of Environment, Sachivalaya, 9th Floor, Block No.- 14, Gandhinagar, Gujarat-382010
3. The Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhinagar-382010
4. The CCF, Regional Office, Ministry of Environment & Forests, Bhopal.
5. IA - Division, MOEF, New Delhi - 110001.
6. Guard file.

(K.C. RATHORE)
Additional Director (IA)

6

No. 21-1087/2007-IA.III
Government of India
Ministry of Environment & Forests
(IA-III Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi-110 003.

Dated: 3.11.2011

To,

M/s. Jubiliant Infrastructure Ltd
Plot 1-A, Sector-16, Institutional Area
NOIDA – 201 301

Subject: – Amendment to Environmental Clearance for setting-up of SEZ for Chemicals at Vilayat, GIDC at Taluka Vagra, District Bharuch, Gujarat by M/s. Jubiliant Infrastructure Ltd – regarding.

Sir,

This has reference to your application No. Nil dated 14.10.2010 and subsequent letter dated 8.3.2011 seeking amendment to the Environmental Clearance accorded earlier on 3.7.2008 for the above project under the EIA Notification, 2006. The amended proposal has been appraised as per prescribed procedure in the lights of provisions under the EIA Notification, 2006 and its subsequent amendment, on the basis of the mandatory documents enclosed with the application viz., Compliance Status of EC, detailed note giving the proposed change, NOC from GPCB, site plan, GIDC permission etc. and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 18-20th January, 2011 and 5-6th April, 2011.

2. It is, interalia, noted that the project involves setting-up of a SEZ for chemicals in vilayat GIDC, Taluka Vagra, District Bharuch, Gujarat on a total plot area of 265 acres (earlier proposal was on 250 acres). The revised project details are as follows:

S.No	Item	original	Revised	Total
1	SEZ area	250 acres	15 acres	265 acres
2	Water	5600 m^3	4400 m^3	10000 m^3
3	Effluent-industrial	2650 m^3	2780 m^3	5430 m^3
4	Effluent-domestic	180 m^3	-	180 m^3
5	Haz. Waste	21 T/day	119 T/day	140 T/day
6	Solid waste	52.7 T/day	-	52.7 T/day

The proposed SEZ is mainly for export manufacturing products viz. fine chemicals, speciality chemicals, bulk organic chemicals, packing units etc. The above industrial estate will have 15-20 plots for chemical manufacturing units. Total water

requirement after revision is 10,000 m^3/day (earlier-5600 m^3/day) and industrial effluent generation is 5430 m^3/day, which will be treated by the individual industries to the required standards before discharging to common conveyance channel which will be connected to the common effluent treatment plant (capacity – 2500 m^3/day). The treated wastewater confirming to marine outfall standard along with the industrial effluents from other industrial units shall be discharged into already installed GIDC effluent disposal pipeline for the deep-sea disposal. The domestic sewage 180 m^3/day will be collected & treated in common STP (capacity-200 m^3/day) and treated waste water will be used for greenbelt development within the SEZ. Hazardous waste generated will be 140 T/day (earlier 21 T/day). The solid waste generated will be 52.7 T/day from the SEZ will be segregated into biodegradable and non-biodegradable waste. The recyclable solid waste will be handed over to authorized vendors for recovery of recyclable material and biodegradable waste will be composted at site for organic manure. A TSDF for hazardous waste disposal will include 9 TPD solid waste and 200 m^3/day liquid waste incinerator and 22,000 MT x5 cells of secured landfill as per CPCB guidelines will be developed. Total cost of the project is Rs 100 Crore.

3. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the amendment of Environmental Clearance for the project mentioned above. Accordingly, the Ministry hereby accord necessary amendment to the Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification–2006 and its subsequent amendments, subject to strict compliance of the terms and conditions as follows:

PART A - SPECIFIC CONDITIONS

I. Construction Phase

(i) Solvent recovery plant shall be installed to recover the solvents and recovery shall not be less than 95 percent. All the solvents shall be handled in closed conditions and chillers shall be provided for chilled brine circulation to condensate the solvent vapours and reduce solvent losses. The solvents generated from the vents and in the work zone the GPCB, CPCB and Ministry's Regional Office at Bhopal.

(ii) Volatile Organic Compounds (VOCs) shall be assessed, controlled and monitored in solvent storage areas along-with other parameters and reports be submitted to the SPCB/CPCB and Regional Office of the Ministry

(iii) The scrubber shall be provided to control fugitive emissions in the workplace environment, product, raw material storage areas and regularly monitored.

(iv) Arrangements shall be made to control and monitor the odorous chemicals.

(v) The gaseous emissions (SO_2, NO_x, CO, VOC and HC) and particulate matter along with the RSPM levels from various process units shall confirm to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control systems(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.

(vi) All the solid/hazardous waste including ETP sludge shall be sent to treatment, storage and disposal facility (TSDF). The toxic/hazardous solid and liquid waste shall be incinerated in incinerator.

(vii) Liquid effluent emanating from different units will be treated to confirm to the prescribed standards before discharging to common conveyance channel which will be connected to the ETP.

(viii) Adequate measures will be taken to control fugitive emissions from the industries in SEZ.

(ix) Internal road widths within the SEZ be minimum 24 m ROW.

(x) Common facilities facilities such as repair shops, rest rooms for drivers and attendants.

(xi) 2% of the project shall be earmarked for CSR activities.

(xii) MOU duly covering environmental legal framework for disposal of effluents with GIDC shall entered and the copy shall be submitted to MOEF and State PCB.

(xiii) Proper meters with recording facility shall be provided to monitor the effluent sent from the member industries to CETP and from CETP to the final effluent pipeline of GIDC on daily basis

(xiv) Member industries shall treat the effluent to meet the CETP inlet norms stipulated under EP Act provisions.

(xv) Provisions shall be made to reuse MEE condensate as committed by PP. Suitable metering for measurement of the quantity of reuse shall be provided

(xvi) A greenbelt of minimum width of 20 m shall be developed all around the project.

(xvii) Solar lighting in the non-process area shall be provided.

(xviii) Parking space to accommodate 300 trucks, 150 cars, 200 two wheelers and 400 bicycles shall be provided as presented by the project proponent

(xix) Online monitoring system shall be provided at the outlet of ETP for critical parameters in consultation with SPCB.

(xx) Continuous VOC monitors at SEZ periphery at three locations shall be provided in consultation with SPCB.

(xxi) "Consent for Establishment" shall be obtained from Gujarat State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.

(xxii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

(xxiii) A First Aid Room will be provided in the project both during construction and operation of the project.

(xxiv) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.

(xxv) Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.

(xxvi) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.

(xxvii) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.

(xxviii) Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the Gujarat State Pollution Control Board.

(xxix) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.

(xxx) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.

(xxxi) Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.

(xxxii) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ GSPCB.

(xxxiii) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100 Km of Thermal Power Stations).

(xxxiv) Ready mixed concrete must be used in building construction.

(xxxv) Storm water control and its re-use as per CGWB and BIS standards for various applications.

(xxxvi) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

(xxxvii) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.

(xxxviii) Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.

(xxxix) Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

(xl) Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality double glass with special reflective coating in windows.

(xli) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.

(xlii) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfill requirement.

(xliii) The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightening etc.

(xliv) Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.

(xlv) Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.

II. Operation Phase

i) The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated affluent emanating from STP shall be recycled/ reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Gujarat State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.

ii) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.

iii) Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Gujarat State Pollution Control Board.

iv) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

v) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.

vi) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.

vii) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts. above the highest ground water table.

viii) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.

ix) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

x) A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc. and submit to the Ministry in three months time.

xi) Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.

xii) Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.

xiii) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

PART – B. GENERAL CONDITIONS

i) The environmental safeguards contained in the EIA/EMP Report should be implemented in letter and spirit. All the recommendations made in respect of environmental management and risk mitigation measures relating to the project shall be implemented.

ii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC 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 SPCB.

4. Officials from the Regional Office of MOEF, Bhopal who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bhopal.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

7. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

8. The project authorities shall strictly comply with the rules and guidelines under manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October 1994 and January, 2000 and hazardous Waste (Management and Handling) Rules, 1989 as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage and disposal of wastes. All Transportation of Hazardous Chemicals shall be as per the MVA, 1989.

9. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

10. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Kerala Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.nic.in. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.

11. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation V/s Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

12. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

13. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral

parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

14. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

Yours faithfully,

(E. Thirunavukkarasu)
Deputy Director

Copy to:

(1) The Principal Secretary, Department of Environment, Government of Gujarat, U.D & Urban Housing Department, Sachivalaya, 9th Floor, Block No.14, Gandhinagar – 382 010 (Gujarat).
(2) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 110 032.
(3) The Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhinagar – 382 010.
(4) The CCF, Regional Office (WR), Ministry of Environment & Forests, Kendriya Paryavaran Bhavan, Link Road No.3, Ravi Shankar Nagar, Bhopal- 426 016.
(5) IA - Division, Monitoring Cell, MOEF, New Delhi - 110003.
(6) Guard file.

(E. Thirunavukkarasu)
Deputy Director

Annexure 14: Copy of Letter received from GIDC for water supply

GUJARAT INDUSTRIAL DEVELOPMENT CORPORATION
(A Govt. of Gujarat Undertaking)

Office of the Executive Engineer
1st FLOOR , NARMADA COMM. COMPLEX,
STATION ROAD, PANCHBATTI,
BHARUCH - 392 001
PH : 242432/244184 FAX:(02642)241902

No.GIDC/EE/BRH/PB/420 426 Date: 25/01/2011
1.3.11

To,
M/s. Jubiliant Infrastructure Ltd.
Plot No 5,
Vilayat Estate.

Subject:- Requested for confirmation of water supply requirement upto 15 MLD and effluent drainage upto 5 MLD for your SEZ at Plot No.5 Vilayat GIDC.

Ref:- Your letter dtd.22.01.2011.

Dear Sir,

In context to the above, we hereby confirm that GIDC will be able to provide your ultimate water requirement of 15 MLD and ultimate requirement of effluent drainage connection for Sea disposal after meeting with GPCB Norms upto 5MLD, subject to on clearance from Environmental Authorities by you. This is for your information & further necessary action please.

Thanking You,
Yours Faithfully

Executive Engineer,
GIDC, Bharuch.

Copy to:-
Dy. Executive Engineer (Drg), GIDC, Bharuch.
Dy. Executive Engineer (W/s), GIDC, Bharuch.

Annexure 15: Copy of Mutual Agreement between JIL and JLSL for Supply of Utilities

JUBILANT INFRASTRUCTURE

SEZ/Allotment/03

September 04, 2014

To,
Unit Head
Jubilant Life Sciences Limited (Unit-3)
P1-L11,12,17 & 18, Within Jubilant SEZ at Plot no.5,
GIDC Vilayat, Tal.: Vagra,Dist.: Bharuch

Subject : Membership of CETP and other utility services of the SEZ

Dear Sir,

With reference to your application for membership of CETP and other utility services of the SEZ for manufacture of pesticides by your new Unit-3 in our SEZ, we are pleased to provide you membership of CETP and other utility services of the SEZ as mentioned below:

a. Steam from Boiler of SEZ
b. Substation
c. Tank Farm
d. Power Plant
e. Water Treatment Plant
f. Canteen
g. Fire Station
h. Effluent Treatment plant
i. Liquid Incinerator System
j. Vent Gas Incinerator System
k. Occupational Health Centre

We are also ready to install a solid waste incinerator on confirmation of requirement and capacity from your side.

Charges for above facilities are determined based on the costing carried out time to time and mutually agreed between the Developer and the Units. Same shall be applicable for your new unit also.

We are also ready to take care of all your disposable wastes, including solid waste, hazardous waste, scrap and effluent as per statutory requirements.

Thanking you,

Yours faithfully,

For Jubilant Infrastructure Limited (SEZ Developer)

RAVINDRA TIWARI
SR. VICE PRESIDENT – SEZ

A Jubilant Life Sciences Company

OUR VALUES

Jubilant Infrastructure Limited
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Kadam

Environmental Consultants

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Environment *f*or Development

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Delhi / NCR

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