

COMPLIANCE REPORT

Name of Project : Expansion and addition of Chemicals and Pharmaceutical products of IOL Chemicals and Pharmaceuticals Limited, V&P.O Fatehgarh Channa, Trident Complex, Mansa Road, Dhaula, Barnala (Punjab)-148107

MOEF Clearance Letter No & Date : F. No 11011/976/2008-I A II (I) Dated 24.08.2009

Period of Compliance Report : 24.02.2012 to 23.08.2012
A- SPECIFIC CONDITIONS

S.No.	EC Conditions	Compliance																												
1	<p>The effluent shall be segregated into low TDS and high TDS streams. The high TDS stream (95m³/d) shall be evaporated in the multiple effect evaporators. The low TDS stream (545m³/d) shall be given primary, secondary and tertiary treatment. The treated effluent after complying with the prescribed standards shall be used for land irrigation within the plant premises. The ground water quality monitoring shall be carried regularly around the irrigated land area and data submitted to the RO of the Ministry/CPCB/State Pollution Control Board.</p>	<p>Effluent streams have been segregated into low TDS and high TDS streams. The high TDS stream is being evaporated in the multiple effect evaporators. The low TDS stream is already being treated in primary, secondary and tertiary treatment. Detail is attached as per annexure no 1 The treated effluent is complying with the prescribed standards laid down by the Board and being used for land irrigation within the plant premises. Ground water quality report shall be given properly to the office of the board and results are as follows</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Parameters</th> <th>Unit</th> <th>Result</th> <th>Limits</th> </tr> </thead> <tbody> <tr> <td>Colour</td> <td>hazen</td> <td><5.0</td> <td>5.0 Max</td> </tr> <tr> <td>Odour</td> <td></td> <td>Unobjectionable</td> <td>Unobjectionable</td> </tr> <tr> <td>Taste</td> <td>Agreeable</td> <td>Agreeable</td> <td>Agreeable</td> </tr> <tr> <td>Turbidity</td> <td>NTU</td> <td><5.0</td> <td>5 Max</td> </tr> <tr> <td>pH value at 25.0°C</td> <td></td> <td>7.8</td> <td>6.5-8.5</td> </tr> <tr> <td>Total Hardness (as Caco₃)</td> <td>mg/l</td> <td>197.4</td> <td>200 Max</td> </tr> </tbody> </table>	Parameters	Unit	Result	Limits	Colour	hazen	<5.0	5.0 Max	Odour		Unobjectionable	Unobjectionable	Taste	Agreeable	Agreeable	Agreeable	Turbidity	NTU	<5.0	5 Max	pH value at 25.0°C		7.8	6.5-8.5	Total Hardness (as Caco₃)	mg/l	197.4	200 Max
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		Iron (as Fe)	mg/l	0.03	0.3 Max
		Chloride (as Cl)	mg/l	78.34	250 max
		Coli forms	MPN/100 ml	<2	10 max
		Ecoli / 100 ml		Absent	Absent

All above parameters are tested from NABL Accredited Laboratories . Ground Water Testing Report is **attached as per annexure no 2.**

After part expansion the total low TDS effluent 352 M3/ day would be treated in existing ETP having the capacity 750 M3/ day and the total high TDS effluent 3 M3/day would be treated in existing Evaporator having the capacity of 5 M3/day.

ii	The process emissions in the form of acid mist shall be scrubbed with scrubber. The emissions shall conform to the prescribed standards. The particulate emissions from the 80TPH boiler shall be controlled by installation of ESP and emissions shall be dispersed through stack of adequate height as per CPCB /State Pollution Control Board standards. The from the DG set shall be dispersed through stack and height of the stack shall be provided as per the CPCB standards	Gas scrubbing system is already installed on the system and testing is done by PPCB lab reports are as follows			
		Point of sample Collection	Unit	Results from PPCB on dated 26.04.2011	Results from PPCB on dated 28.12.2011
		Port Hole on Stack after APCD of Boiler 80 TPH	SPM	99 mg/NM ₃ at 12%CO ₂	125 mg/NM ₃ at 12%CO ₂
		Port Hole on Stack after APCD of Boiler 15 TPH	SPM	-----	-----
		Port Hole on Stack after APCD of Boiler 32 TPH	SPM	-----	-----
		Port Hole on Stack after APCD of Ketene Furnace	SPM	126 mg/NM ₃ at 12%CO ₂	90 mg/NM ₃ at 12%CO ₂
		Port Hole on Stack after APCD (Caustic Scrubber)of IBU Section	SPM	-----	Not Detected

		Port Hole on Stack after APCD (Caustic Scrubber)of Mono Chloro Acetic Acid Section	SPM	Not Detected	Not Detected
		Port Hole on Stack of Thermopac	SPM	147 mg/NM ₃ at 12%CO ₂	-----

Reports are attached as per annexure no 3
 ESP is installed on 80 MT boiler to stop the emission
 Feasibility report is **attached as per annexure no 4.**
 And adequate height of stack is 60 mts to disperse the emission properly.
 DG set 1000 KVA = 7.5 Mts
 625 KVA = 6.3 Mts. as per the CPCB standards

iii The company shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on its 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 State Pollution Control Board. The levels of SPM, RSPM, SO₂, NO_x and VOC (ambient levels) and ground water quality data regarding pH, BOD, COD and emissions from the stacks shall be monitored and displayed at a convenient location near the main gate of the company and at important public places.

The levels of SPM, RSPM, SO₂, NO_x and VOC (ambient levels) and ground water quality data regarding pH, BOD, COD and emissions from the stacks are monitored regularly Result of effluent sample tested by **NABL accredited Laboratory on dated 20.10.2011**

Parameters	Final Outlet of ETP on dated
pH	7.56
TSS (mg/l)	20
TDS(mg/l)	898
COD(mg/l)	144
BOD(mg/l)	23.2
O&G (Mg/L)	3
Chlorides	38.4
Sulphates	13.1
Bioassay	100 % survival of fish in 100 % effluent after 96 hours

Results from Thapar Lab are attached as follows on dated 17.11.11

Parameters	Final Outlet of ETP on dated 17.11.11
pH	7.5
TSS(mg/l)	68
COD(mg/l)	166
BOD(mg/l)	28
Phosphorus(mg/l)	0.56
Sulphide (mg/l)	<1.0
Phenolic Compound (mg/l)	0.09
As (mg/l)	<0.001
Pb (mg/l)	<0.05
Cr (mg/l)	0.06
Hg (mg/l)	0.004
O&G(mg/l)	9.9
CN(mg/l)	<0.1
Bioassay(in 100% effluent after 96 hrs)	100%Survival of fish in 100 % effluent after 96 hrs

Reports are attached as per annexure no 5.

		<p>Ambient air Quality Report</p> <table border="1"> <thead> <tr> <th data-bbox="786 300 1079 388">Location</th> <th data-bbox="1079 300 1369 388">Parameter</th> <th data-bbox="1369 300 1557 388">Results</th> </tr> </thead> <tbody> <tr> <td data-bbox="786 388 1079 531">Air Monitoring Station No 4(IBB MCA area) 09.01.2012</td> <td data-bbox="1079 388 1369 531">TSPM</td> <td data-bbox="1369 388 1557 531">108.19</td> </tr> <tr> <td data-bbox="786 531 1079 577"></td> <td data-bbox="1079 531 1369 577">RSPM</td> <td data-bbox="1369 531 1557 577">47.26</td> </tr> <tr> <td data-bbox="786 577 1079 623"></td> <td data-bbox="1079 577 1369 623">NRSPM</td> <td data-bbox="1369 577 1557 623">60.93</td> </tr> <tr> <td data-bbox="786 623 1079 732">Air monitoring Station No 3 (26.01.2012)</td> <td data-bbox="1079 623 1369 732">TSPM</td> <td data-bbox="1369 623 1557 732">110.76</td> </tr> <tr> <td data-bbox="786 732 1079 779"></td> <td data-bbox="1079 732 1369 779">RSPM</td> <td data-bbox="1369 732 1557 779">46.88</td> </tr> <tr> <td data-bbox="786 779 1079 825"></td> <td data-bbox="1079 779 1369 825">NRSPM</td> <td data-bbox="1369 779 1557 825">63.88</td> </tr> </tbody> </table> <p>Reports are attached as per annexure no 11.</p>	Location	Parameter	Results	Air Monitoring Station No 4(IBB MCA area) 09.01.2012	TSPM	108.19		RSPM	47.26		NRSPM	60.93	Air monitoring Station No 3 (26.01.2012)	TSPM	110.76		RSPM	46.88		NRSPM	63.88
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iv	<p>The Company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008 for management of hazardous wastes and prior permission from GPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. The concerned company shall undertake measures for fire fighting facilities in case of emergency.</p>	<p>Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules 2008 is valid up to 12/02/2013 .On site preparedness plan is developed at site it avoid the risk of fire attached as per annexure no 6</p> <p>Auto mode hydrant Grid is installed in and around the facility and sufficient amount and combination of portable fire extinguishers are installed in the form of fire points.</p>																					
v	<p>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. All Transportation of Hazardous Chemicals shall be <i>as per</i> the MVA, 1989.</p>	<p>Agreed with the conditions</p>																					
vi	<p>Hazardous chemicals shall be stored in tanks in tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm. Solvent transfer shall be by pumps.</p>	<p>Hazardous chemicals are already being kept / stored in tanks in tank farms, and in drums in RM store, Solvents tanks are buried under the land to avoid the risk of fire. Solvent transfer is already being by pumps.</p>																					

<p>vii</p>	<p>The company shall undertake following Waste Minimization measures :-</p> <ul style="list-style-type: none"> a) Metering and control of quantities of active ingredients to minimize waste. b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. c) Use of automated filling to minimize spillage. d) Use of "Close Feed" system into batch reactors. e) Venting equipment through vapour recovery system. f) Use of high pressure hoses for equipment clearing to reduce wastewater generation 	<ul style="list-style-type: none"> a)-Regular meetings with process department to control of quantities of active ingredients to minimize waste. b) Reuse of by product is already in use, as well as HCl is being use in DM plant. c)-Automatic filling machines are already installed for filling finish goods. d) Feed of liquid input in reactor is already in closed system e) - condensers and chillers are already installed on the recovery of vapors. f) Equipments cleaning are already being done by high pressure jet system to minimize the use of water/ waste reduction.
<p>viii</p>	<p>For control of fugitive emissions following steps shall be followed :</p> <ul style="list-style-type: none"> 1-Closed handling system shall be provided for chemicals. 2-Reflux condenser shall provided over reactor. 3-System of leak detection and repair of pump/pipeline based on preventive maintenance. 4-The acids shall be taken from storage tanks to reactors through closed pipeline. Storage tanks shall be vented through trap receiver and condenser operated on chilled water. 	<ul style="list-style-type: none"> 1-Already in practices. 2- Already in practices. 3- Already in practices. 4- Already in practices.

ix	<p>Solvent management shall be as follows :</p> <ol style="list-style-type: none"> a. Reactor shall be connected to chilled brine condenser system b. Reactor and solvent handling pump shall have mechanical seals to prevent leakages. c. The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 95% recovery d. Solvents shall be stored in a separate space specified with all safety measures. e. Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. f. Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses 	<ol style="list-style-type: none"> a) Already in practices. b) Already in practices. c) Well designed and calculated with 21% extra efficiency condensers are already installed. d)-Already in practices. e) Earthing is already provided in all the electrical equipment wherever solvent handling is being done. f) Agreed with the conditions.
x	<p>Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by PPCB.</p>	<p>Agreed with the conditions ,reports are attached as per annexure no 7</p>
xi	<p>During transfer of materials, spillages shall be avoided and garland drains be constructed to avoid mixing of accidental spillages with domestic waste and storm drains.</p>	<p>Agreed with the conditions.</p>
xii	<p>The Company shall harvest surface as well as rainwater 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.</p>	<p>Rain water Harvesting system is already developed at the facility attached as per annexure no 8</p>

xiii	The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	On site preparedness plan is developed at site to avoid the risk of fire attached as per annexure no 6. Auto mode hydrant Grid is installed in and around the facility and sufficient amount and combination of portable fire extinguishers are installed in the form of fire points.
xiv	Training shall be imparted to all employees on safety and health aspects of chemicals handling. 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.	Training to employee on safety and health aspect is already in practices and periodically training sessions are being organized. Training sheets & Mock drill photos are attached as per annexure no 9 Medical examinations for all employees are in regular practice attached as per annexure no 10.
xv	Usage of PPEs by all employees/ workers shall be ensured.	Already in practices and under proper monitoring
xvi	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers is done on a regular basis and records maintained as per rules and regulations
xvii	Green belt shall be developed in 22 acres of the plant area. Selection of plant species shall be as per the CPCB guidelines.	Green belt in 22 acres was completed in last monsoon season . Plant species are according to CPCB guidelines e.g Eucalyptus, Neem, popular etc.
xviii	The company shall undertake rainwater harvesting measures to recharge the ground water as well as reduced consumption of water.	Rain water Harvesting system is already developed at the facility attached as per annexure no 8
xix	The adequate financial provisions shall be made in the budget of the project for implementation of the above suggested environmental safeguards. Fund so earmarked shall not be diverted for any other purposes.	Agreed with the condition.
xx	The company shall comply with the recommendations made in the EIA/EMP/Risk assessment report and public hearing	Agreed with the condition
xxi	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. The	Agreed with the condition

	housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	
	B-GENERAL CONDITIONS:	
i	The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board.	Conditions stipulated by SPCB have been complied. SPCB has granted Air Consent No.ZO-II/SGR/APC/2010/V-381, dated 18/06/2010 valid up to 22/10/2012 and Water Consent No. No.ZO-II/SGR/WPC/2010/V-410, dated 18/06/2010 valid up to 22/10/2012.
ii	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In <i>case</i> 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.	No expansion or modifications will be carried out without approval of MOEF.
iii	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.	Agreed with the condition

<p>iv</p>	<p>The gaseous emissions (NO_x, SO₂ and SPM) and Particulate matter along with RSPM levels 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 <i>are</i> rectified to achieve the desired efficiency. Stack monitoring for SO₂, NO_x and SPM shall be carried.</p>	<p>Agreed with the condition, reports are above attached and results are with in limit</p>
<p>v</p>	<p>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 <i>are</i></p>	<p>Ambient air quality monitoring stations is installed in the up wind and downwind direction at ETP and North Block. Reports are attached as per annexure no 11</p>

	anticipated.	
vi	Dedicated scrubbers and stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided to control the emissions from various vents. The scrubbed water shall be sent to ETP for further treatment.	Gas scrubbing system along with adequate height of stack is already installed on the system and scrubbed water is already going to ETP for further treatment.
vii	The overall noise levels in and around the plant <i>area</i> 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).	Noise level monitoring is in continue practice and results are under limit as per prescribed standards attached as per annexure no 12
viii	The project proponent shall also comply with all the environmental protection measures and safeguards proposed in the project report submitted to the Ministry. All the recommendations made in respect of environmental management and risk mitigation measures relating to the project shall be implemented	Agreed with the condition and all mitigation measures taken in consideration.
ix	The company will undertake all relevant measures for improving the Socio-economic conditions of the surrounding area. CSR activities will be undertaken by involving local villages and administration	Agreed with the condition. The CSR activities concept is already implemented in plant attached as per annexure no 13.
x	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Agreed with the condition. The company takes eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment attached as per annexure no 13
xi	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions	Agreed with the condition, Environment Management Cell is already set up that includes General Manager, Head (Environment), Engineer, Chemist, Operator, Helper.

xii	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.	Agreed with the condition
xiii	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 and shall be posted on the website of the Company.	Agreed with the condition We will submit the six monthly status report to monitoring agency/ on web site,
xiv	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any , were received while processing the proposal	Agreed with the condition, copy of the clearance letter is already sent to Zila Parishad.
xv	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated E C 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 State Pollution Control Board.	Agreed with the condition We have already submitted the six monthly status of compliance of the E.C. conditions and results of monitoring data to MoEF, s Regional office Chandigarh ,PPCB and concerned authorities copy attached as per annexure no 14
xvi	The environmental statement for each financial year ending 31 st March in Form-V as is mandated shall be submitted 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 environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	The environmental statement for financial year 2010 -2011 in Form-V has been submitted to MoEF ,s Regional office ,Chandigarh and PPCB regional office report is attached as per annexure no 15
xvii	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	Agreed with the condition

	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.	
xviii	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.	Agreed with the condition
9.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed with the condition
10	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Agreed with the condition
11	Any appeal against this environmental clearance shall lie with the National Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Authority Act, 1997.	Agreed with the condition
12	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986 Hazardous Wastes (Management and Handling) Rules, 2003/2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	SPCB has granted Air Consent No.ZO-II/SGR/APC/2010/V-381, dated 18/06/2010 valid up to 22/10/2012 and Water Consent No. No.ZO-II/SGR/WPC/2010/V-410, dated 18/06/2010 valid up to 22/10/2012, Public Liability Act policy valid from 10/08/2011 to 09/08/2012 . Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules 2008 is valid up to 12/02/2013