



Otsuka Otsuka Chemical (India) Pvt. Ltd.

Issued by dept. other than Human Resources

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OCIPL/F/2021-22/EC compliance-CDTR-Pi**632**

30-11-2021

To,

The Regional Director,

Ministry of Environment, Forest and Climate Change

Aranya Bhawan, Jhalana Doongri

Jaipur, (RAJ).

Subject: EC Compliance F.No. J-11011/520/2007- IA II (I)
For the Period of **Apr-21 to Sep-21**

Sir,

Please find attached herewith compliance status of Environment Clearance No. J-11011/520/2007- IA II (I) for your needful please.

Thanking you.

For Otsuka Chemical (India) Pvt. Ltd.

Pratul Gupta

Vice President

CC: Regional Office RSPCB, VKI Jaipur

Enclosures: As per attached List

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Specific conditions:

Condition	Compliance									
1. Multi Cyclone separator with a stack of 30 m height shall be installed for dispersion of particulate matter from the boiler. Cyclone separator efficiency shall be minimum 90%. DG sets shall also have a chimney of 30m.	ESP has been installed and is used for controlling the particulate matter whose efficiency remains more than 90%. Refer Annexure: 01 05 numbers of DG Sets, with inbuilt acoustic enclosure and 30 m stack height.									
2. There shall be no process emissions from the project however an emergency scrubber shall be provided.	As such there is no process emission, but for safe side scrubbers have been installed. Refer Annexure : 01									
3. There shall be no odour nuisance from products & materials used.	There is no odour nuisance from the products as well as from materials used.									
4. Water withdrawal shall not exceed 250 KLD which will be met through RIICO water supply.	RIICO has no water supply facility therefore permission from CGWA has been taken for 800 KLD.									
5. The waste water generation shall not exceed 58 KLD which shall be treated in ETP and shall be recycled in the plant. The effluent streams shall be segregated and high COD stream shall be incinerated. High TDS stream shall be sent to MEE and low COD shall be treated in the ETP by activated sludge method.	23KLD effluent generated from CDTR-PI is segregated & divided for treatment into two stream viz. Low TDS & High TDS. The low TDS - Low COD stream is being treated in ETP, while high TDS - high COD stream is being sent to MEE-I for treatment. Sampling done on 14/09/2021 . CDTR-Pi is not in production, below given parameter results are of GCLE effluent. <table border="1"> <thead> <tr> <th>Description</th> <th>COD (ppm)</th> <th>TSS (ppm)</th> </tr> </thead> <tbody> <tr> <td>ETP Inlet</td> <td>2600</td> <td>63(TSS)</td> </tr> <tr> <td>ETP Outlet (MVRE cond.)</td> <td>87</td> <td><20 (TSS)</td> </tr> </tbody> </table> <p>As above, emission levels are below the stipulated standards, Refer Annexure-2</p> <p>Also refer installed online monitoring system photograph annexure-15</p> <p>Refer Annexure-01 - Waste water management & Pollution control measure The treated effluent is recycled in the plant Evaporated salt (MEE) are being sent to TSDF Udaipur</p> <p>Manifests List are attached as annexure-03 for ready reference for GCLE production.</p>	Description	COD (ppm)	TSS (ppm)	ETP Inlet	2600	63(TSS)	ETP Outlet (MVRE cond.)	87	<20 (TSS)
Description	COD (ppm)	TSS (ppm)								
ETP Inlet	2600	63(TSS)								
ETP Outlet (MVRE cond.)	87	<20 (TSS)								
6. Distillation residue shall be sent to common incinerator at TSDF. Dried ETP sludge cake and incineration ash shall be packed in HDPE bags and shall be stored in a covered leachate proof storage area and shall ultimately be sent to TSDF at Udaipur.	Distillation residue is being sent to in-house liquid incinerator. Dried ETP sludge cake and incineration ash are packed in HDPE bags and are stored in a covered leachate proof storage area i.e. Hazardous Waste Store Room and is being sent to TSDF at Udaipur for final disposal. Copy of membership letter attached. Annexure 04									



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<p>7. Hazardous chemicals shall be stored 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 stored in dedicated tank farms areas. Flame arresters & breather valves have been provided at tanks. Solvents are being transferred through automatic pumps.</p>
<p>8. Spent solvent shall be recovered as far as possible & recovery shall not be less than 98 percent. Solvent vapors emitted during purification process from purification tanks as fugitive emissions shall be reduced as far as possible. All venting equipment shall have vapour recovery system.</p>	<p>Spent solvent are recovered to the extent of 98 %. There is very rare possibility of fugitive emission as we have closed charging system. All venting equipment possesses vapour recovery system.</p>
<p>9. Benzene shall not 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.</p>	<p>There is no raw material in RM list like benzene and no odorous compounds /gas like mercaptans or Hydrogen sulfide.</p>
<p>10. Regular monitoring of HC & VOC shall be carried out at all vents , in work zone area and the ambient air at probable location in and around the plant</p>	<p>Monitoring HC and VOC are being carried out as per following table, conducted on 16/09/2020. Reports attached as Annexure-05</p>

Description	Parameter	Result	
<p>In between process area <u>Ambient Air Quality</u></p>	<p>VOC (Benzene, Toluene, Xylene, Ethyl Benzene)</p>	<p>ND</p>	<p>µg/M³</p>
	<p>Total Hydrocarbon</p>	<p>ND</p>	<p>µg/M³</p>
<p>Stack No. S-981 <u>Source Emission Sample & Analysis</u></p>	<p>VOC (Benzene, Toluene, Xylene, Ethyl Benzene)</p>	<p>ND</p>	<p>µg/M³</p>
	<p>Total Hydrocarbon</p>	<p>ND</p>	<p>Mg/m³</p>
<p>C – Process finish product area <u>Work Zone Air Quality</u></p>	<p>VOC (Benzene, Toluene, Xylene, Ethyl Benzene)</p>	<p>ND</p>	<p>µg/M³</p>
	<p>Total Hydrocarbon</p>	<p>ND</p>	<p>µg/M³</p>
<p>S- 303 Ware house area <u>Work Zone Air Quality</u></p>	<p>Suspended particulate Matter (SPM)</p>	<p>167</p>	<p>µg/M³. As per CPCB Max. limit is 600</p>



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A. GENERAL CONDITIONS:


<p>1.0 The project authorities shall strictly adhere to the stipulations made by the state pollution control board.</p>	<p>Project has been installed as per EC & CTE. Compliances of EC and CTO have been done in accordance with conditions.</p>															
<p>2.0 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.</p>	<p>Company ensure that no further expansion or modification in the plant shall be carried out without prior approval of MoEF. A fresh reference shall be made for any deviation & change in the plant, if required.</p>															
<p>3.0 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.</p>	<p>The whole plant is interlocked / automated with the pollution control equipments & there is no chance of exceeding the prescribed limits of emissions.</p>															
<p>4.0 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.</p> <p>In the event of failure of pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.</p>	<p>Particulate matter with RSPM levels from process units are confirming to the standards conducted on 14/09/2021.</p> <table border="1" data-bbox="865 1043 1492 1301"> <thead> <tr> <th>Standard value</th> <th>100 µg/M³ (PM 10)</th> <th>60 µg/M³ (PM 2.5)</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">Observed Value</td> </tr> <tr> <td>In between Process House</td> <td>60.6 µg/M³</td> <td>35.2 µg/M³</td> </tr> <tr> <td>Near Material gate</td> <td>79.2 µg/M³</td> <td>47.7 µg/M³</td> </tr> <tr> <td>Near parking area</td> <td>54.1 µg/M³</td> <td>32.0 µg/M³</td> </tr> </tbody> </table> <p><i>As above, emission levels are below the stipulated standards. Annexure-06</i></p> <p>In the event of failure of pollution control system adopted, we undertake that unit would not be restarted until the control measures are rectified to achieve the desired efficiency.</p>	Standard value	100 µg/M ³ (PM 10)	60 µg/M ³ (PM 2.5)	Observed Value			In between Process House	60.6 µg/M ³	35.2 µg/M ³	Near Material gate	79.2 µg/M ³	47.7 µg/M ³	Near parking area	54.1 µg/M ³	32.0 µg/M ³
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<p>5.0 The location of ambient air quality monitoring stations shall be decided in consultation with the state pollution control board (SPCB). It shall be ensured that at least one station shall be installed in the downwind direction as well as where maximum ground level concentrations are anticipated.</p>	<p>The locations of ambient air quality monitoring stations has been decided in consultation with the Regional Officer, Rajasthan state pollution control board. Monitoring equipments are being installed at downwind direction and within process area.</p>															
<p>6.0 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.</p>	<p>07 numbers of alkali scrubbers have been installed with an appropriate stack height to control emissions & water from these scrubbers is being sent to ETP for further treatment. Refer Annexure-01 – Waste water management & Pollution control measure</p>															
<p>7.0 All the storage tanks will be under negative pressure to avoid any leakages.</p>	<p>#All storage tanks are provided with breather valves to automatically maintain the pressure inside the tanks</p>															



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<ul style="list-style-type: none"> • Breather valves, N2 blanketing and secondary condensers with brine chilling system shall be provided for all the storage tanks to minimize vapor losses. • All liquid raw materials shall be stored in storage tanks and drums. • Closed handling systems for chemicals and solvents will be provided. • Magnetic seal will be provided for pumps/agitators for reactors for reduction of fugitive emissions. • Solvent vapors lines will be connected to condensers with receivers. 	<p>during filling & emptying of the tanks. Additionally, all storage tanks are surrounded by dyke walls to avoid spreading of solvents in case of a leakage.</p> <ul style="list-style-type: none"> ▪ Breather valves, N2 Blanketing & secondary condensers with brine chiller have been installed at all storage tanks. ▪ All liquid material is being stored in storage tanks and drums. ▪ Solvents are handled through closed circuit system. ▪ All pumps & agitators used in the handling of solvents are inbuilt with mechanical seal. ▪ Solvents vapors are passed through the condensers installed with receivers.
<p>8.0 All venting equipment shall have vapour recovery system.</p> <p>All the pumps and other equipments where there is a likelihood of HC leakage 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.</p>	<p>Primary heat exchanger has been installed to recover solvents vapor from all vents. There is absolutely no likelyhood of HC leakage from pumps, agitators & other equipments as we are using double mechanical seals (Models Plan 9 & Plan 11) at all places.</p>
<p>9.0 The company shall undertake following waste minimization measures</p> <p>A. Metering and control of quantities of active ingredients to minimize waste.</p> <p>B. Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</p> <p>C. Use of automated filling to minimize spillage.</p> <p>D. Use of close feed system into batch reactors.</p> <p>E. Venting equipment through vapor recovery system.</p> <p>F. Use of high pressure hoses for equipment cleaning to reduce wastewater generation.</p>	<p>Waste minimization measures are being taken as follows:</p> <p>A. In addition to metering, active ingredients are charged through Distributed Control System (DCS) i.e. computerized system to avoid any wastage.</p> <p>B. There is no by- product.</p> <p>C. Yes, we have provided automated filling system to minimize the spillage.</p> <p>D. At the time of batch charging, the raw materials and process chemicals are put into reactor through a closed feed system only.</p> <p>E. Venting equipments e.g condenser, scrubber have been provided at reactors to absorb vapors.</p> <p>F. Using water at high pressure for cleaning the equipments.</p>
<p>10.0 Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored.</p> <p>The emissions shall conform to the limits imposed by the state pollution control boards/central pollution control board.</p>	<p>Refer annexure-05</p> 

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<p>11.0 The project authorities shall strictly comply with the rule and guidelines under Manufacture, storage and Import hazardous chemicals rules, 1989 as amended in October, 1994 and January, 2000 and hazardous waste (management and handling) rules, 1989, as amended from time to time. Authorization from the SPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes. All transportation of hazardous chemicals shall be as per the MVA, 1989.</p>	<p>Complying and reports are submitted to SPCB.</p> <p>Copy of authorization attached. Annexure-08A</p> <p>Copy of HW transportation authorization attached. Annexure-08B</p>																				
<p>12.0 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. an all sources of noise generation.</p> <p>The ambient noise levels shall conform to the standards prescribed under environment (protection) Act, 1986 rule.1989 viz. 75 dBA (day time) and 70 dBA (night time).</p>	<p>The overall noise levels in and around the plant area are being well within the standards by providing noise control measures including acoustics, silencers, enclosures etc.</p> <p>The ambient noise levels are well below the limits as conducted on 14/09/2021. Refer Annexure-09</p> <table border="1" data-bbox="861 929 1516 1243"> <thead> <tr> <th>Location</th> <th>Day Time Results dB(A)</th> <th>Day Time Standards as per EP act</th> <th>Night time-Results dB (A)</th> <th>Night Time Standards as per EP act</th> </tr> </thead> <tbody> <tr> <td>Material gate</td> <td>60.5 dB(A)</td> <td>75 dB(A)</td> <td>57.8 dB(A)</td> <td>70 dB(A)</td> </tr> <tr> <td>Middle of four process House</td> <td>73.6 dB(A)</td> <td>75 dB(A)</td> <td>62.6 dB(A)</td> <td>70 dB(A)</td> </tr> <tr> <td>Near Parking area</td> <td>61.1 dB(A)</td> <td>75 dB(A)</td> <td>54.1 dB(A)</td> <td>70 dB(A)</td> </tr> </tbody> </table>	Location	Day Time Results dB(A)	Day Time Standards as per EP act	Night time-Results dB (A)	Night Time Standards as per EP act	Material gate	60.5 dB(A)	75 dB(A)	57.8 dB(A)	70 dB(A)	Middle of four process House	73.6 dB(A)	75 dB(A)	62.6 dB(A)	70 dB(A)	Near Parking area	61.1 dB(A)	75 dB(A)	54.1 dB(A)	70 dB(A)
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<p>13.0 Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the factories Act.</p>	<p>Occupational health surveillance program of the workers & employee is being done regularly twice in a year. Records of these activities are being maintained as per Factories Act.</p> <p>Annexure-10</p>																				
<p>14.0 Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical examinations for all employees shall be undertaken on regular basis.</p>	<p>Training is being regularly imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical examinations for all employees are being done on regular basis.</p> <p>Annexure-11</p>																				
<p>15.0 Usage of PPEs by all employees/workers shall be ensured.</p>	<p>Employees/ workers are mandatory to wear PPEs as and where required.</p> <p>Annexure-12</p>																				
<p>16.0 25% of the total area shall be developed as green belt as per the CPCB guidelines.</p>	<p>Total area of Plant - 88000 Sqm Area under greenbelt - 29040 Sqm</p> <p>Green belt photograph attached as Annexure-13</p>																				



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<p>17.0 The company shall strictly follow all the recommendations mentioned in the charter on corporate responsibility for environmental protection (CREP).</p>	<p>Company follows the CREP condition.</p>
<p>18.0 The company shall harvest surface as well as rooftop of the building proposed in expansion project and storm water drains to recharge the ground water and use of the same water for the various activities of the project to conserve fresh water.</p>	<p>Company has well maintained rain water harvesting pits to harvest the rain water & storm water to recharge the ground water. Refer Annexure-14 Recharge Pits- outside the factory premises, Recharge Pits – inside the factory Premises</p>
<p>19.0 The project proponent shall also comply with all the environmental protection measures and safeguards and risk mitigation measures proposed in the report relating to the project.</p>	<p>Scrubbers, dust collectors & ESP have been provided wherever required under EMP.</p>
<p>20.0 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.</p> <p>The funds so provided shall not be diverted for any other purpose.</p>	<p>Company keeps 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.</p> <p>The sanctioned fund is not diverted for any other purpose.</p>
<p>21.0 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.</p>	<p>Tree plantation.</p>
<p>22.0 The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.</p>	<p>a. Potable water of low fluoride content has been supplied in close vicinity b. Construction of new pond for rain water recharges structure at Village Nareheda. c. Medical aid. A total of Rs. 8.28 lac has been incurred on above activity. Photograph attached as Annexure-14</p>
<p>23.0 A separate environmental management cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental management and monitoring functions.</p>	<p>Company has constituted Environment Management cell separately who take care of Environmental activities. Company has also fully fledged environment laboratory facility.</p>
<p>24.0 The implementation of the project vis-a-vis environmental action plans shall be monitored by the concerned regional office of the ministry/SPCB/CPCB.</p> <p>A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the company.</p>	<p>RPCB inspect site as per their schedule.</p> <p>Company ensures six monthly compliance status reports to be submitted to monitoring agencies.</p>



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25.0 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 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.	Project has been installed in RIICO Industrial area which is a govt. notified area.
26.0 The project authorities shall inform the Regional Office as well as the ministry, the date of financial closures and final approval of the project by the concerned authorities and the date of start of the project.	Project has already been completed in 2014.

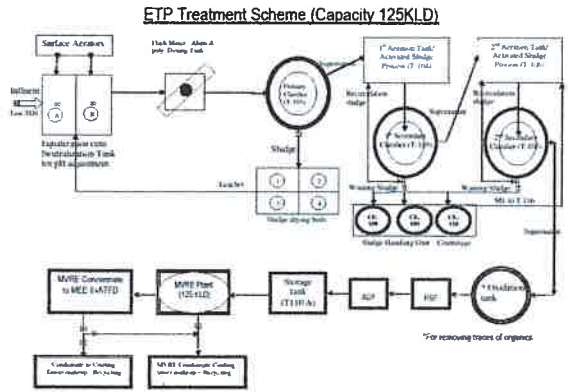


Pollution Control Measures
EC Compliance:

We (OCIPL) have a well developed waste water management system to meet the desire limits and norms of pollution control board, with existing facility of ETP, MEE-I, MVRE, MEE-II & ATFD & Incinerator. The salient features are discussed below.

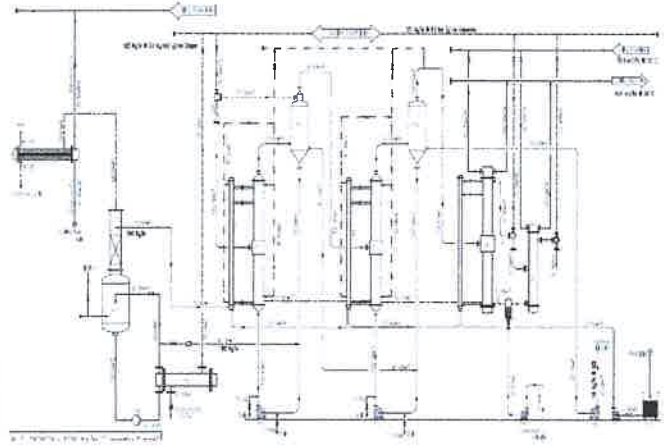
- Separation & segregation of effluent, generating from the process
 - High TDS Effluent
 - Low TDS Effluent
 - Organic Solvent residue

Effluent Treatment Plant (ETP)

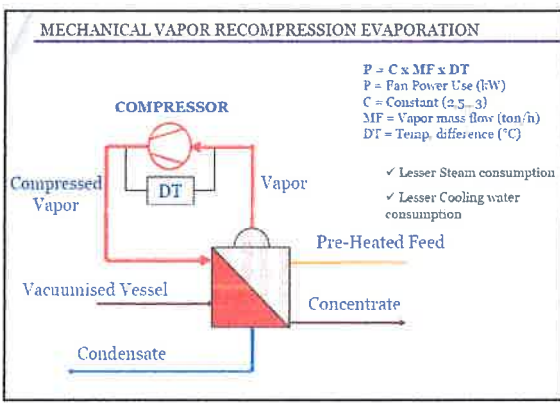


Effluent Treatment Plant is required to treat the liquid waste of an industry. Company has 125 KLD capacity of ETP to treat Low Total Dissolved Solid effluent coming for process.

Multi Effect Evaporator (MEE-I with stripper)



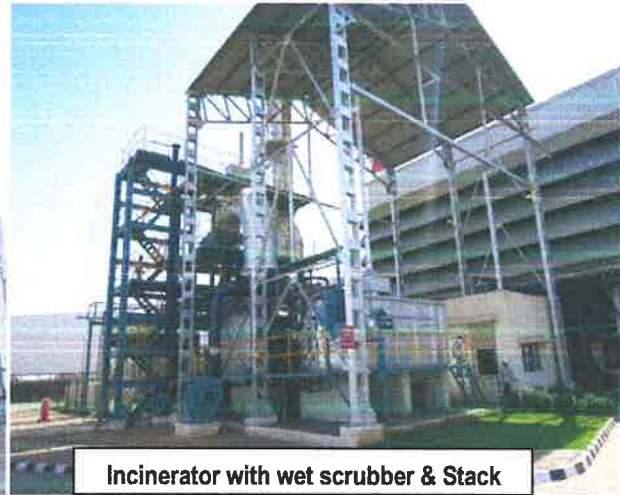
MVRE (Mechanical Vapour Recompression Evaporator)



Pollution Control Measures
EC Compliance:

MEE-II & ATFD & Incinerator

Solid Liquid separation – Zero Liquid discharge (ZLD)



Sewage treatment plant (STP)

