

**PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE**

Project Name	Ulyanovsk Landfill Gas Reduction Project
Region	ECA
Sector	Solid waste management
Project ID	P101994
Borrower(s)	N/A
Implementing Agency	JSC "Green Project Management"
Environment Category	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	March 27, 2008
Estimated Date of Appraisal Authorization	04/29/2008
Estimated Date of ERPA Signing	06/14/2008

I. Key development issues and rationale for Bank involvement

Disposal of solid waste on landfills is the main waste disposal strategy in Russia. At the moment, the organic part of household waste is being decomposed under anaerobic conditions in landfills generating methane emissions which are emitted to the atmosphere. Nowadays, capture and utilization or flaring of landfill gas (LFG) is a well proven technology to reduce the methane emissions. However, currently, the extraction and utilization or flaring of methane gas from landfill is not widely implemented in Russia. Ulyanovsk oblast is not an exception in this respect. There are no landfills in Ulyanovsk Oblast that are capturing and flaring the LFG.

Baratayevka landfill facility is located outside the City of Ulyanovsk, Russia. The landfill is owned by Ulyanovsk' City Administration and is rented out to the Centre of Ecological Technologies Ltd till 2015. At present, JSC "Green Project Management" has concluded a 10 years, three-party landfill gas rights agreement with both of the above parties.

The Project envisages the installation and operation of the Gas Flaring System plant fuelled by landfill gas at the Baratayevka landfill site in Russia.

Environmental benefits:

- Fully lined disposal areas for leach ate containment;
- Reduction of CH₄ emissions into the atmosphere by 75%;
- Final cover system including re-vegetation as each disposal area is completed.

Social Benefits:

- Extra jobs creation for local community;
- Cleaner air;
- Reduction of odors.

Economic Benefits:

Concession payments would be made to the regional administration.

The World Bank, as trustee of various Carbon Funds, aims to mitigate climate change via market-based emission reduction (ER) purchase transactions through the Kyoto Protocol's Joint Implementation Mechanism (JI), which opens up a significant source of revenue for financing projects. With the prior experience of developing other carbon finance projects in the ECA Region, the Bank is well positioned to facilitate the transaction for the Ulyanovks Landfill Gas Reduction Project. The World Bank has undertaken a pioneering role in developing the JI market in Russia, including capacity building workshops and conferences.

II. Proposed objective(s)

The project development objective is to reduce LFG emissions from solid waste disposed by methane generated in the landfill and providing a sustainable revenue stream for the operating company JSC "Green Project Management" (GPM) through an associated carbon finance transaction. The key indicator for this objective will be the annual delivery of ERUs. In addition to the global benefits of GHG reductions, the agreement between the project sponsor and Ulyanovsk Oblast administration will provide funds from the ER revenue to improve landfill management and waste collection, as well as social benefits for the surrounding communities.

III. Preliminary Description

Disposal of solid waste on landfills is the main waste disposal strategy in Russia. At the moment, the organic part of household waste is being decomposed under anaerobic conditions in landfills generating methane emissions which are emitted to the atmosphere. Nowadays, capture and utilization or flaring of LFG is a well proven technology to reduce the methane emissions. However, currently, the extraction and utilization or flaring of methane gas from landfill is not widely implemented in Russia and there are no landfills in Ulyanovsk Oblast that are capturing and flaring the LFG.

The project has three components. The main one and primary focus of the carbon finance operation is the establishment of a LFG flaring system on the existing landfill area and progressively on new areas as they are filled. This is being done by the CF project proponent/beneficiary: JSC "Green Project Management" who has a 10 year landfill gas rights agreement. The second component is the upgrading of the existing landfill operation undertaken by the concession operator Center of Ecological Technologies Ltd. The third component is the proposed plastics separation and processing operation undertaken by JSC "Green Project Management", based on the inclusion of claimed but minor carbon emission reductions from this project.

The main components of applied technology include gas extraction wells, gas transportation pipes, condensate wells, blowers and flaring stack. Reductions of methane emissions will be achieved through flaring of captured landfill gas. The equipment that will be installed will have gas metering system recording gas quality and quantity in accordance with the UNFCCC verification criteria.

The equipment (LFG collection system) to be installed is expected to capture up to 75% of the landfill gas generated in the landfill. The estimated average ERU's per year during the crediting period (2009-2012) is **85,000** (flaring) tones CO₂e.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered <i>(please explain why)</i>	Yes	No	TBD
Environmental Assessment (OP/BP 4.01)	X		
<p>The project is assigned Category B.</p> <p>The project itself is not expected to have negative environmental impacts beyond those of routine civil works sites. Instead, the project is expected to create an overall positive environmental balance:</p> <p>(i) The potential for groundwater contaminations would likely be reduced by the impermeable cover system, which would form a key component of the Methane capture system, as the percolation of precipitation water through waste body would be restricted.</p> <p>(ii) The installation of a gas capture system and the utilization of GHG, especially the conversion of Methane to CO₂ by combustion, and the additional benefit of energy generation, will be clear positive impacts under the climate change agenda.</p> <p>However, there are risks of harmful impacts and poor environmental performance of continued landfill operation.</p> <p>Contaminations from the landfill could already have reached groundwater bodies, which are used as drinking water sources, or surface water courses. This hazard should be carefully investigated and monitored during project preparation and implementation to exclude and additional risk induced by project activities.</p>			
Natural Habitats (OP/BP 4.04)		X	
Forests (OP/BP 4.36)		X	
Pest Management (OP 4.09)		X	
Physical Cultural Resources (OP/BP 4.11)		X	
Indigenous Peoples (OP/BP 4.10)		X	
Involuntary Resettlement (OP/BP 4.12)			X
<p>According to Russian regulations LF operations have to be surrounded by a 0.5 km wide buffer zone, which must not be used for agricultural purposes (except the production of fodder) or be inhabited. During project preparation it will be investigated, if this cordon sanitaire is being enforced; agriculturally used land starts immediately adjacent to the LF. The project team will need to establish whether implementation of the project will impose restrictions on the use of the buffer area (i.e., whether the regulations will be enforced as a result of the project). If so, this would be equivalent to the taking of land, the safeguard would be triggered and a Resettlement Action Plan would have to be prepared and disclosed before appraisal.</p> <p>The project is not expected to have any negative social impacts. There will be positive signal for the local job market, the quality of life for the neighboring population and regional economic activity is expected to be improved by the project.</p>			
Safety of Dams (OP/BP 4.37)		X	
Projects on International Waterways (OP/BP 7.50)		X	
Projects in Disputed Areas (OP/BP 7.60)		X	
Disclosure Policy 17.50	X		
All relevant safeguard documents will be disclosed prior to appraisal.			

Environmental Assessment: The project is proposed to be Category B as the potential environmental impacts are well defined and site-specific. The net environmental impacts are

expected to be positive as LFG will be captured and flared, reducing GHG emissions, and local air pollution (e.g., odor, volatile organic compounds).

Resettlement: There are no communities living on the premise of the landfill. It is therefore not anticipated that the project will displace persons or economic activities and will not require land acquisition.

V. Tentative financing

There is no World Bank lending involved in this carbon finance transaction. The JI project will be implemented under 10 year landfill gas rights agreement between the landfill owner Ulyanovsk city administration, the landfill and operator Center of Ecological Technologies and the investor JSC “Green Project Management for the collection and flaring of LFG. The project sponsor will be self-financing the project. The envisaged upfront payment of 20% will be crucial to make the project happen.

VI. Contact point

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