REGD. &H.O: 6A SHANTHI NAGAR, SANTACURZ (E) P.O.BOX No.6818 MUMBAI-400 055.
TEL: 39818000, FAX: 39818888

PLEASE REPLY TO:
Penta Division, B-5 to B-10, SIPCOT Industrial Complex, Kudikadu, Cuddalore-607 005.
Tel: 239247, 239248 & 239423, Fax: 239234.

asianpaints
Asian Paints Limited
Penta Division
AN ISO 14001 &
OHSAS 18001 UNIT

APL/ CDL/TNPCB/036 /2013–14

1st August 2013

The Member Secretary,
Tamil Nadu Pollution Control Board
76, Mount Salai, Guindy,
Chennai - 600 032

BY RPAD.

Dear Sir,

**Sub: Submission of Environmental statement as on 31.03.2013 –Form V**

We are enclosing herewith the Environmental statement (FORM-V) for the financial year 2012-2013.

This is for your kind perusal please.

Thanking you,

Yours faithfully,

For **ASIAN PAINTS LIMITED**

**T.C.N.SAIKRISHNAN**

**GENERAL WORKS MANAGER**

*Cc:* The Divisional Environmental Engineer,
TNPCB,
21/A Siva Complex, 2 nd Floor,
Imperial road,
CUDDALORE – 607 002.

**Encl:**

1. Environmental Statement (Form V)

# FORM V

**Environment Statement for the Financial Year ending 31st March 2013**

## PART A

| | | |
|---|---|---|
| 1. Name and address of the Owner/Occupier of the Industry operation or Process | : | Shri. K.B. S ANAND.<br>MANAGING DIRECTOR AND CEO<br>ASIAN PAINTS LIMITED<br>PENTA DIVISION<br>B5 - B10 SIPCOT INDUSTRIAL COMPLEX<br>CUDDALORE 607 005. |
| 2. Industry/Category Primary (STC Code) | : | Red / Large |
| Secondary (STC Code) | : | |
| 3. Production Capacity | : | **Consented Quantity:**<br>PENTA ERYTHRITOL 450 MT/MONTH<br>SODIUM FORMATE 275 MT/MONTH<br>FORMALDEHYDE 675 MT/MONTH |
| 4. Year of establishment | : | 1986 |
| 5. Date of the last environmental Statement submitted | : | 19th June 2012. |

## PART-B

**WATER AND RAW MATERIAL CONSUMPTION**

| | | |
|---|---|---|
| Water Consumption Cu.M/day | : | 552.507 |
| Process Cu.M/day | : | 25.471 |
| Cooling/Boiler feed Cu.M/day | : | 499.296 |
| Domestic Cu.M/day | : | 27.740 |

| **Name of products Process water consumption per product output** | | |
|---|---|---|
| | **During the previous (2011-12) financial year $M^3$/MT** | **During the current (2012-13) financial year $M^3$/MT** |
| Penta erythiritol Note 1 | 32.481 | 37.345 |
| Sodium Formate Note 1 | 56.271 | 63.587 |
| Formaldehyde Note 1 (100%) | 30.198 | 34.425 |

Note1: The water consumption shown above is net of recovered water from Zero Liquid Discharge system.

- We have planted around 4185 tree saplings in our factory premises.

**2. Raw Material Consumption:**

| Name of Raw Material | Name of products | Consumption of Raw Material per unit of output (Tons/Ton) | |
|---|---|---|---|
| | | During the previous financial year (2011-12) | During the current financial year (2012-13) |
| a. FORMALDEHYDE (100%) | PENTAERYTHIRITOL | 1.086 | 1.085 |
| b. ACETALDEHYDE | AND | 0.372 | 0.381 |
| c. CAUSTIC LYE (100%) | SODIUM FORMATE | 0.371 | 0.373 |
| d. METHANOL | | 1.223 | 1.269 |

# PART- C

**Pollution discharged to environment/unit of output**
**(Parameter as specified in the consent issued)**

| Pollutants | Quantity of pollutants discharged (mass/day) | Concentrations of pollutants in discharges (mass/volume) * (in ppm) | Percentage of variation from prescribed standards with reasons |
|---|---|---|---|
| a. WATER | -- | pH 7 | |
| | 4.973 | TDS 86 | |
| | 0 | TSS 0 | NIL |
| | 0 | COD 0 | |
| | 0 | BOD 0 | |
| | 2.593 | Chlorides 45 | |
| | 2.327 | Sulphates 40 | |
| b. AIR | 44.56 | SPM 26.516 | |
| | 148.22 | SO2 88.212 | |
| | 14.23 | NOx 8.467 | NIL |
| | | Annual average value of Stack emission analysis done by TNPCB | |

* Averaged values of analysis done by APL laboratory on daily basis - (Based on Water cess annexure ROA). Characteristics of water given above are recovered water from the Zero discharge system for re use.

# PART- D

**Hazardous Wastes**

**(As specified under Hazardous Wastes/Management and Handling Rules, 1989) as amended in 2000**

| Hazardous Wastes | Total quantity in (Ltrs) | |
|---|---|---|
| | During the previous financial year (2011 - 12) | During the current financial year (2012 - 13) |
| a. From Process<br>Used System oil<br>Other Spent oil<br>Spent Carbon.<br>From Pollution Control Facilities ***From ETP/MEE/ATFD*** | <br>825 Liters<br>99 Liters<br>0<br>63.759 MT | <br>863 Liters<br>15 Liters<br>0<br>117.260 MT |

# PART-E

**Solid Wastes**

| | **Total quantity** | |
|---|---|---|
| | **During the previous financial year (MT) (2011-12)** | **During the current financial year (MT) (2012-13)** |
| a. From Process / Ash from Boiler | 983.640 MT | 1360.96 MT |
| b. From Pollution control facilities From ETP | NIL | NIL |
| c. i. Quantity recycled or reutilized+ | NIL | NIL |
| with in the unit. | NIL | NIL |
| ii. Sold | NIL | NIL |
| iii Disposed / Ash from Boiler | 946.460 MT | 1303.628 MT |

# PART-F

Please specify the characterizations (in terms of composition and quantum) of hazardous as well As solid wastes and indicate disposal practice adopted for both these categories of wastes.

| **Sl. No.** | **PARAMETERS** | **USED OILS** | **WASTE OIL** |
|---|---|---|---|
| 1 | Color (Hazan units.) | Brown | Dark Brown |
| 2 | Water % | BDL (DL: 0.05%) | 0.28% |
| 3 | Density (g/cc) | 0.8656 kg/l | 0.8950 kg/l |
| 4 | Total halogens (ppm) | 15 | 16 |
| 5 | Chromium as cr (ppm) | ND | 0.1 |
| 6 | Nickel as Ni (ppm0 | ND | 0.3 |
| 7 | Cadmium as cd (ppm) | <2.5 | 3.2 |
| 8 | Lead as Pb (ppm) | 1.4 | 0.9 |
| 9 | Arsenic as As (ppm) | ND | ND |
| 10 | PAH (ppm) | 0.18 | 0.2 |
| 11 | PCB (ppm) | BDL (D.L-2.0 ppm) | BDL (D.L-2.0 ppm) |

## PART G

**Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.**

- WATER consumption per Mt of Pentaerythritol (Product) is 37.345 KL is high compared to previous financial year the reason for increase in specific water consumption is due to tree plantation and its maintenance.
- We have reduced the specific POWER consumption in our Plant to 1333.19 KWH PMT of Pentaerythritol from 1363 KWH (in the year 2011-12), which indirectly reduces the emission at the power generation point.

Status of various resource conservation efforts over the last few years is given below:-

| Specific consumption Per Tonne of PE | 1996-97 | 1997-98 | 1998-99 | 1999-2000 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | % Reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Water $M^3$** | 123 | 109 | 85 | 75 | 69 | 62 | 52 | 49 | 45 | 44 | 37 | 39.59 | 40.274 | 36.992 | 30.313 | 32.905 | 37.345 | 69.64 |
| **Steam MTs** | 33 | 30 | 28 | 27 | 25 | 23 | 21 | 19 | 19 | 20 | 20 | 21.01 | 19.669 | 18.940 | 19.810 | 19.560 | 19.71 | 40.273 |
| **Power Units KWH** | 2850 | 2694 | 2643 | 2431 | 2200 | 2090 | 1929 | 1695 | 1587 | 1554 | 1598 | 1500 | 1556.18 | 1477 | 1391 | 1363 | 1333.19 | 53.221 |
| **Major Raw Material Acetaldehyde Kgs** | 455 | 433 | 423 | 422 | 401 | 395 | 300 | 374 | 390 | 389 | 387 | 376 | 376 | 378 | 371 | 370.750 | 372.19 | 18.20 |
| **Fuel Eq. Coal – Kgs.** | 288 | 280 | 258 | 237 | 252 | 260 | 255 | 269 | 276 | 279 | 253 | 245 | 254 | 270 | 242 | 229.200 | 246.87 | 14.281 |
| **COD load Kgs/day** | | | | | | 27 | 23 | 25 | 25 | 17 | 12 | 14 | 7.387 | 1.139 | **ZLD unit-** | **ZLD unit-** | **ZLD unit-** | **ZLD unit-** |
| **BOD load Kgs/day** | | | | | | 3 | 3 | 2 | 2 | 2 | 2 | 1.77 | 0.788 | 0.123 | | | | |

- All specific consumption figures given above are for per ton of our product produced except for Fuel which is given in Kgs of Equivalent Coal per ton of Steam produced.

The above reduction in various resources directly reflects the improved environmental performance of our Division.

- Around 4185 tree saplings were planted in our factory premises during the financial year to replace the uprooted trees because of thane cyclone
- 236 numbers of tree saplings given to nearby village for plantation on Independence Day.
- 365 numbers of tree saplings planted outside of factory premises. (Adjacent to the SIPCOT service road)
- The effluent generation is being periodically monitored on shift-wise basis and appropriate action istaken to reduce the effluent generation from source itself.
- The Effluent Treatment Plant is being operated as per the established operating procedure and the performance is being monitored closely to ensure consistent COD & BOD reduction across aeration system.
- We have connected the domestic effluent to the inlet of aeration tank in Effluent Treatment Plant which has improved performance of Effluent Treatment Plant in reducing BOD and total effluent is discharged through a single point.
- We have installed two stage Reverse osmosis plant cum Zero Discharge system to recycle the treated effluent in to our process plant and the same is being operated and maintained on daily basis. Around 95 % of the recovered water from the Zero Liquid Discharge system is used in our Cooling tower and as boiler feed water after further polished in our ION exchange water treatment plant
- The ash storage area is properly bounded with dyke wall arrangement and an effective dust suppression system has been provided to eliminate dust emission from the area.
- Two numbers of coal storage shed of capacity 550 MT and 700 MT each, to a store the same.
- Low sulphur content imported coal is being used.
- The ambient air and various emission discharge points of boiler stack and process stacks are being monitored at regular intervals by engaging external laboratory and TNPCB district environmental lab. The quality of the emission from the emission points are well within TNPCB norms.

- The sludge generated from ETP and ATFD (ZLD unit) is sending to TNWMA, Gummidipoondi for disposal as and when required.

**AIR EMISSION MONITORING**

- We are monitoring the ambient air quality once in a week at four different locations. (Both up wind and Downwind directions.)

- We have been regularly monitoring boiler stack emission by engaging reputed laboratories / TNPCB's laboratory facility on a monthly basis.

- We are monitoring the Ambient VOC / THC / AAQ, in different locations (Both upwind and down wind direction) once in three months and ensured that the values are well within the limit.

**Details of activities carried out to maintain the ambient air quality are as follows:-**

- We have installed a bag filter in our FBC Boilers and reduced the SPM level less than 50 $Mg/NM^3$. We have also provided on line SPM, $SO_2$ and $NO_x$ meters in our 16 TPH boiler chimney and monitoring the same on continuous basis.

- The entire fuel and ash handling systems in our boiler has been completely covered to avoid dust emission while handling fuel and ash.

**ENVIRONMENT & SAFETY MANAGEMENT: ISO 14001: OHSAS 18001**

- We have designed and implemented the Environmental Management System (EMS) as per the international standard ISO 14001. This system is being regularly audited every six months by M/s Det Norske Veritas (DNV). Our unit is also OHSAS 18001 standards by the same agency.

**TRAINING OUR EMPLOYEES ON ENVIRONMENTAL ISSUES:**

- We are conducting training programme for our employees to educate, train and motivate their activities in an environmental friendly/responsible manner.

- As a part of ongoing ISO 14001 and OHSAS 18001 activities, we have been conducting job related environmental training programmes for all our employees in various departments.

- We are taking lead for spreading awareness on Environmental preservation by mobilising/campaigning on environmental issues among our employees and neighbouring villagers. The Environment Day was celebrated in our factory presided over by the DEE, TNPCB every year.

- Green Belt Initiative – Tree Plantation

  To improve green belt in our Plant premises, we have planted 4185 tree saplings and supplied 200 saplings to ARLM School Cuddalore and Sarath Logistics, Pondicherry during the financial year.

- 236 numbers of tree saplings given to nearby village for plantation on Independence Day.

- 365 numbers of tree saplings planted outside of factory premises. (Adjacent to the SIPCOT service road)

We have planned to plant 1000 more tree saplings during the financial year.

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## PART – H

**Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution**

- It is planned to continuously improve the greenery in the Plant in the ensuing years.
- We are currently using Environmental friendly imported coal originating from Indonesia. This coal contains less sulphur content.

## PART - I

**Any other particulars for improving the quality of the environment.**

- We are conducting characterisation of the effluent and recycling the same in the plant for various process applications.
- Our unit has been awarded the II prize by the Inspectorate of Factories, Tamil Nadu Government's **'State Safety Award '**, for the safety standards set under the group B, scheme III for having recorded the longest accident free period man-hours. Safety Trophy and Certificate was handed over by the TN Minister in a public function at Chennai, on 19th December 2012.
- Our unit has received the following national level awards from the Confederation of Indian Industry, as **"Excellent Energy Efficient Unit"** and **"Innovative Project award"** in the **'13th National Award for Excellence in Energy Management 2012'** event held in Hyderabad in August 2012.

**CSR activities carried out during FY 2012-13**

- 1000 Kgs of Rice donated to the neighboring villagers, affected by rain in the year 2012
- Contributing Rs 114000/ each (for two teachers) as salary to the PTA employed teachers of the Government higher school at Karaikadu.
- Contributing Rs 60000/ towards scholarship of the first five rank holders of the Government higher school at Karaikadu. (For plus one and plus two).
- Bi Monthly Electricity bill of around Rs 18000/ is paid to the Government higher school at Karaikadu.
- Replaced the damaged AC sheet roofing in the class room. Amount spent on the job Rs 25000/=
- Re fixed the School name board in position which had fallen down due to Thane cyclone.
- Conducted a session with the students, teachers and parents of the local community on "Environment awareness"