

Compliance Report as at the end of MAR 2011

for conditions in Environmental Clearance No.: J-11011/32/2007-IA-II(I) dated 23.07.2007 issued by Ministry of Environment & Forests, New Delhi, for expansion project of existing pesticides unit by United Phosphorus Ltd., on Plot Nos. 3 – 11, GIDC, Vapi, Dist – Valsad, Gujarat

S. No	Conditions	Status																																																															
2	Environmental clearance for the following products after expansion/addition																																																																
	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Products</th> <th>Capacity MTM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Aluminum Phosphide (Fumigant)</td> <td>200</td> </tr> <tr> <td>2</td> <td>Zinc Phosphide (Rodenticide)</td> <td>40</td> </tr> <tr> <td>3</td> <td>Cypermethrin (Insecticide)</td> <td>400</td> </tr> <tr> <td>4</td> <td>Alpha Cypermethrin (Insecticide)</td> <td>10</td> </tr> <tr> <td>5</td> <td>Permethrin (Insecticide)</td> <td>100</td> </tr> <tr> <td>6</td> <td>Desmedipham (DMP) (Herbicide) Phenmedipham (PMP) Either OR</td> <td>100</td> </tr> <tr> <td>7</td> <td>Bifenthrin (Insecticide)</td> <td>20</td> </tr> <tr> <td>8</td> <td>Clodinafop (UPH-203) (Herbicide)</td> <td>20</td> </tr> <tr> <td>9</td> <td>Safner (UPH-203 S) (Herbicide)</td> <td>5.0</td> </tr> <tr> <td>10</td> <td>Thiomethaxam (STAR) (Insecticide)</td> <td>5.0</td> </tr> <tr> <td>11</td> <td>Magnesium Phosphide (Fumigant)</td> <td>8.0</td> </tr> <tr> <td>12</td> <td>Metameton (Herbicide)</td> <td>25</td> </tr> <tr> <td>13</td> <td>Sulfosulfuron (Herbicide)</td> <td>2.0</td> </tr> <tr> <td>14</td> <td>Heptenophos (Pesticide)</td> <td>8.33</td> </tr> <tr> <td>15</td> <td>Red Phosphorus (Non Pesticide)</td> <td>80</td> </tr> <tr> <td>16</td> <td>Pesticide Formulation Product</td> <td>300</td> </tr> <tr> <td>17</td> <td>Dichloro vinyl Chloride (DVACL)</td> <td>300</td> </tr> <tr> <td>18</td> <td>Metaphenoxy Benzaldehyde (MPBAD)</td> <td>275</td> </tr> <tr> <td>19</td> <td>ASAM</td> <td>2.0</td> </tr> <tr> <td>20</td> <td>Hydrazide</td> <td>20</td> </tr> </tbody> </table>	S. No.	Products	Capacity MTM	1	Aluminum Phosphide (Fumigant)	200	2	Zinc Phosphide (Rodenticide)	40	3	Cypermethrin (Insecticide)	400	4	Alpha Cypermethrin (Insecticide)	10	5	Permethrin (Insecticide)	100	6	Desmedipham (DMP) (Herbicide) Phenmedipham (PMP) Either OR	100	7	Bifenthrin (Insecticide)	20	8	Clodinafop (UPH-203) (Herbicide)	20	9	Safner (UPH-203 S) (Herbicide)	5.0	10	Thiomethaxam (STAR) (Insecticide)	5.0	11	Magnesium Phosphide (Fumigant)	8.0	12	Metameton (Herbicide)	25	13	Sulfosulfuron (Herbicide)	2.0	14	Heptenophos (Pesticide)	8.33	15	Red Phosphorus (Non Pesticide)	80	16	Pesticide Formulation Product	300	17	Dichloro vinyl Chloride (DVACL)	300	18	Metaphenoxy Benzaldehyde (MPBAD)	275	19	ASAM	2.0	20	Hydrazide	20	<ul style="list-style-type: none"> • CC & A No 10596 dated 27/05/2008 was submitted with the FIRST Report. • Production details Attached as Annexure # A
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BY PRODUCTS

1	Phosphoric Acid (100 %)	25
2	Hydrochloric Acid (30 %)	2048
3	Spent Sulfuric Acid (46 -68 %)	1025
4	Aluminum Chloride (20 %)	1130
5	Sodium sulfite (20 %)	930
6	Phosphorous Oxy - Chloride	412
7	Ammonium Chloride	34.8

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3	<ul style="list-style-type: none"> The solvent recovery is about 95%. All liquid raw material will be stored in storage Tanks and Drums and will be transported by road. Water consumption will be 3790 KLD which will be met through GIDC water supply 	<ul style="list-style-type: none"> Being Complied Complied Only GIDC water is used. Water consumption details are <u>attached as Annexure # B</u>
	<ul style="list-style-type: none"> All the incinerable waste shall be sent to the common incineration system of BEIL for incineration. Other waste shall be sent to the approved TSDF site of BEIL, Ankleshwar for which unit has membership Natural gas will be used for Boiler as alternative fuel. 	<ul style="list-style-type: none"> Being Complied Being Complied ,All Boilers now use NG

SPECIFIC CONDITIONS:

i	<ul style="list-style-type: none"> The gaseous emissions (SO₂, NO_x, VOC and HC) particulate matter from various process units shall 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. 	<ul style="list-style-type: none"> Complied. All parameters are monitored both, in - house as well as by Third Party (SGS). SGS Reports for MAY 10 attached as Annexure # C (3 pages) & all the parameters are observed to be with in the permissible limits Noted
ii	<ul style="list-style-type: none"> New Standards for pesticides unit, as proposed by the CPCB under the E P Act, 1986 shall be followed by the Unit. 	<ul style="list-style-type: none"> Complied.
iii	<ul style="list-style-type: none"> Stacks of 30.5 m will be provided with the Boilers and 15.5 m with D.G. Sets for dispersion of emissions 	<ul style="list-style-type: none"> Complied.
iv	<ul style="list-style-type: none"> Water /Alkali Two stage Scrubber systems, Mist Eliminator with Koch filter and Wet Scrubber with Mist Eliminator shall be installed for the boilers, Thermic Fluid heater, D.G. Set and process stacks from pesticides (tech), pesticide intermediates and AIP, ZnP plant. The scrubbed water shall be sent to ETP for further treatment. 	<ul style="list-style-type: none"> Complied. We have provided scrubbers to process stacks Mist eliminator & Demister are provided on ALP Reactor stacks and Mist Eliminator on ZNP Reactor Stack. SGS Monitoring reports for MAY 10 are attached as <u>Annexure # C</u> (3 pages) Scrubbed fluid is sent to ETP for further treatment
v	<ul style="list-style-type: none"> Regular monitoring of emissions from the stack shall be carried out for HC and VOC, besides the criteria pollutant. Levels of HC and VOC shall also be monitored in the ambient air at various probable locations in and around the plant. 	<ul style="list-style-type: none"> Complied. Both HC & VOC are monitored on a monthly basis.
vi	<ul style="list-style-type: none"> The locations of ambient air quality monitoring stations shall be reviewed in consultation with the State Pollution Control Board (SPCB) and additional stations shall be installed, if required in the downwind direction as well as where maximum ground level concentration are anticipated. 	<ul style="list-style-type: none"> Noted and complied
vii	<ul style="list-style-type: none"> FO as fuel in boilers shall be replaced with natural gas as early as possible. 	<ul style="list-style-type: none"> Being Complied ,All Boilers now use NG

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viii	<ul style="list-style-type: none"> Use of toxic solvents like Methylene Chloride (M.C.) etc. shall be minimized to the extent possible. No Benzene shall be used as solvent and no odorous compounds/gas like Mercaptans or Hydrogen Sulfide shall be used or formed in any of reactions at the site. 	<ul style="list-style-type: none"> No such chemicals being used or generated.
ix	<ul style="list-style-type: none"> Bioassay test and toxicity index shall be carried out regularly. All the storage tanks will be under negative pressure to avoid any leakages. Breathers, N2 blanketing and condensers will be provided for all the storage tanks. Closed handling systems for chemicals and solvents will be provided. 	<ul style="list-style-type: none"> Complied, Both the tests are being carried out. Provided systems as per requirement Provided system as per requirement Facilities to minimize solvent/ chemicals losses provided
x	<ul style="list-style-type: none"> Magnetic seals will be provided for pumps/agitators for reactors for reduction of fugitive emissions. Chilled Brine based condensers shall be used to prevent VOC emissions. Solvent traps shall be installed wherever necessary. 	<ul style="list-style-type: none"> For control of fugitive emissions, we have provided seals on reactors. Installed pumps with mechanical seal and, closed system for handling Bromine, PCL3, POCL3 & Phenol. Provided on CTC storage tank.
xi	<ul style="list-style-type: none"> All venting equipment shall have vapour recovery system. All the pumps and other equipments where there is a likelihood of HC leakages shall be provided with Leak Detection and Repair (LDAR) system and LEL indicators and Hydrocarbon detectors. Provision for immediate isolation of such equipment, in case of a leakage will also be made. The company shall provide a well defined Leak Detection and Repair (LDAR) programme for quantification and control of fugitive emissions. The detectors sensitivity will be in ppm levels. 	<ul style="list-style-type: none"> LDAR programme is in practice
xii	<ul style="list-style-type: none"> Spent solvents shall be recovered as far as possible & solvent recovery shall be further increased from the present 95% to at least 98 percent. Solvent vapours emitted during purification process from purification tanks as fugitive emissions shall be reduced as far as possible. 	<ul style="list-style-type: none"> Development of various systems to increase recovery of solvents has been taken up as an on going project. Hexane Recovery was above 96%. For all other solvents it was above 95%. The aggregate recovery was above 96.30%.
xiii	<ul style="list-style-type: none"> Phosphorous shall be stored under water to prevent fuming. 	<ul style="list-style-type: none"> Being complied
xiv	<ul style="list-style-type: none"> Phosphine monitors in Aluminum Phosphide plant shall be installed. Portable monitoring instruments for other gases like Chlorine and Ammonia shall be provided. 	<ul style="list-style-type: none"> Phosphine & Chlorine monitors are installed in ALP & MPBAD Plants respectively. Installation of Ammonia Monitor is being planned. Being complied.
xv	<ul style="list-style-type: none"> Fugitive emissions in the work zone environment, product, raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Boards/Central Pollution Control Board. 	<ul style="list-style-type: none"> Regular monitoring is done for fugitive Emissions and Reports are enclosed as Annexure # D (Form 37 for monitoring done in ALP, DVACL & MPBAD Plants)

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xvi	<ul style="list-style-type: none"> • No ground water will be used for the project. • The waste water generation from the Process / Wash, Cooling Tower / Boiler water Blow down and Domestic shall not exceed 2,398 KLD which will be treated in modified and upgraded ETP of the company. • After the expansion, high TDS low COD effluent will be segregated and sent to MEE and High COD low- TDS effluent will be sent to incinerator of BEIL. • Cyanide bearing effluent will be detoxified and then sent to ETP after checking cyanide and pesticide levels. • Only the normal effluent will be sent to company's ETP for further treatment to achieve GPCB norms. The treated effluent will be disposed off into CETP through GIDC, Vapi drainage system. 	<ul style="list-style-type: none"> • Noted and complied • Complied. The average daily effluent generation is 965.55 KLD .Monthwise generation is shown in ANN # E. The treated effluent is sent to CETP for further treatment and disposal • High TDS effluent is treated in MEE. • Complied • Complied
xvii	<ul style="list-style-type: none"> • Hazardous and toxic waste generated during process like distillation residue, spent carbon, spent mixture solvents, process organic residue shall be segregated and sent for treatment and disposal. Incinerable waste shall be incinerated in a common incineration facility or otherwise these may be incinerated in a properly designed in-house incinerator with energy recovery facility • The incinerator shall meet the CPCB standards and guidelines • Hazardous wastes temporary storage shall be properly maintained and stock shall be minimum. Hazardous Waste containers shall be properly labeled. . 	<ul style="list-style-type: none"> • Complied. We are members of the Common Incineration Facility operated by BEIL,Ank;leshwar • Not Applicable-as we do not have Incinerator • Complied
xviii	<ul style="list-style-type: none"> • Emissions from the incinerator shall be with in the prescribed norms for the incinerators. Monitoring Protocol as prescribed in these standards shall be followed. 	<ul style="list-style-type: none"> • Not Applicable
xix	<ul style="list-style-type: none"> • The company shall undertake following Waste Minimization measures. <ul style="list-style-type: none"> • Metering and control of quantities of active ingredients to minimize waste. • Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. • Use of automated filling to minimize spillage. • Use of Close Feed system into batch reactors. • Venting equipment through vapour recovery system. • Use of high pressure hoses for equipment clearing to reduce wastewater generation. 	<ul style="list-style-type: none"> • Noted and shall be implemented • We also have a dedicated dept working for process improvement on an ongoing basis.
xx	<ul style="list-style-type: none"> • The project authorities shall strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in 2000 for handling of hazardous chemicals. Necessary approvals from Chief Controller of Explosives must be obtained before commissioning of the expansion project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented. Regular mock drills shall be carried out for both On-site and Off-Site plans. 	<ul style="list-style-type: none"> • Noted and being complied. • On Site Emergency Plan is in place. • Mock Drills are conducted regularly. • Take active part in OFF SITE mock drill as & when organized by the Authorities.

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xxi	<ul style="list-style-type: none"> All Transportation of Hazardous Chemicals shall be as per the MVA, 1989. As submitted by the unit to the Ministry, transportation of Hazardous Chemicals shall be switched over to the railways. 	<ul style="list-style-type: none"> Noted for compliance
xxii	<ul style="list-style-type: none"> The company shall develop rain water harvesting structures to harvest the run off water for recharge of ground water. 	<ul style="list-style-type: none"> Complied. We have installed the system in Administrative building.
xxiii	<ul style="list-style-type: none"> Minimum 25% of the total area shall be developed as green belt as per the CPCB guidelines. 	<ul style="list-style-type: none"> Complied As this is an existing site and area available for development is less, we have earmarked 5 Acres of Land for various plantations including teakwood trees on our nearby land on Survey no.39/1 at Village Nahuli.
xxiv	<ul style="list-style-type: none"> Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. 	<ul style="list-style-type: none"> Being complied
xxv	<ul style="list-style-type: none"> Training shall be imparted to all employees on safety and health aspects of chemicals handling. As informed to the Ministry, OHSAS 18001 shall be continued. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted. 	<ul style="list-style-type: none"> Being Complied Noted Being complied
xxvi	<ul style="list-style-type: none"> Usage of PPE's by all employees/ workers shall be ensured. 	<ul style="list-style-type: none"> Being complied
xxvii	<ul style="list-style-type: none"> The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP). 	<ul style="list-style-type: none"> Being complied
xxviii	<ul style="list-style-type: none"> The Company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the expansion project 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. 	<ul style="list-style-type: none"> Complied. We have installed the system in Administrative building.
xxix	<ul style="list-style-type: none"> All the recommendations made by the consultants in respect of environmental management and risk mitigation measures relating to the project shall be implemented. 	<ul style="list-style-type: none"> Complied
xxx	<ul style="list-style-type: none"> The company will undertake all relevant measures, as indicated during the Public Hearing for improving the Socio-economic conditions of the surrounding area. CSR activities will be undertaken by involving local villages and administration 	<ul style="list-style-type: none"> Public hearing was not conducted for this particular project as per Notification of 2006. However we have undertaken the following:- Various CSR activities including operation of school (Gnyan Dham), a College (ROFFEL) and a Nursing Institute. Various other common CSR Projects like Haria Hospital etc.

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xxxii	<ul style="list-style-type: none"> The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval. 	<ul style="list-style-type: none"> Supporting the common effluent treatment plant. Supporting the local notified industrial estate in municipal solid waste collection and treatment (Supported by giving technology for kitchen waste treatment). Creating Environmental awareness in local community including celebration of World Environment Day. Supporting Vapi Industries Association in organizing environmental activities.

General Conditions

I	<ul style="list-style-type: none"> The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board. 	<ul style="list-style-type: none"> Noted for compliance
ii	<ul style="list-style-type: none"> No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any. 	<ul style="list-style-type: none"> Noted and complied
iii	<ul style="list-style-type: none"> At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved. 	<ul style="list-style-type: none"> Noted and complied
iv	<ul style="list-style-type: none"> The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes. 	<ul style="list-style-type: none"> Noted and complied
V	<ul style="list-style-type: none"> The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time). 	<ul style="list-style-type: none"> Noted for compliance. We are monitoring noise level regularly. See Ann-F for a Report.
vi	<ul style="list-style-type: none"> The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. 	<ul style="list-style-type: none"> Being complied
vii	<ul style="list-style-type: none"> A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. 	<ul style="list-style-type: none"> Environmental Management Cell with all facilities is functioning.

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viii	<ul style="list-style-type: none"> The project authorities shall earmark separate funds of Rs. 04.00 Crores 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. 	<ul style="list-style-type: none"> Funds have been utilized for :- Up gradation of ETP (Rs. 3.1 Crores) Installation of MEE for treating high TDS effluent stream (Rs 1.6 Crores)
ix	<ul style="list-style-type: none"> The implementation of the project vis-à-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. 	<ul style="list-style-type: none"> Noted and complied Half yearly reports are being sent.
X	<ul style="list-style-type: none"> 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/Committee and may also be seen at Website of the Ministry at http://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry. 	<ul style="list-style-type: none"> Complied
xi	<ul style="list-style-type: none"> The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project. 	<ul style="list-style-type: none"> Noted Noted and complied We have completed the Project & obtained CC&A Order from GPCB
6	<ul style="list-style-type: none"> The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory. 	<ul style="list-style-type: none"> Noted
7	<ul style="list-style-type: none"> The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions. 	<ul style="list-style-type: none"> Noted
8	<ul style="list-style-type: none"> The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules. 	<ul style="list-style-type: none"> Noted