World Bank-financed Jiangxi Poyang Lake Basin and Ecological Economic Zone Small Town Development Demonstration Project

Ruijin City Mianjiang River (Lucao Lake) Wetlands Protection and Utilization Subproject

Septic Tanks

Environmental Codes of Practice

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General Introduction

1.1 Project Background

World Bank-financed Jiangxi Poyang Lake Basin and Ecological Economic Zone Small Town Development Demonstration Project is a demonstration project according to national urban development strategy and development needs of Poyang Lake basin and Ecological Economic Zone small town development. Based on loan project, it introduced international experience to boost coordinated development of ecological protection and urban construction, improve urban and rural infrastructure, and accelerate city and countryside integration. The annex is Environmental Codes of Practice of Septic Tank Works of World Bank-financed Jiangxi Poyang Lake Basin and Ecological Economic Zone Small Town Development Demonstration Project, Ruijin City Mianjiang River (Lucao Lake) Wetlands Protection and Utilization Subproject. See Table 1 for subproject contents.

Contents of the annex include special environmental impact analysis and corresponding environmental codes of practice and environmental codes of practice of small civil works (see Annex 1.1). See Figure 1 for geographic location.

<table>
<thead>
<tr>
<th>Name of Component</th>
<th>Contents</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Area of Ridong Reservoir Wetland</td>
<td>Volume 2m³, 543 sets, see international standard Brick Septic Tank (02S701) for practice, and the model is Z1-2SQF.</td>
<td>Hubei Village and Lukeng Village</td>
</tr>
<tr>
<td>Rentian Wetland Purification, Protection and Utilization Area</td>
<td>Volume 2m³, 1,900 sets, see international standard Brick Septic Tank (02S701) for practice, and the model is Z1-2SQF.</td>
<td>Gaoxuan Village, Zhongtan Village, Xixin Village and Xiajie Village</td>
</tr>
<tr>
<td>Yeping Wetland Purification, Protection and Utilization Area</td>
<td>Volume 2m³, 2,100 sets, see international standard Brick Septic Tank (02S701) for practice, and the model is Z1-2SQF.</td>
<td>Shanqi Village, Songping Village, Yunji Village and Xinyuan Village</td>
</tr>
</tbody>
</table>
2 Environmental Codes of Practice in the Design Stage

1. Site selection of septic tank: the septic tank shall be more than 30m away from intake structures and no less than 5m away from outer wall of structures.

2. Septic tank shall have anti-seepage treatment design.

3. The septic tank shall be equipped with breather pipe, and the material of pipe shall be plastic steel tube with diameter of DN100, which shall be installed onto the top of tank with the height of no less than 2.5m.

4. Consideration shall be given to the outlet water quality of septic tank and needs of routine maintenance of septic tank, excessive outlet water quality will cause blocking of the septic tank, thus it needs to be dig frequently.

3 Environmental Codes of Practice during Construction

3.1 Environmental Codes of Practice in Construction Plant

3.1.1 Construction Site Management

Arrangement of camp buildings: As construction projects are scattered and the scale of single project is small, there are no camp buildings and canteens in the construction area. The construction unit will rent the nearby homes or urban area of the project.

3.1.2 Construction Site and Facility Management
(1) Placing of Material
Building materials shall be put by category in the place specified in the construction layout plan. The placing of materials shall not exceed the specified height.

(2) Unfinished septic tank the same day and pot hole with people passing by in the nighttime shall have warning signs or cover protection.

4 Environmental Codes of Practice in Operation Period

4.1 Risk Prevention

Due to the presence of methane, carbon monoxide, and hydrogen sulfide, the project has risks in the operation period, thus appropriate measures shall be taken during the running period:

(1) Before pulling out the septic tank, a warning sign shall be set up in advance, barriers shall be removed to guarantee smooth traffic; and non-operation personnel shall be
evacuated before opening the cover.

(2) The cover of methane-generating pit shall not be pried by steel chisel and anvil in order to avoid spark and cause burns and explosion.

(3) Using electric machine to pump and drain sewerage, and check whether electric machine, power supply, line and knife switch have leakage or not to avoid electric shock.

(4) Operating personnel should use natural ventilation to remove harmful gases such as carbon monoxide, carbon dioxide, hydrogen sulfide, methane before dredging, and use instrument to detect, and conduct pit operation after confirming harmless and safe. Operators under pit shall wear anti-static clothing, and shall not wear hard metal objects such as a key.

(5) Operators above the pit shall hold seat belts in hands and contact with under-pit staff at any time.

(6) After finishing clearing work, tank cover and ditch cover shall be recovered and repaired in a timely manner; and warning signs or protection shall be set up in case of failing to finish the very day.

4.2 Environmental Management in Operation Phase

(1) The septic tank shall be cleared and treated at regular intervals, and checked frequently and repaired timely, water pipeline, soil pipe connection well and septic tank shall be kept in good condition.

(2) Excessively thick harden and overtopping shall not exist in septic tank, and the thickness of internal plate of septic tank shall not exceed 40mm.

(3) Garbage, wewage and sundries shall not be poured into septic tank, and debries shall not be piled on the septic tank, and blow-off line shall not be rebuilt without permission.

(4) The cover plate of septic tank shall be closely covered to prevent from the occurrence of stink and accident.

(5) Fire use shall be prohibited nearby the septic tank.

(6) Waste water and fecal residue taken out shall be transported to the professional treatment plant designated by municipal sanitation competent department, and the water quality after treatment shall reach specified effluent standard; stacking of fecal residue shall be managed by a specially-assigned person to avoid cross contamination.

(7) The surrounding area of septic tank can plant some canna or other plants with stink absorption functions.
## Appendix 1 Checklist of Construction Site Environment

<table>
<thead>
<tr>
<th>Items</th>
<th>Implementation</th>
<th>Remarks/Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Implemented</td>
<td>Not Implemented</td>
</tr>
<tr>
<td>1.1 Is septic tank more than 30m away from intake structures?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Is septic tank no less than 5m away from outer wall of structures?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 Does septic tank have anti-seepage treatment design?</td>
<td></td>
<td></td>
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<tr>
<td>1.4 Do unfinished septic tank the same day and pot hole with people passing by in the nighttime have warning signs or cover protection?</td>
<td></td>
<td></td>
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<tr>
<td>1.5 Others (please specify)</td>
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<td></td>
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Map 1. Geographic Location of the Project