

GUJARAT POLLUTION CONTROL BOARD**Paryavaran Bhavan**

Sector-10-A, Gandhinagar - 382 010.

Phone : 23222756, 23222095, 23222096

Gram : CLEANWATER Fax : (079) 23232156

Website : www.gpcb.gov.in

**"Consent to Establish"**

NO: GPCB/CCA-VRD-905(2)[NOC-VRD-2969] / 33676.

TO,
M/s. BODAL CHEMICALS LIMITED (UNIT-VII),
 SURVEY NO. 804, 805, 807 TO 822, 824 TO 839 & 849,
 VILL. DUDHWADA,
 TAL. PADRA, DIST. VADODARA

12:9 DEC 2008

SUB: Consent to Establish (NOC) under Section 25 of the Water Act 1974 and Section 21 of the Air Act 1981

REF: Your application letter no. Nil dated 22/01/2008 and subsequent correspondence thereof.

Sir,

Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants the **Consent to Establish (NOC)** for manufacturing of **new additional products** at your industrial plant/activities at SURVEY NO. 804, 805, 807 TO 822, 824 TO 839 & 849, VILL. DUDHWADA, TAL. PADRA, DIST. VADODARA for the manufacturing of 1000 MT/Month crude Synthetic Dyes & 500 MT/Month Beta Naphthol as under. **The Validity period of the order will be Five years from date of issue.**

Sr. No.	Name of product/s	Quantity in MT/Month
1	Ramazol Dyes such as Black Mix, Black 5	500
2	Reactive Dyes such as Reactive Red 195, Reactive Yellow 145	250
3	Direct Dyes such as Acid Black 194, Acid Black 210, Direct Black 22	250
4	Beta Naphthol	500

SUBJECT TO THE FOLLOWING SPECIFIC CONDITIONS: -

Applicant shall comply with all the conditions stipulated by the MOEF in the order of Environment Clearance issued vide letter no. J-11011/613/2007- IA II (I) dated June 12, 2008. The applicant is required to get the corrected the quantity of total industrial effluent as 622 m³/day instead of 700 m³/day in the Environment Clearance obtained from the MOEF.

CONDITIONS UNDER WATER ACT 1974:

1. The quantity of the industrial effluent to be generated from the manufacturing process and other ancillary industrial operations after the proposed expansion shall not exceed 622 m³/day, which includes concentrated effluent streams of 148 m³/day and dilute streams of 474 m³/day.
2. The quantity of the domestic waste water (sewage) after the proposed expansion shall not exceed 8 m³/day

3. The adequate effluent treatment plant consisting of the following units as proposed by you shall be installed.
- i) Collection Tank for Concentrated Stream from Beta Naphthol
 - ii) Collection Tank for Dilute Stream of washings from Beta Naphthol
 - iii) Collection Tank for Concentrated Stream from Direct Black 22 & Acid 210 Dyes
 - iv) Oil & Grease Trap
 - v) Collection Cum Equalization Tank
 - vi) Flash Mixer
 - vii) Flocculator
 - viii) Primary Settling Tank
 - ix) Sludge Sump
 - x) Filter Press
 - xi) Aeration Tank
 - xii) Secondary Clarifier
 - xiii) Intermediate Storage Tank
 - xiv) Pressure Sand Filter
 - xv) Activated Carbon Filter
 - xvi) Treated Effluent Sump
4. The concentrated stream ($148 \text{ m}^3/\text{day}$) shall be segregated and incinerated totally with double chambered well designed Incinerators. Hence there shall be no discharge of any concentrated effluent.
5. The other dilute effluent ($474 \text{ m}^3/\text{day}$) shall be treated separately and it shall conform to the following standards:

PARAMETERS	ECP INLET NORMS
pH	5.6 to 8.5
Temperature	40°C
Colour (pt. co. scale) in units	100 units
Suspended Solids	100 mg/l
Oil and Grease	10 mg/l
Phenolic Compounds	1 mg/l
Cyanides	0.2 mg/l
Fluorides	1.5 mg/l
Sulphides	2 mg/l
Ammonical Nitrogen	50 mg/l
Arsenic	0.2 mg/l
Total Chromium	2.0 mg/l
Hexavalent Chromium	0.1 mg/l
Copper	3 mg/l
Lead	0.1 mg/l
Mercury	0.01 mg/l
Nickel	3 mg/l
Zinc	5 mg/l
BOD (3 days at 27°C)	100 mg/l
COD	250 mg/l
Chlorides	600 mg/l
Sulphates	1000 mg/l
Total Dissolved Solids	5000 mg/l
Insecticides / Pesticides	Absent
Bio-assay Test	90% survival of fish after 96 hours in 100% effluent

GUJARAT POLLUTION CONTROL BOARD

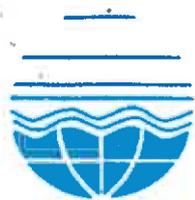
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6. The treated effluent of other dilute effluent streams conforming to the above standards shall be discharged into effluent conveyance channel project of M/s. ECPL and shall ultimately be conveyed up to the estuary of river Mahi.
7. The domestic wastewater shall be treated along with the industrial so as to conform to the above mentioned ECP inlet standards.
8. You shall provide separate energy meter for the Effluent Treatment Plant and Incinerators
9. Different colour coding shall be done for both type of effluent lines i.e. effluent conveying concentrated wastewater (zero discharge) and the effluent lines conveying wastewater to Effluent Treatment Plant.
10. Adequate effluent sampling points shall be provided at Effluent Treatment Plant outlet as well as disposal point at ECP channel.
11. You shall maintain daily logbook with details of products / by-products manufactured, its quantity, water consumption, wastewater generated, wastewater incinerated, fuel consumed in Incinerator, Incineration Ash generated, power consumed etc. and keep it ready for inspection all the time in your factory.

CONDITIONS UNDER AIR ACT 1981:

12. The following shall be used as fuel in the Boiler/ Hot Air Generator as following rates:

Sr. No.	Name of Fuel	Quantity
1	Coal	120 MT/Day

13. The applicant shall install & operate air pollution control system in order to achieve norms prescribed below.
14. The flue gas emission through stack shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control system	Parameter	Permissible Limit
1.	IBR Steam Boiler	30	Multi Cyclone Separator	Particulate matter SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm
2	Hot Air Generator	30	Multi Cyclone Separator	Particulate matter SO ₂ NO _x	150 mg/NM ³ 100 ppm 50 ppm

15. The Process emission through various stacks/ vents of reactors, process, vessel shall conform to the following standards:

Stack No.	Stack attached to	Stack height in Meter	Air Pollution Control system	Parameter	Permissible Limit
1	Spray Dryers (4 No.)	25	Two Stage Cyclone Separator followed by Wet Scrubber	Particulate matter	150 mg/NM ³
2	Fusion Vessel	15	Alkali Scrubber	SO ₂	40 mg/NM ³

16. Stack monitoring facilities like port hole, platform/ladder etc, shall be provided with stacks/vents chimney in order to facilitate sampling of gases being emitted into the atmosphere.
17. Ambient air quality within the premises of the industry shall conform to the following standards: -

PARAMETERS	PERMISSIBLE LIMIT
Suspended Particulate Matter	500 Microgram/M ³
RSPM	150 Microgram/M ³
SO ₂	120 Microgram/M ³
NO _x	120 Microgram/M ³
Hydrocarbons as CH ₄	160 Microgram/M ³
Carbon Monoxide	5000 Microgram/M ³

18. All measures for the control of environmental pollution shall be provided before commencing the proposed expanded production.

CONDITIONS UNDER HAZARDOUS WASTE :

19. Applicant shall have to comply with provisions of Hazardous Waste (Management, Handling & Transboundary Movement) Rules – 2008.
- 19.1 The applicant shall obtain membership of common TSDF site for disposal of Haz. Waste as categorized in Hazardous Waste (Management, Handling & Transboundary Movement) Rules – 2008.
- 19.2 The applicant shall obtain membership of common TSDF site for disposal of Haz. Waste as categorized in Hazardous Waste (Management, Handling & Transboundary Movement) Rules – 2008.
- 19.3 The applicant shall obtain membership of common Haz. Waste incinerator for disposal of incinerable wastes.
- 19.4 The applicant shall provide temporary storage facilities for each type of Haz. Waste as per Hazardous Waste (Management, Handling & Transboundary Movement) Rules – 2008.

GENERAL CONDITION:

20. Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is atleast 1000 trees per acre of land and a green belt of appropriate width as per the guidelines prescribed by the Central Pollution Control Board.
21. The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of water cess to the Board under the Water Cess Act- 1977.
22. In case of change of ownership/management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
23. The applicant shall however, not without the prior consent of the Board bring into use any new or altered outlet for the discharge of effluent or gaseous emission or sewage waste from the proposed industrial plant. The applicant is required to make applications to this Board for this purpose in the prescribed forms under the provisions of the Water Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986.

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24. The applicant also comply with the General conditions as per Annexure - I attached herewith (No.1 to 38) (whichever applicable).
25. The concentration of Noise in ambient air within the premises of industrial unit shall not exceed following levels:
- Between 6 A.M. and 10 P.M. : 75 dB(A)
Between 10 P.M. and 6 A.M. : 70 dB(A)
26. Applicant is required to comply with the manufacturing, Storage and Import of Hazardous Chemicals Rules-1989 framed under the Environment (Protection) Act-1986.
27. If it is established by any competent authority that the damage is caused due to their industrial activities to any person or his property .in that case they are obliged to pay the compensation as determined by the competent authority.

For and on behalf of
GUJARAT POLLUTION CONTROL BOARD


(J. R. MEHTA)
ENVIRONMENTAL ENGINEER

GUJARAT POLLUTION CONTROL BOARD
GENERAL CONDITIONS (NOC - 1 TO 38)

- 01 In case of any change either in products, its capacity or manufacturing process, the applicant shall have to obtain prior permission of this Board. The applicant shall not commence the production until consent under Water (Prevention and Control of Pollution) Act-1974, Air (Prevention and Control of Pollution) Act-1981 and Authorisation under the Hazardous Waste (Management and Handling) Rules-1989 is obtained.
- 02 If the products, process falls in SCHEDULE-I or II of the Environmental Audit Scheme , as specified in the order dated 13/03/97 of High Court in MCA No.326/97 in SCA No.770/95, the applicant shall also abide by the said scheme.
- 03 The applicant shall have to register the unit under the provisions of the Factories Act-1948 and shall obtain the necessary factory license.
- 04 The Environmental Management unit/Cell shall be set up to ensure implementation and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Cell / unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells / units shall also co-ordinate the exercise of environmental audit and preparation of environmental Statements.
- 05 The applicant shall have to obtain P.L.I. Policy as per P.L.I. Act-1991 and submit the copy of the same to the G.P.C.B.
- 06 The concentration of Noise on ambient air within the factory premises shall not exceed the following limit :
 Between 6 AM to 10 PM : 75 dB (A)
 Between 10 PM to 6 AM : 70 dB (A)
- 07 The unit shall, on establishing this plant.
 - a). Put up at the entrance and prominent places boards prominently displaying the name of the unit, particulars of the products / process and the names of the Proprietor / Partners/Directors of the unit, the electricity consumer number and the name of the electricity consumer as on the record of the GEB.
 - b). Make adequate lighting arrangements all around the Effluent Treatment Plants Pollution Control Measures and also above the boards mentioned in the above clause.
08. The Environmental Audit shall be carried out yearly and the environmental statements pertaining to previous year shall be submitted to this Board latest by 30th September every year.
- 09 The unit shall have and use only one outlet for the discharge of its effluent and no effluent shall be discharged without requisite treatment and without meeting with the GPCB norms. Such outlet shall be near the front gate/ entrance of the unit. The unit shall not keep any bypass line or system or loose or flexible pipe for discharging effluent outside or even for transporting treated or untreated effluent within the factory premises, within effluent treatment plants or in the compound of the unit.
- 10 "Magnetic Flow Meters" should be installed at inlet and outlet of Effluent Treatment Plant (ETP thereafter)
11. All the chemicals and nutrients which are required to be added / dosed any where in the ETP should be so added by using " Metering Pumps" only.
12. The pipeline connecting various equipments or sumps of tanks of ETP should be minimum in number. Loose connections of hose pipes or temporary connections will not be permitted.
13. In case of incinerators the unit shall provide the flow measuring devices for roother liquor , light diesel oil, air used for combustion and temperature measuring devices within incinerators at different points scrubber , outside the incinerator should be provided . The temperatures as well as flow should be recorded , every day.
14. In case of plants involving Bio-mass Treatment For each addition of bio-mass time and quantity , should be recorded . The uptake rate of oxygen of the bio-mass in the aeration basis and other parameters of biological system should be recorded every day.
15. The printed log books shall be maintained and get it certified for :

- a. Energy / fuel consumption / Raw material Consumption and quantity of products manufactured.
 - b. Waste water / gaseous flow at inlet & outlet of ETP and Air Pollution Control Measures.
 - c. Quantity of sludge generated.
 - d. Laboratory analysis / reports for each of the specified parameters of liquid effluents, gaseous discharge and soil sludge samples.
16. The unit shall operate full and efficiently all its effluent treatment plant/s and shall close down all its manufacturing processing activities whenever the effluent treatment plant/s or any part thereof are fully or partly non-operational for any reason whatsoever (Whether maintenance/ repairs/electricity failure or otherwise) and shall not restart such activities unless and until all the effluent treatment plants of the unit are fully operational.
 17. The unit shall have and operate all the requisite equipments/ facilities for prevention and control of air pollution and shall operate the same. The unit shall also have stack monitoring facilities. Whenever the equipments/facilities for prevention and control of air pollution are fully or partly nonfunctional , the unit shall close down all its manufacturing / processing activities and shall not restart its manufacturing/ processing activities unless and until all its air pollution protection and control equipments and facilities including stack monitoring facilities are fully operational.
 18. The unit shall submit, before commencing the production to the GPCB any committee appointed by the court, the site plan of the unit indicating the location of manufacturing / processing plant as also the effluent treatment plants and also separate plan indicating the channel through which water / effluent passes from different stages of manufacturing / processing and the effluent treatment process right upto the stage of its final outlet. Such plans shall also be displayed by the unit on a Board of adequate size within its compound and near its effluent treatment plant/s.
 19. The unit shall supply to the GPCB the figures of production and consumption of electricity and water for each day during the period of production, though such figures shall be supplied on weekly basis. The unit shall supply separate figures for consumption of electricity for running the effluent treatment plants by having a separate meter / sub meter for such effluent treatment plants. The number of units consumed by operating the diesel generating sets, if any, shall also be supplied to the GPCB on weekly basis.
 20. The unit shall also supply to the GPCB , within 1 week from the date of the starting production , the documents regarding monthly production and consumption of electricity.
 21. The unit shall permit the officers/employees of the GPCB/ Government Members of the committee of the court, Members of the Monitoring Committee of the Association of the Industries to enter the factory premises and to inspect and take samples from the unit at any time without any prior intimation. Any delay in giving any of the above persons entry into the factory premises or any plant thereof on effluent treatment plants shall entail closure of the unit. All the watchmen / security personnel of the unit shall be immediately apprised of the above.
 22. It shall be open to the GPCB through general instruction of circulars and to the GPCB officers inspecting the unit to give all the support instructions regarding location of the outlet and / or any other appropriate directions regarding effluent treatment plants, their operation and processes and disposal channel and disposal system. The unit shall comply with all such instructions whether general or special.
 23. When electricity supply or water supply is disconnected in future on account of non - compliance with the GPCB norms or on notice of the court order, which may be passed by the court or by the Govt. / GPCB under any statutory provisions relating to environmental protection and prevention and control of pollution
 - a. The unit shall not use any diesel generating set or any other alternative source of energy or water tankers from outside.
 - b. The unit shall pay wages to its workers regularly every month or at such shorter intervals as per the Central/State Government order.
 24. Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the Gujarat Pollution Control Board . Regular Effluent Quality monitoring should be carried out for relevant parameters and the monitored data alongwith the statistical

- analysis and interpretation should be submitted to the Gujarat Pollution Control Board on monthly basis.
25. Guards ponds of sufficient holding capacity should be provided to cope with the effluent discharge during the process disturbances. In the event of failure or non functioning of the ETP, the respective units should be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency. Guard pond should be provided with impervious lining and stability of the ponds with respect to leakages/cracks and other factors should be ensured.
 26. The ground water quality around the guard ponds and landfill site should be monitored on a regular basis. The monitored data should be submitted to this Board once in six months.
 27. The gaseous emission from the various process units should adhere to the air emission standards specified in this order. At no time the emission should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be immediately put out of operation and should not be restarted until the control measures are rectified to achieve the desired efficiency.
 28. a). Ambient air quality monitoring station should be set up in the downwind direction as well as at locations where maximum ground level concentrations are anticipated. These locations should be fixed in consultation with the GPCB. The number of air quality monitoring stations and frequency of monitoring should be selected on the basis of mathematical modeling to represent short term ground level concentrations, human settlements, sensitive targets etc..
 - b). Stack emissions from the boiler and heater should be monitored for SO₂, NO_x, Hydro Carbon and SPM and record maintained. On line continuous stack monitoring equipments should be provided for measurement of SO₂ and NO_x.
 - c). Data on ambient air quality and stack emission from boiler and heater should be submitted to this Board once in a month alongwith the statistical analysis and interpretation.
 - d). Fugitive emissions should be controlled, regularly monitored and data recorded. The monitored data should be submitted to this Board once in a month.
 29. Low NO_x burners should be provided to avoid excessive formulation of NO_x. Only LSH will be used a fuel during the critical month to ensure that SO levels in the ambient air is within the norm specified.
 30. The unit shall make all the requisite arrangements for the storage and handling of solid waste including impervious flooring and leachate collection and the unit shall store and handle solid waste in accordance with the provisions of the relevant rules in their behalf.
 31. A secured double lined landfill should be developed within the plant premises for disposal of solid waste by providing impervious liner and leachate collection system. The leachate shall be taken to the treatment plant for further treatment. In case of specified items or Napthalene based product and in the case of Pesticides waste, the leachate shall be totally incinerated after neutralization and / or after detoxification treatment. The design of the landfill site should be submitted before commencing the production to this Board and Government.
 32. Handling manufacturing, storage and transport of hazardous chemicals should be in accordance with the Manufacture, Storage and Import of Hazardous Chemicals Rules-1989.
 33. The hazardous wastes should be handled as per the Hazardous Waste (Management and Handling) Rules of the Environment (Protection) Act, 1986.
 34. On-site and off-site Emergency Plan as required under the Rules 13 and 14 of the Handling, Manufacture, Storage and Import of the Hazardous Chemicals Rules-1989 should be prepared and approval from the Board should be obtained.
 35. A community welfare scheme for improving the socio-economic environment should be worked out and report submitted to the Board and Government for review.
 36. Periodical medical check up of the workers should be done and records maintained as a measures to provide occupational health service to the workers.
 37. The project authorities should set up laboratory for collection, analysis of samples under the supervision of competent technical person and report to the Chief Executive.
 38. The funds earmarked for the Environmental Protection measures should not be diverted for any other purpose and year wise expenditure should be reported to this Board and to the Government.



True Copy

GUJARAT POLLUTION CONTROL BOARD**Paryavaran Bhavan**

Sector-10-A, Gandhinagar - 382 010.

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NO:GPCB/CCA-VRD-905(2)/ 23496

2 | OCT 2009

By R.P.A.D.

Amendment to CONSENTS AND AUTHORISATION Order No. 9906, dtd. 19-12-2007
(Under the provisions/rules of the aforesaid environmental acts)

To,
 M/s. **BODAL CHEMICALS LIMITED (UNIT-VII),**
PLOT NO. 804,805,807 TO 822,824 TO 839 & 849,
VILLAGE- DHDHWADA, TALUKA PADRA,
DISTRICT VADODARA.

In exercise of the power conferred under Section-25 of the Water (Prevention and Control of Pollution) Act-1974, under Section-21 of the Air (Prevention and Control of Pollution) Act-1981 and Authorization under rule 3(c)& 5(5) of the Hazardous Waste (Management and Handling) Rules'1989, amendment rules-2000, amended rules-2003 framed under the E (P) Act-1986, the Board has granted consolidated consent Authorization vide order No. **9906**, vide letter. No. **GPCB/CCA-VRD-905/34555**, dated **19/12/2007** under the provisions / Rules of the aforesaid Acts.

And whereas Board has received your online application for the amendment of Consolidated Consent and Authorization (CC&A) of this Board under the provisions/rules of the aforesaid Acts, CC&A order no. **9906** is hereby amended as below :

(A) The condition no. 2 is amended to include following products as below :

Sr. No.	Product	Quantity
1.	Ramazol Dyes such as Black Mix, Black-5	500 MT/Month
2.	Reactive Dyes such as Reactive Red 195, Reactive Yellow 145.	250 MT/Month
3.	Direct Dyes such as Acid Black 194, Acid Black 210, Direct Black 22	250 MT/Month
4.	Beta Naphthol.	500MT/Month.

(B) SUBJECT TO THE FOLLOWING SPECIFIC CONDITIONS.

Applicant shall comply with all the conditions stipulated by the MOEF in the order of Environment Clearance issued vide letter No. J-11011/613/2007-IA II (I) dated 12 -6-2008.

CONDITION UNDER THE WATER-ACT-1974.

- (C) Condition no 3.1 is amended as the quantity of the industrial effluent to be generated from the manufacturing process & other ancillary industrial operations after the proposed expansion shall not exceed **622 m³/day** (instead of **145 KL/Day**), which includes concentrated effluent streams of **148 m³/day** & dilute streams of **474m³/day**.
- (D) The condition no 2 is amended as quantity of the domestic waste-water (sewage) shall be **8 M³/day** instead of **2.5 KL/day**.
- (E) Condition no. 3.3.1 is amended as, concentrated stream (**148 m³/day**) shall be segregated & incinerated totally in double chambered well designed incinerators and there shall be no discharge of any concentrated effluent.

- (F) Conditions no.3.3.2& 3.3.3. are amended as, other dilute effluent stream 474 m³/day shall be treated separately to conform to the following standards & the final treated effluent conforming to the standards shall be discharged into effluent conveyance channel of M/s. ECPL.

PARAMETER	ECP INLET NORMS
PH ^r	6.5 to 8.5
Temperature	40 ° C
Colour (pt. co. scale) in units	100 units
Suspended Solids	100 mg/l
Oil and Grease	10 mg/l
Phenolic compound	1 mg/l
Cynide	0.2 mg/l
Fluorides	1.5 mg/l
Sulphides	2 mg/l
Ammonical Nitrogen	50 mg/l
Arsenic	0.2 mg/l
Total chromium	2 mg/l
Hexavalent chromium	0.1 mg/l
Copper	3 mg/l
Lead	0.1 mg/l
Nickel	3 mg/l
Zinc	5 mg/l
BOD (5 days at 20 ° C)	100 mg/l
COD	250 mg/l
Chlorides	600 mg/l
Sulphates	1000 mg/l
Total dissolved solids	5000 mg/l
Insceticides/Pesticide	Absent
Bio-assay test	90% Survival of fish after 96 hours in 100% effluent

CONDITIONS UNDER THE AIR ACT:

- (G) Condition no. 4.1 is amended to include following fuel.

Sr. No.	Fuel	Quantity
1.	Coal.	120 MT / Day

- (H) Condition no 4.2.1 is amended to include following stacks.

Stack No.	Stack attached to	Stack Height (m)	Air pollution control system.	Parameter	Permissible Limit
1.	IBR Stream Boiler.	30	Multi cyclone Separator.	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm
2..	Hot Air Generator.	30	Multi cyclone Separator	Particulate Matter SO ₂ NO _x	150 mg/Nm ³ 100 ppm 50 ppm



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- (I) Condition no 4.2.2 is amended to include following process stacks.

Stack No.	Stack Attached To	Stack Height in Meter	Air Pollution Control System	Parameter	Permissible Limit
1	Spray Dryers. (4 Nos.)	25	Two Stage cyclone separator followed by Wet scrubber.	Particulate matter.	150 mg/NM3
2.	Fusion vessel.	15	Alkali scrubber.	SO2	40 mg/NM3

CONDITION UNDER HAZ WASTE RULES.

- (J) Condition no 6.1.1 is amended to included ultimate quantity of following Haz. waste than what is prescribed in earlier CCA no. 9906 dated. 19-12-2007.

Sr. No.	Waste	Quantity	Category of HW	Facility
1.	ETP Sludge	400-425 MT/M	34.3	Collection, Storage, & Disposal at TSDF site or sell out to cement manufacturing units.
2.	Incineration ash	85 MT/M	36.2	Collection, Storage, & Disposal at TSDF
3.	Distillation residues	1.5-2 MT/M	36.4	Disposal to CHWI facility.
4.	Used Oil	100 Ltr/Yr	5.1	Collection, Storage and selling to recyclers authorized by CPCB.
5.	Discarded containers / Barrels/liners	17,000 Nos/M	33.3	Collection, Storage and selling To registered refiners

- (K) The validity and other conditions of the said CC&A order no. 9906, dated 19-12-2007 shall remain unchanged.

For and on behalf of
Gujarat Pollution Control Board


(J. R. MEHTA)

ENVIRONMENTAL ENGINEER



True Copy

**GUJARAT POLLUTION CONTROL BOARD**

PARYAVARAN BHAVAN

Sector 10-A, Gandhinagar 382010

Phone : (079) 23226295

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website : www.gpcb.gov.in

BY R.P.A.D

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)-1981 and Authorization under rule 5(4) of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules'2008 & as amended from time to time framed under the Environment (Protection) Act-1986.

And whereas Board has received consolidated consent application Inward I.D.NO. 59266 dated 12/07/2012 for Consolidated Consent and Authorization (CC & A-RENEWAL) of this Board under the provisions/rules of the aforesaid acts. Consents & Authorization are hereby granted as under:

CONSENTS AND AUTHORISATION:

(Under the provisions /rules of the aforesaid environmental acts)

To,

- M/S BODAL CHEMICALS LTD. UNIT-VII (21752),
PLOT NO: S.NO.804, VILLAGE: DUDHWADA, TAL: PADRA,
DUDHWADA,
TAL: PADRA , DIST: VADODARA.

1. Consent Order No: AWH-50942 date of Issue: 03/12/2012.

The consent under Water Act -1974 for the treatment and disposal of treated effluent and the consent under Air Act-1981, and Authorization under the Hazardous Waste (Management, Handling and Transboundary Movement) Rules'2008 under Environment (Protection) Act-1986 shall be valid up to 11/07/2017 to operate industrial plant for manufacture of the following items / products at PLOT NO:/S.NO 804,VILLAGE: DUDHWADA, TAL: PADRA,DUDHWADA ,DIST : VADODARA , TAL : PADRA.

Sr. No.	PRODUCT	Production [MT/ M]
1	H – acid	150
2	Vinyl Sulphone	200
3	Acetanilide	150
4	Crude Synthetic organic dyes (1000 MT/M)	
A)	Ramazol dyes such as - Black mix - Black 5	500
B)	Reactive dyes such as - Reactive red 195 - Reactive yellow 145	250
C)	Direct acid dyes such as - Acid black 194 - Acid black 210 - Direct black 22	250
5	β-Naphthol	500
Sr. no.	Name of By-Products	Quantity [MT/M]
1.	Hydrochloric Acid [HCl]	220 - 390
2.	Glauber Salt [From VS plant]	90
3.	Glauber Salt [From H acid plant]	150
4.	Acetic Acid	35
5.	Gypsum sludge	850

Clean Gujarat Green Gujarat

ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

2. SPECIFIC CONDITIONS :

2.1 You shall not carry out any activities that may attract the provisions of the EIA Notification – 2006.

3. CONDITIONS UNDER THE WATER ACT:

3.1 The quantity of trade effluent from the R.O. Plant and Utilities Plant shall not Exceed **474 K L /day**.

3.2 The quantity of trade effluent generation from the industrial operation (processing , washing & w/w of scrubber) shall not exceed **148 KL/day**, which shall be totally incinerated in Incinerator as per CPCB guidelines and hence there shall be zero discharge of Trade effluent generation from the industrial operation (processing ,washing& w/w of scrubber) from your Industry.

3.3 The quantity of Sewage effluent from the factory shall not exceed **8.0 KL/day**.

3.4 TRADE EFFLUENT:

3.4.1 The concentrated and toxic effluent stream generated as per condition no.3.2 shall be segregated and completely incinerated in a well designed incinerator.

3.4.2 The effluent from the R.O. Plant and the Utilities Plant as per condition no. 3.1 shall conform to the VECL inlet norms mentioned below.

PARAMETERS	VECL INLET NORMS
pH	6.5 to 8.5
Temperature	40 C
Colour (pt.co.scale) in units	100 units
Suspended Solids	100 mg/l
Oil and Grease	10 mg/l
Phenolic Compounds	1 mg/l
Cyanides	0.2 mg/l
Fluorides	1.5 mg/l
Sulphides	2 mg/l
Ammonical Nitrogen	50 mg/l
Arsenic	0.2 mg/l
Total Chromium	2.0 mg/l
Hexavalent Chromium	0.1mg/l
Copper	3 mg/l
Lead	0.1 mg/l
Mercury	0.01 mg/l
Nickel	3 mg/l
Zinc	5 mg/l
BOD (3DAYS AT 27 C)	100 mg/l
COD	250 mg/l
Chlorides	600 mg/l
Sulphates	1000 mg/l
Total dissolved solids	5000 mg/l
Insecticides/Pesticides	Absent
Bio-assay test	90% Survival of fish after 96 hours in 100% effluent.



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- 3.4.3 The final treated effluent from the R. O. Plant & the Utilities Plant conforming to the above standards shall be discharged into effluent channel project of M/s VECL and shall ultimately be conveyed up to the estuary of river Mahi.
- 3.4.4 You shall provide separate energy meter for the Effluent Treatment Plant and Incinerators.
- 3.4.5 Different colour coding shall be done for both of the effluent lines i.e. effluent conveying process waste water (zero disposals) and the effluent lines conveying waste water of the R. O. Plant & Utilities Plant.
- 3.4.6 Adequate effluent sampling points shall be provided at Effluent Treatment Plant outlet as well as disposal point at effluent channel project.
- 3.4.7 You shall maintain daily log book with details of projects/by products manufacture its quantity, water consumption, waste water generation, waste water incinerated, fuel used in incinerator, incineration ash generated, power consumed etc. and keep it ready for inspection all the time in your factory.
- 3.4.8 Domestic effluent shall be disposed off through septic tank/soak pit system.
- 3.4.9 The unit shall install meters for measuring category wise (category as given in Water Cess Act- 1977 Schedule II) consumption of water.

4. CONDITIONS UNDER THE AIR ACT:

- 4.1 The following shall be used as fuel in boiler/furnace/heater as per condition 4.2 respectively.
- 4.2 The flue gas emission through stack attached to boiler/furnace/heater shall conform to the following standards.

Sr. no.	Stack attached to	Type of fuel	Fuel consumption	Stack height	Pollution control measures	Type of Pollutant	Conc. of Pollutant
1	IBR steam boiler - 1	Lignite/coal	1.25 T/hr.	37 m (common)	Multicyclone	P.M SO ₂ NOx	150 mg/NM ³ 100 ppm 50 ppm
2	IBR steam boiler - 2	Lignite/coal	1.25 T/hr.		Multicyclone		
3	Thermic fluid heater	Lignite/coal	0.5 T/hr.		Multicyclone		
4	Incinerator - 1	F.O.	0.25 KL/ hr.	30 m (common)	Quenching followed by venturi scrubber followed by Spray Tower		
5	Incinerator - 2	F.O.	0.10 KL/hr.				
6	IBR steam boiler - 3	Coal	100 MT/D	30 m	Multicyclone		
7	Hot air generator	Coal	20 MT/D	30 m	Multicyclone		

- 4.3 D.G.Sets standards:-The flue gas emission through stack attached to D.G.Sets shall conform to the following standards.
- o The minimum height of stack to be provided with each of the generator set shall be $H=h + 0.2 (KVA)^{1/2}$, where H= Total stack height in meter, h= height of the building in meters where or by the side of which the generator set is installed.

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- o Noise from DG set shall be controlled by providing an acoustic enclosure or by treating the room acoustically, at the users end.
- o The acoustic enclosure or acoustic treatment of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/ acoustic treatment. Under such circumstances the performance may be checked for noise reduction up to actual ambient noise level, preferably, in the night time). The measurement for insertion loss may be done at different points at 0.5 m from the acoustic enclosure/room, and the averaged.
- o The D.G. Set shall be provided with proper exhaust muffler with insertion loss of minimum 25 dB (A).
- o All efforts shall be made to bring down the noise level due to the D.G.Set, outside the premises, within the ambient noise requirements by proper siting and control measures.
- o Installation of a D.G.Sets must be strictly in compliance with the recommendations of the D.G.Set manufacturer.
- o A proper routine and preventive maintenance procedure for the D.G.Set should be set and followed in consultation with the DG Set manufacture which would help prevent noise levels of the DG Set from deteriorating with use.

4.4 The process emission through various stacks/ vents of reactors, process vessel shall be confirmed to the following standards.

Sr. no.	Stack attached to	Stack height	Pollution control measures	Type of Pollutant	Conc. of Pollutant
1	Chlorosulphonator & Decomposition	15 m	packed column followed by two venturi scrubbers followed by alkali scrubber	HCl SO ₂	20 mg/ NM ³ 40 mg/ NM ³
2	Neutralizer vessel of H-acid plant	15 m	Venturi scrubber followed by two-stage caustic soda scrubber	NO _x	25 mg/ NM ³
3	Isolation vessel of H-acid plant	15 m	Four venturi scrubber followed by three stage alkali scrubbers	SO ₂ NO _x	40 mg/ NM ³ 25 mg/ NM ³
4	Spray dryer - 1 Spray dryer - 2 Spray dryer - 3 Spray dryer - 4	25 m	Two stage cyclone separator followed by wet scrubber	PM	150 mg/ NM ³
5	Process vent from fusion vessel	15 m	Alkali scrubber	SO ₂	40 mg/ NM ³

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

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient air
1.	Sulphur Dioxide (SO ₂), µg/M ³	Annual 24 Hours	50 80
2.	Nitrogen Dioxide (NO ₂), µg/M ³	Annual	40



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		24 Hours	80
3.	Particulate Matter (Size less than 10 µm) OR PM ₁₀ µg/M ³	Annual	60
		24 Hours	100
4.	Particulate Matter (Size less than 2.5 mm) OR PM _{2.5} µg/M ³	Annual	40
		24 Hours	60

- 4.6 The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted / displayed to facilitate identification.
- 4.7 The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(a) during day time and 70 dB (A) during night time. Daytime is reckoned in between 6a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.
- 5 Authorization For the [Management, Handling & Transboundary Movement] of Hazardous Wastes Form-2 (See rule 5 (4) Form for grant of authorization for occupier or operator handling hazardous waste rule, 2008.

5.1 Authorization Number- AWH-50942 and valid up to 11/07/2017.

5.2 M/S. BODAL CHEMICALS LTD. UNIT-VII (21752), is hereby granted an authorization to operate facility for following hazardous wastes on the premises situated at Plot No./S.No. 804, VILLAGE: DUDHWADA, TAL: PADRA, DUDHWADA - 382340, DIST: VADODARA, TAL: PADRA..

Sr. No.	Type of waste	Category & Schedule	Quantity [MT/m]	Method of Disposal
1	ETP sludge	34.3, Sch- I	400 - 425	Collection, storage, Transportation, & Disposal to TSDF site or Sell out to cement manufacturing units.
2	Incineration Ash	36.2, Sch- I	85	Collection, storage, Transportation, & Disposal to TSDF site
3	Distillation residues	36.4, Sch- I	1.5 - 2	Collection, storage, Transportation Disposal to CHWI facility
4	Used oil	5.1, Sch- I	100 L/year (Max)	Collection, storage, Transportation and selling to recyclers authorized by CPCB
5	Discarded containers / liners	33.3, Sch- I	@ 17,000 nos.	Collection, storage, Transportation and reused for disposal of waste storage to TSDF site
6	Process sludge from filtration & neutralization	26.1, Sch- I	1350	Collection, storage, Transportation & Disposal to TSDF site or Sell out to cement manufacturing units.

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7	Iron sludge	26.1, Sch- I	315	Collection, storage, Transportation & Disposal to TSDF site or Sell out to cement manufacturing units.
8	Spent sulphuric acid	D2, Sch- II	1400-1500	Captivity consumed in H-acid manufacturing/sold out to authorized potential users.
9	HCl (30%)	D2, Sch- II	390	Collection, storage, Transportation & Sold out to authorized potential consumers.

5.3 The authorization is granted to operate a facility for collection, storage, within factory premises, transportation, and ultimate disposal of Hazardous wastes by selling out to registered recyclers and common TSDF Site of GESCSL, Ahmedabad.

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

5.5 TERMS AND CONDITIONS OF AUTHORISATION:

- a) The applicant shall comply with the provisions of the Environment (Protection) Act - 1986 and the rules made there under.
- b) The authorisation shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
- c) The persons authorized shall not rent, lend, sell, and transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
- d) Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorisation order by the persons authorized shall constitute a breach of this authorisation.
- e) It is the duty of the authorised person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
- f) An application for the renewal of an authorisation shall be made as laid down in rule 7.
- g) Industry shall submit annual report within 15 days and subsequent by 31st January every year.
- h) Hazardous waste shall be disposed off in accordance with the Haz. Waste (Management, Handling & Transboundary Movement) rules, 2008 and unit shall have to obtain Authorization of this Board for all applicable categories of waste.

6. GENERAL CONDITIONS: -

6.1 Any change in personnel, equipment or working conditions as mentioned in the consents form/order should immediately be intimated to this Board.

6.2 Applicant shall also comply with the general conditions given in annexure I.