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|  | Name of Project | Introduction of the (pushable) teleinspection system for telediagnostics of the sewage network of the city of Minsk |
|  | Term of implementation of the project | 1 year |
|  | Applicant organisation proposing the project | MINSKVODOKANAL UE |
|  | Objectives of the Project | Reducing the number of incidents in the sewage network.  Shortening the time required for detecting and eliminating the faults in the sewage networks.  Ensuring the trouble-free and uninterrupted operation of the water discharge system.  Improving the quality of services for waste water disposal away from subscribers. |
|  | Tasks planned to be performed within the framework of the project implementation | 1. Organisation of the procedure of purchase of the teleinspection system (3 off).  2. Use of the teleinspection systems to monitor the operation of the water discharge system |
|  | Target groups | Legal entities and individuals of the city of Minsk |
|  | Measures within the project | 1. Purchase of the teleinspection systems.  2. Training the personnel in operating the teleinspection systems |
|  | Total volume of financing (in US dollars) | |
| Source of financing | | Approximately 168,000 US dollars for 3 teleinspection systems |
| Donor’s funds | | Approximately 168,000 US dollars for 3 teleinspection systems |
| Co-financing | | 1% for training the personnel that is 1,680 US dollars |
|  | Location of the project implementation  (region/district, city) | City of Minsk, Minsk Region |
|  | Contact person  (initials, surname, position, phone, e-mail address) | Kudritsky, Alexander Antonovich  (Deputy Operations Manager  of Minskochistvod Enterprise, phone: +375 44 7601064,  KUDRITCKII\_AA@minskvodokanal.by) |
|  | Justification | The total length of the sewage networks under the economic management of the Enterprise is 2085.3 km.  The main tasks for operation of the sewage networks are:  - organisation of production and economic activities aimed at the proper operation of the water discharge networks;  - implementation of measures aimed at preventing emergency situations in the water disposal networks;  - organisation of the technical preparation of operation and repair of the sewage networks;  - monitoring the construction of external networks of household sewage and sewage facilities of the city.  One of the methods for ensuring the trouble-free and uninterrupted operation of the water discharge system is telediagnostics of pipelines.  The telediagnostics is an advanced technology for inspection and monitoring of the technical condition of the sewage pipelines. One of the tools of this method is the pushable teleinspection. It makes it possible to detect the places of blockages, identify the presence of foreign objects, cracks and determine the areas of deformation of pipelines remotely without excavating and partially dismantling the utilities. The teleinspection makes it possible to establish the presence of lime and silt deposits as well as assess the presence and degree of pipeline defects. The use of teleinspection is advisable for assessing the quality of sewage pipes on completion of construction and repair work. The relative easiness of use makes it possible to inspect both horizontal and vertical cavities.  The teleinspection system is equipped with a high-resolution digital camera for inspection of ventilation and sewage pipes, which provide a high-quality image even in low light conditions. The wide viewing angle and the focusing system create a complete picture of the examination. The air-tightness and reliable moisture protection make it possible to perform the inspection in filled objects. For additional illumination, the video cameras are equipped with powerful LEDs. The elastic and durable cable can pass through elbows of up to 90°. The control unit makes it possible to perform the real-time monitoring of the process and save its video records to a storage device. The use of special centralisers holds the chamber in the middle of the pipe and makes the instrument suitable for different pipe diameters. |
|  | Results of the project | The use of the teleinspection systems will make it possible to carry out the high-quality and timely maintenance and repair of sewage networks that will ensure the uninterrupted waste water disposal away from subscribers and consumers. |