DETERMINATION REPORT

VEMA S.A.

DETERMINATION OF THE

"DEVELOPMENT AND IMPROVEMENT OF WATER SUPPLY SYSTEM, DRAINAGE SYSTEM AND WASTEWATER TREATMENT OF «INFOX LTD.» BRANCH «INFOXVODOKANAL"

REPORT NO. UKRAINE-DET/0265/2011

REVISION NO. 02

Report No: UKRAINE-det/0265/2011

Determination Report

Date of first issue: 21/04/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: VEMA S.A.	Client ref.: Fabian Knodel

Summary:
Bureau Veritas Certification has made the determination of the «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» project of VEMA S.A. located in Odesa Region, Ukraine, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account these requests, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies Guidance on criteria for baseline setting and monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE-det/0265/2011	Subject Group: JI
Project title: «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal»	
Work carried out by: Oleg Skoblyk – Team Leader, Lead Veifier Karina Kucherenko - Team Member, Verifier	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer	
Work approved by: Flavio Gomes - Operational Manager	
Date of this revision: 21/04/2011 / Rev. No.: 02	Number of pages: 67

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1 INTRODUCTION

VEMA S.A. has commissioned Bureau Veritas Certification to determine its JI project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» (hereafter called "the project") located in the City of Odesa.

This report summarizes the findings of the determination of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions units (ERUs).

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Determination team

The determination team consists of the following personnel:

Oleg Skoblyk – Bureau Veritas Certification, Team Leader, Lead Verifier

Karina Kucherenko - Bureau Veritas Certification, Team Member, Verifier

This determination report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal technical reviewer

2 METHODOLOGY

The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.
In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria.

The determination protocol serves the following purposes:

- It describes and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent determination process where the determiner will document how a particular requirement has been determined and the result of the determination.

The completed determination protocol consists of two tables and is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD version 01 dated 24/02/2011) was submitted by VEMA S.A. together with additional documents related to the project design, baseline and monitoring plan, i.e. host country Law, Guidelines for users of the joint implementation project design document form, Approved CDM methodology and/or Guidance on criteria for baseline setting and monitoring, the Kyoto Protocol, Clarifications on Determination Requirements to be checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, VEMA S.A. revised the PDD and resubmitted it on 15/03/2011 as version 02.

To address Bureau Veritas Certification corrective action and clarification requests, VEMA S.A. made and resubmitted the PDD on 07/04/2011as version 03 which is deemed final.

The determination findings presented in this report relate to the project as described in the PDD versions 01, 02 and 03.

2.2 Follow-up Interviews

On 05/04/2011 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of "Infox Ltd." branch "Infoxvodokanal" and VEMA S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
"Infox Ltd." branch "Infoxvodokanal"	➢ Project History ➢ Project approach ➢ Project boundaries ➢ Schedule of implementation ➢ Organizational Structure ➢ Responsibilities and obligations ➢ Training ➢ Quality management procedures and technologies ➢ Modernization / installation of equipment (records) ➢ Control of measuring equipment ➢ The system of keeping records of measurements, the database ➢ Technical Documentation ➢ Monitoring Plan and procedures ➢ Permits and licenses ➢ Environmental Impact Assessment ➢ Answers of stakeholders
VEMA S.A.	➢ Methodology for the Baseline ➢ Monitoring Plan ➢ Evidence of additionality ➢ The calculations of emission reductions ➢ Project decision ➢ Legal issues relating to the project ➢ Environmental Impacts ➢ Approval of the host party

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Request (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The requirements of methodological procedure or qualification requirements are not met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol in Appendix A.

3 PROJECT DESCRIPTION

The “Infox” branch of “Infoxvodokanal” is one of Ukrainian companies with typical water supply, drainage and wastewater treatment systems that are usually characterized by an unsatisfactory technical state thereof. Continuous wearing out of equipment, obsolete technological schemes, general lack of facilities and water supply systems modernization, general lack of new technologies implementation result in the following:

- ineffective and excessive electric energy consumption;
- pour quality wastewater treatment, waste processing and utilization;

“Infoxvodokanal” consists of 10 structural subdivisions, and employs more than 3000 people. It services 1657.7 km of water pipes and a drainage network of 680.2 km in length. The wastewaters are treated at two

biological treatment plants (“Pivnichna” and “Pivdenna”). Today, the company supplies water to Odessa as well as populated communities within a 50 km radius from the region’s center.

The project’s main goal is reduction of electric energy consumption by modernization and development of centralized water supply, drainage and wastewater treatment systems, which includes replacement and modernization of pumps and replacement of water distribution systems, installation of frequency regulators, optimization of the technological process of water pumping and wastewater treatment system (aeration system in aerotanks) in the city of Odesa. Implementation of the abovementioned technologies will allow to decrease greenhouse gas emissions (CO2). The project mission is to promote sustainable development of the city.
The project provides for GHG emission reduction due to:

- Modernization of pump equipment;
- Replacement of pump equipment;
- Optimization of the technological process of water pumping;
- Installation of automatic air valves;
- Replacement of water-supply and drainage networks;
- Installation of new groups of metering devices;
- Installation of frequency regulators;
- Modernization of aeration system at treatment facilities (aerotanks);
- Implementation of a small hydroelectric power plant.

Implementation of measures at “Infox” branch of “Infoxvodokanal” provided for by the project, will lead to:

- Decrease of national economy’s dependence on import of energy resources and increase of country’s energy supply security
- Improvement in quality of water supply and wastewater treatment at discharge in waters;
- High rates of labor and health protection;
- Improvement of the global ecology state (counteraction in response to global climate change by means of reduction of greenhouse gases emission into the atmosphere);
- Solution to the problem of continuous water supply to consumers and drainage of wastewater.

The determination protocol includes CAR and CL for 1 st, 2 nd and 3 rd versions of the PDD.
Due to the fact that implementation methane tanks, and cogeneration plants in gasholders at “Infox Ltd.” branch “Infoxvodokanal" is carried out according to a plan of another JI project, these measures were excluded from the PDD version 3 of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal».

4 DETERMINATION CONCLUSIONS

In the following sections, the conclusions of the determination are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Determination Protocol in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 55 Corrective Action Requests, 27 Clarification Requests and 1 Forward Action Request.

The number between brackets at the end of each section corresponds to the DVM paragraph.

4.1 Project approvals by Parties involved (19-20)

The project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» has already got a letter of endorsement, namely a Letter of Endorsement #644/23/7 issued by National Environmental Investment Agency as of 25.03.2011.
Bureau Veritas Certification got this letter from the Project Participants and have no doubts in its authenticity.
After receiving Determination Report the project documentation will be submitted to the National Environmental Investment Agency of Ukraine for receiving a Letter of Approval.

As the project has no approvals by the Parties involved, FAR 01 remains pending and will be closed after report finalizing (refer to the Appendix A).

4.2 Authorization of project participants by Parties involved (21)

The official authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written Letters of Approval (from the government of Switzerland as the country-investor and from the government of Ukraine as the host country. See Section 4.1 of this report.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI Guidelines (hereinafter referred to as "specific approach") with selected elements of approved CDM baseline and monitoring methodology AM0020 «Baseline methodology for water pumping efficiency improvements» Version 02, was the selected approach for identifying the baseline (in accordance with paragraph 11 of Guidance on criteria for baseline setting and monitoring (Version 02).

The PDD provides a detailed description in a complete and transparent manner, as well as justification, that the baseline was set.

Full use of the methodology AM0020 is impossible, because the formulae to estimate project emissions reductions include the exact values of electric energy consumption and volume of water supplied, and in this case it is impossible to specify the amount of electric energy needed to pump water to consumers in the project year. To increase the accuracy of preliminary calculations a specific approach, which is based on the efficiency of pumping equipment and water losses in water supply network, was used. The specific approach used in the project allows predicting the consumption of electric energy for pumping water to the consumer in the project year.

When determining the emissions reductions caused by modernization of pumping equipment at treatment plants, that pump sludge to sludge fields, and aeration systems (airblowers), that blow air into aerotanks, it is impossible to use methodology AM0020, since formulae which are used to calculate emission reductions, include accurate values of the amount of water supplied and waste water pumped. For the calculation of GHG emission reductions a specific approach, that is based on the amount of sludge pumped to sludge fields, was used. The volume of pumped sludge is determined by using the following indicators:

- The volume of incoming waste at wastewater treatment plants (determined by flowmeters);
- The concentration of pollution in wastewater (BOD_{20} was adopted as a basic factor of pollution of biological origin; it is determined by conducting laboratory analyses).

The approach selected to baseline setting is stated and described and then applied in section B.1. of PDD.

Selection of the baseline is based on identifying the most likely alternatives.

Section B.1. of PDD provides an assessment of several alternatives that can be considered as the most probable in comparison to the project baseline.

The most realistic alternatives have been identified and will be used as a baseline:

- operation of existing equipment will continue (continuation of the current situation), and electric energy consumption will increase.

The basic scenario has been identified as the most plausible scenario among all practical and possible alternatives.

Variants of the baseline that were considered do not include options that:

• do not meet statutory and other mandatory requirements or

• depend on key resources such as fuel, materials or technology that are not available on the location of the project.

Methods of calculation used to determine the expected and actual baseline emissions, are sufficiently described in sections E and D of PDD respectively.

Introduction of new and modernization of old equipment under the project began in late 2003, in view of conservatism emission reductions due to these implementations are not included in the project.

2000-2003 were taken to calculate the Baseline. Specific electric energy consumption in the baseline scenario is calculated based on the assumption of its linear growth with time. This occurs for several reasons:

- permanent reduction of efficiency factors of pumping equipment over time and efficiency factor of the pumping plant as a whole;

- steady increase in losses in water supply and drainage networks.

This linear relationship is built on historical data for the period from 2000 to 2003 (for water-supply system and wastewater treatment system) and 2001-2004 (for drainage system) by using the method of least squares. Details are provided in Section D.1.

4.4 Additionality (27-31)

The most recent version of the “Tool for the demonstration and assessment of additionality” approved by the CDM Executive Board was used, in accordance with the JI specific approach, defined in paragraph 2 (c) of the annex I to the “Guidance on criteria for baseline setting and monitoring”. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

The developer of the project proved that anthropogenic emissions under the project are lower than the emissions that would take place in the absence of the project activity.

Section B.2. of PDD demonstrated that there are several barriers that hinder the proposed project activity.

Additionality proofs are provided. Three probable and realistic alternative scenarios were identified, and the scenarios’ mandatory compliance with

the laws and legal acts was demonstrated. Such potential barriers as financial barriers (additional cost for implementation of measures) and technological barriers (lack of experience and qualified personnel to operate modern equipment and additional costs of training related thereto) will hinder the implementation of the project scenario without additional income from the project under the joint implementation mechanism, and which in fact will not allow for implementation of any alternative other than the baseline scenario, were described and grounded properly. There are no barriers to baseline alternative, which is the continuation of the situation before the implementation of project activities.
Thus, the overall conclusion is that the project activity meets the criteria of additionality, is not a baseline scenario and is additional.
Additionality is demonstrated properly, as a result of the analysis, which is used by the approach chosen.

4.5 Project boundary (32-33)

The project boundary defined in the PDD, which in accordance with the applied methodology AM0020 «Baseline methodology for water pumping efficiency improvements» (version 02) is delineated by the physical, geographical site of the project equipment of water supply, drainage and wastewater treatment systems.
Geographical boundaries of the project coincide with territory the city of Odessa and some adjoining towns in Odessa region. «Infox Ltd.» branch «Infoxvodokanal» is divided into sub-departments, departments and divisions. Water supply system, drainage system and wastewater treatment of “Infoxvodokanal” are included into the project boundary. Detailed list of facilities that are included in the project boundary was provided by the project developer in Accompanying documents.
The PDD clearly states the emission sources in the baseline and project scenarios that are included in the project boundary.
Anthropogenic emissions by sources of greenhouse gases (GHGs) and the baseline and project boundary that are under the control of the project participants and reasonably attributable to the project, include:

(i) CO_2 emissions due to electric energy consumption from the national power grid, which is used by water-supply system;
(ii) CO_2 emissions due to electric energy consumption, which is used by drainage system;
(iii) CO_2 emissions due to electric energy consumption, which is used by wastewater treatment system.

Indirect extraneous leakage of CO_2, CH_4, N_2O from fuel production and its transportation are excluded. Leakages are not controlled by the project’s

developer (it is impossible to estimate quantity of leakages), due to this they were excluded.
The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD.

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the participants of “Infox Ltd.” made a decision about the start of the JI project implementation and implementation or real actions under the project began, and the starting date is 17/12/2003.

The PDD states the expected operational lifetime of the project in years and months, which is 14 years or 168 months – from January 1, 2004 to December 31, 2017.

The PDD states the length of the crediting period in years and months, which is 5 years or 60 months for the Kyoto commitment period (2008-2012).

The date on which first emission reduction units are expected to be generated was taken as the starting date of the crediting period, namely January 1, 2004. The end of the crediting period will be the final date of commitments to the buyer under the purchase and sales contract, under which their project owner must submit to the buyer approved greenhouse gases anthropogenic emission reductions resulting from this project, namely December 31, 2017.
If after the first period of commitments under the Kyoto Protocol its validity is prolonged, crediting period under the project will be prolonged by 5 years/60 months (January 01, 2013-December 31, 2017).

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

4.7 Monitoring plan (35-39)

Monitoring plan is the system of requirements to monitoring method and is an integral part of the project design documentation.
The monitoring plan for the project was designed with a specific approach relying on the methodology AM0020 «Baseline methodology for water pumping efficiency improvements» (version 02).
All categories of data to be collected for monitoring the project and baseline emissions (Option 1) and formulae for processing the collected

data and calculation of GHG emissions, are described in detail in Section D of the PDD version 3.
Collection of all the key parameters necessary for calculating GHG emissions takes place in accordance with practices established in “Infox Ltd.” branch “Infoxvodokanal” for measuring fuel, energy, waste and environmental impact. Monitoring the project does not require changes to existing accounting system and data collection. All relevant data is calculated and recorded in any case. All leakages were analysed and considered by using the conservative approach and are deemed to be immaterial.
The most objective and cumulative factors that provide a clear picture of whether the emission reduction took place:
1) Energy savings. It can be defined as the difference between the basic electric energy consumption, and electric energy consumption after the project implementation. If the equipment of pumping plants and the equipment of wastewater treatment system (aeration systems in aerotanks) consume electric energy at the project level, all other indicators, for example, such as efficiency of new pumps, and water loss in water distribution networks are adequate;
2) The total amount of electric energy that will be replaced by electric energy generated by small hydroelectric power plant.
“Infox Ltd.” branch “Infoxvodokanal" collects the data on the amount of consumed electric energy and water purchased to provide water supply in the form of electric energy bills and bills for purchased water. The information will be provided for verification together with monitoring report.

According to the guidelines for users of the JI PDD forms, revision # 04, the described approach to monitoring clearly states:

a) Data and parameters that are not subject to monitoring during the crediting period but are identified only once and are available at the PDD development stage:

EF_y	Specific carbon emission factor for Ukrainian electrical grid, calculated by Global Carbon B.V. in «Study “Standardized emission factors for the Ukrainian electric energy grid”» (Version 5, 02 February 2007).
EF_g	Specific carbon emission factor from the Ukrainian electrical grid (when electric energy is generated by hydroelectric power plants), t CO_2e/ kWh.

b) Data and parameters that are not subject to monitoring during the crediting period but are identified only once (and thus are fixed during the

crediting period) and are not available at the PDD development stage: none

c) Data and parameters that are subject to monitoring during the crediting period:

V_w	Volume of pumped water to consumers by water supply system, m^3
V_m	Total volume of wastewater pumped over by drainage system , m^3
V_t	Total volume of wastewater pumped over to the aerotanks system, m^3
EC_w	Quantity of electric power, necessary for water transportation by water supply pumping plants, kW*h
EC_m	Quantity of electric power, necessary for wastewater transportation by drainage pumping plants, kW*h
EC_t	Quantity of electric power, necessary for wastewater treatment by system of aerotanks, kW*h
EC_g	Quantity of electric power generated by the small hydroelectric power plant, kW*h

Detailed scheme of collection, transfer and processing of monitoring data, determination of responsibilities for implementation of the monitoring plan and preparation of the report on monitoring as well as management structure that will be used to monitor emission reductions by the project participants, are outlined in the project design documentation (see D and Appendix 3). Procedures to ensure and control quality of monitoring are properly documented and will be checked at the stage of verification.

The monitoring plan develops all the algorithms and formulae used to estimate / calculate baseline emissions and project emissions:

Formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

$$E_b^y = E_{b,e}^y + E_{b,g}^y,$$

Where:

E_b^y – GHG emissions, that take place in period «y» in the baseline scenario, t CO_2e;

$E_{b,e}^y$ - GHG emissions, due to electric energy consumption by pump and treatment equipment in period «y» under the baseline scenario, t CO_{2e};

$E^{y}_{b,g}$ - GHG emissions, due to electric energy consumption that will be substituted with electric energy generated by the small hydroelectric power plant under the baseline scenario, in period «y», t CO_{2e};

$[e]$ - electric power demand system;

$[g]$ - small hydroelectric power plant system;

$[y]$ - monitoring period;

$[b]$ - relates to baseline period.

Formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

$$E^{y}_{r} = E^{y}_{r,e} + E^{y}_{r,g},$$

Where:

E^{y}_{r} - GHG emissions, that take place in period «y» in the project scenario, t CO_{2e};

$E^{y}_{r,e}$ - GHG emissions, due to electric energy consumption by pump and treatment equipment in period «y» under the project scenario, t CO_{2e};

$E^{y}_{r,g}$ - GHG emissions, due to electric energy consumption that will be substituted with electric energy generated by the small hydroelectric power plant under the project scenario, in period «y», t CO_{2e};

$[e]$ - electric power demand system;

$[g]$ - small hydroelectric power plant system;

$[y]$ - monitoring period;

$[r]$ - relates to reporting year.

Formulae used to estimate emission reductions for the project (for each gas, source, reduction units of CO_2):
Number of Emission Reduction (ER) Units, t CO_{2e}:

$$ER^{y} = E^{y}_{b} - E^{y}_{r},$$

where:

E^{y}_{b} – GHG emissions in period «y» under the baseline scenario, t CO_{2e};

E^{y}_{r} – GHG emissions in period «y» under the project scenario, t CO_{2e};

$[y]$ - monitoring period;
$[b]$ - relates to baseline period;
$[r]$ - relates to project period.

The analysis, which was held by Bureau Veritas Certification, allowed to conclude that the monitoring plan was chosen in accordance with the requirements and will provide sufficient accuracy of data which is subject to monitoring.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that is measured or sampled and data that is collected from other sources.

The monitoring plan specifies that the data that is subject to monitoring and is required for verification should be kept for two years after the last transfer of ERUs under the project.

4.8 Leakage (40-41)

The PDD duly states that leakage of CO_2, CH_4, N_2O from fuel production and its transportation are excluded. Leakages are not controlled by the project's participants.

In accordance with the approved methodology «Baseline methodology for water pumping efficiency improvements», Version 02, that is used in this project together with the JI specific approach, leakages are excluded.

4.9 Estimation of emission reductions or enhancements of net removals (42-47)

To provide preliminary estimation of emission reductions under the project specific formulae were developed and used, due to the fact that one can not use methodological calculations in the absence of some data at the stage of project development. These formulae are based on the increase in effectiveness of equipment. As the data on volume of water supplied, the amount of wastewater, the amount of sludge that is treated and the amount of consumed electric energy is not known during project elaboration, to preliminarily estimate emission reductions the project developers rely on the data known at this stage of calculation, namely the baseline volume of water supplied, the baseline amount of wastewater drained, the baseline volume of wastewater that is treated and total amount of consumed electric energy, the efficiency factor of pumping equipment.

Secton E of PDD states that in the absence of pumping equipment modernization efficiency will continually decline. The limit of the decrease in efficiency of pumping plant operation is deemed to be 49-60% in the baseline scenario. Based on the opinion of leading specialists of the Ukrainian Water Association, where it is stated that when the efficiency of

the pumping plant is lower than 50% the use of electricity and water pumping becomes irrational, and thus, it is a lower level of pumping plant operation, which must be constantly maintained and modernized. Thus, when efficiency of a pumping plant decreases to 49% linear increase in the baseline specific rate of electric energy consumption will be stopped and fixed until the end of the calculation of greenhouse gas emissions.

In addition, the current operation of water supply system, drainage system and wastewater treatment in the city of Odessa is characterized by continuing worsening and lowering of effectiveness of the pump, water distribution and treatment equipment. However, at the same time on-the-spot repair works do not increase efficiency and this greatly aggravates and increases annual total emissions level (the Baseline) over the years. That is, under such conditions the efficiency of the pumping plant actually decreases to the level that is lower than 50%.

Details of the calculations are presented in the accompanying documents 1, 2.1.-2.3. to PDD (version 3).

Section E of PDD provides expected emission reductions estimations.

Project emission reduction = Baseline emissions - (Project emissions + Estimated leakages).

Results of baseline emissions, project emissions and reductions in greenhouse gases estimations, CO_2 equivalent.

Year	Expected project emissions (t CO_2 equivalent)	Expected baseline emissions (t CO_2 equivalent)	Expected emission reductions (t CO_2 equivalent)
2004-2007	564 850	887 589	322 738
2008-2012	384 402	1 269 465	885 063
2013-2017	302 248	1 280 128	977881

Estimated leakages, as noted above, in this case are equal to zero tons CO_{2e}.

To calculate emission reductions estimations such key factors as the Ukrainian legislation, the financial cost of the project, tariffs, availability of local technologies, skills, personnel, and risks associated with the project are properly taken into account.

To calculate the estimations stated above the following sources of data were used: statistical standards and forms, documents and archival data of the enterprises, national reports on climate change, the results of laboratory analyses, etc.; they are clearly defined, credible and transparent.

The calculations are based on conservative assumptions and the most likely scenarios in a transparent manner.

All calculations are in the correct sequence and are in compliance throughout the entire PDD.

Emission factors, such as, for example, specific carbon emission factor for the Power System of Ukraine (EF_y), were selected by carefully balancing the accuracy and appropriateness, and they properly justified their choice.

The average annual emission reduction estimations or increase of net removals over the crediting period are calculated by dividing the total estimated emission reductions or increase of net removals over the crediting period by the total number of months of the crediting period, and multiplying by twelve.

Detailed algorithms of calculations and their results are described in section D, E and accompanying documents 1, 2.1.-2.3. to PDD (version 3).

4.10 Environmental impacts (48)

Sections F.1. and F.2. of PDD provide information about the documentation that contains the analysis of environmental impacts caused by the project in accordance with procedures defined by the Host Party.
The PDD states that modernization of pumping equipment, replacement of water supply and drainage systems are not the objects of particular environmental hazard and are not subject to state examination in accordance with Resolution # 554 as of July 27, 1995 "List of activities and objects of high environmental hazard" and Art. 14 of the Law of Ukraine "On ecological expertise". Section F.1. presents information about the impact on water and air environment, flora and fauna, the impact on land use.
“Infox Ltd.” branch “Infoxvodokanal” has all permits, including limits on the formation and disposal of waste, as well as relevant standards in processing of reporting documents on the use of energy:
- Permits for special water use;
- Permits for waste disposal "Dniester" WTP;
- Permits for waste disposal "Miskanalizatsiya” (Municipal sewage);
- Permits for waste disposal “Pivnichna” BTP;
- Permits for waste disposal “Pivdenna” BTP;
- The limit on the formation and disposal of waste “Infox Ltd.”;
- Form 2-TP (VODHOSP), report on water use;
- Form 11- MTP, report on the use of fuel, heat and electric energy;
- Balance MAD (of maximum allowable discharges).

Project design documentation for the implementation of small hydroelectric power plant (according to State building codes of Ukraine A.2.2-1-2003), which includes environmental impact assessment (EIA) is under development and will be provided during the implementation period.

The general opinion on environmental impact, which was obtained by applying procedures approved by the Ukrainian government, is that when analyzing the environmental impact, it is clear that the project doesn't generate any adverse environmental impact, but rather has a positive impact on the environment. In addition, transboundary impacts of the project activity according to their definition in the text of Convention on long-term transboundary pollution, that was ratified by Ukraine, doesn't take place.

PDD provides conclusions and all references to accompanying documentation to assess the environmental impact, which is in accordance with procedures established by the host Party

4.11 Stakeholder consultation (49)

Since the project activities do not imply any negative environmental impact and negative social effect, special public discussions were not necessary.
"Infox Ltd." branch "Infoxvodokanal" constantly informs the public about the implementations and modernizations that are implemented or planned, and stages of their implementation at the official website of the company. Stakeholders may provide their comments and take part in the discussion of these issues. No negative comments were received.

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases:

i) a desk review of the project design and the baseline and monitoring plan;
ii) follow-up interviews with project stakeholders;

iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

The review of the project design documentation, the subsequent follow-up interviews and settlement of Clarification and Corrective Actions Requests have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria and demonstrate additionality of the project.

The PDD contains the analysis of investment, technological, organizational barriers and analyses of common practice which aim to demonstrate that the proposed project activity is not a likely baseline scenario. Thus, emission reductions attributable to the project are additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project by the host Country (Ukraine). If the written approval by the host Country is provided, it is our opinion that the project as described in the Project Design Document, versions 03 as of 07/04/2011 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Country criteria as well as expectations of the stakeholders.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

7 REFERENCES

Category 1 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ PDD of «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» project, Version 01 as of 24/02/2011;

/2/ PDD of «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» project, Version 02 as of 15/03/2011;

/3/ PDD of «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» project, Version 03 as of 07/04/2011;

/4/ Guidelines for users of the Project Documentation for JI projects. Version 04, JISC;

/5/ AM0020 «Baseline methodology for water pumping efficiency improvements» (version 2);

/6/ The Kyoto Protocol;

/7/ Marrakesh Agreement, JI Methods;

/8/ National inventory report on emissions and removals of greenhouse gases in Ukraine for the period of 1990-2004;

/9/ Ukraine's Third National Communication on Climate Change under the Kyoto Protocol;

/10/ Ukraine's Fourth National Communication on Climate Change under the Kyoto Protocol;

/11/ Ukraine's Fifth National Communication on Climate Change under the Kyoto Protocol;

/12/ The decree of the Cabinet of Ministers of Ukraine as of 01.03.1999 № 303 "Procedure of environmental pollution fee estimation and charging of this fee";

/13/ Guidelines for JI. Annex to decision 9/CDM.1.;

/14/ Guidance for JI determination and verification of JI, version 01;

/15/ Guidance on criteria for baseline setting and monitoring of the JISC. Version 02.

Category 2 Documents:

Documents provided by VEMA S.A. that relate directly to the GHG components of the project.

/1/ Minutes N 1-T of the management meeting which was held at «Infox

Ltd.» branch «Infoxvodokanal» dated 12/17/2003, (making decisions on implementation of a JI project at the company);

/2/ Letter of Endorsement № 644/23/7 of the project entitled «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» issued by the National Environmental Investment Agency as of 03.25.2011.

/3/ Authorization for special water use as of 22.03.2009 # UKR 2305-A/Ode;

/4/ Licence # 298 105 for a centralized water supply and wastewater drainage of «Infox Ltd.» issued by the Ministry of Construction, Architecture and Housing and Utility Companies of Ukraine (expiry date is 23 February 2012);

/5/ Contract # A18-11 as of 03.01.2011 on the provision of services “Certification of chemical-bacteriological laboratories: “Dniester” water treatment plant, “Pivnichna” and “Pivdenna” biological treatment plants of «Infox Ltd.» branch «Infoxvodokanal»;

/6/ Invoice issued by OJSC “Odesaoblenergo” № 5/1-401 for electric energy consumed as of 28.12.2010, «Infox Ltd.» is a consumer;

/7/ Invoice issued by OJSC “Odesaoblenergo” № 5/2-363 for electric energy consumed as of 30.11.2010p., «Infox Ltd.» is a consumer;

/8/ Invoice issued by OJSC “Odesaoblenergo” № 5/1-326 for electric energy consumed as of 27.10.2010p., «Infox Ltd.» is a consumer;

/9/ Invoice issued by OJSC “Odesaoblenergo” № 5/2-294 for electric energy consumed as of 29.09.2010p., «Infox Ltd.» is a consumer;

/10/ Permit # 51210024 issued to «Infox Ltd.» branch «Infoxvodokanal» on waste disposal in 2010 “Dnister” water supply plant, valid from 12.04.2010 to 31.12.2010;

/11/ Permit # 51401346 issued to «Infox Ltd.» branch «Infoxvodokanal» on waste disposal in 2008 “Pivdenna” biological treatment plant, valid from 01.01.2008 to 31.12.2008;

/12/ Permit # 5121010100-19 on emissions of pullutants into the atmosphere by plantary sources, given to «Infox Ltd.» branch «Infoxvodokanal» (valid until 31.05.2015);

/13/ LIMIT # 51401608 on the waste generation and waste disposal in 2011. «Infox Ltd.», valid until 31.12.2011;

/14/ Permit # 51401608 for waste disposal in 2011. «Infox Ltd.» branch «Infoxvodokanal», Miskkanalizatsiya (Municipal sewage system);

/15/ Permit # 51210024 for waste disposal in 2010. «Infox Ltd.» branch «Infoxvodokanal», "Dniester" water supply stantion;

/16/ Form 2-TP (VODHOSP), report on water use in 2003. «Infox Ltd.» branch «Infoxvodokanal»;

/17/ Form 2-TP (VODHOSP), report on water use in 2004 «Infox Ltd.» branch «Infoxvodokanal»;;

/18/ Form 2-TP (VODHOSP), report on water use by 2006 «Infox Ltd.» branch «Infoxvodokanal»;

/19/ Results of analyses of sea water, which have been done in the discharge area of “Pivdenna” BTP under the contract № 230/11 as

of 04.01.2011concluded with State Inspection of Northwest Black Sea Environmental Protection;

/20/ Technological report of “Pivdenna” BTP in 2010;

/21/ FORM 11-MTP, report on the use of fuel, heat and electric energy in January-December 2010 «Infox Ltd.» branch «Infoxvodokanal»;

/22/ FORM 11-MTP, report on the use of fuel, heat and electric energy in January-June 2010 «Infox Ltd.» branch «Infoxvodokanal»;

/23/ Reference information on implementation of frequency regulation devices on objects of branch «Infoxvodokanal»;

/24/ Technical data sheet of high-voltage measuring calculation complex, the type of electric energy meter SL 761C071, № 30,318,522;

/25/ Technical data sheet of high-voltage measuring calculation complex, the type of electric energy meter SL 761C071, № 30,318,569;

/26/ Technical data sheet of high-voltage measuring calculation complex, the type of electric energy meter SL 761C071, № 30318723;

/27/ The certificate N 164-EM as of 22 June 2005 on the state metrological certification of commercial metering of electric energy automated system "ALTAR-INFOXVODOKANAL”;

/28/ Register of daily reports on the objects’ performance at branch «Infoxvodokanal»;

/29/ Report on performance of «Infox Ltd.» branch «Infoxvodokanal» subdivisions as of April 4 2011, "Dniester" WTP;

/30/ Report on performance of «Infox Ltd.» branch «Infoxvodokanal» subdivisions as of March 28 2011, "Dniester" WTP;

/31/ Register of daily reports on water-supply metering of "Zahidna" WPS, the code is 07-01-08;

/32/ Register of daily reports on electric energy metering of "Zahidna" WPS, the code is 07-01-08, 2010-2011;

/33/ Register of water-supply (drainage) metering by means of metering devices and equipment for the period of 1/10/2010-30/09/2011, “Pivnichna” BTP, channel 1, the POD-11 form;

/34/ Register of water-supply (drainage) metering by means of metering devices and equipment for the period of 1/10/2010-30/09/201, “Pivnichna” BTP, channel 2, the POD-11 form;

/35/ Expert opinion on the state of lestes measuring at “Pivnichna” BTP (Odesa Construction and Engineering Institute of scientific works).

/36/ Passport № 168, N.03.3.323.00.00.000 PS, "Centrifugal double-entry type D pumps and electropump units based thereon"; water pumping plant "Pivdenna".

/37/ Passport 169.3.00.000 PS, Pumping unit FG 2400/75,5;

/38/ Passport N 14.00.080.PS, Faecal pumps of FG mark.

/39/ The Letter written by "Infox Ltd." branch "Infoxvodokanal" dated 04/04/2011 regarding information on efficiency factor values of the

company's pumping plants.

Persons interviewed:
List of persons interviewed during the determination or persons that contributed with other information that are not included in the documents listed above.

	Name	Organization	Title
/1/	Leonov Oleksiy Volodymyrovych	«Infox Ltd.» branch «Infoxvodokanal»	Director
/2/	Burjan Igor Yevgenovych	«Infox Ltd.» branch «Infoxvodokanal»	Chief metrologist
/3/	Goltsov Volodymyr Ivanovych	«Infox Ltd.» branch «Infoxvodokanal»	Chief technologist
/4/	Vilkov Sergiy Yuriyovych	«Infox Ltd.» branch «Infoxvodokanal»	Chief power engineer
/5/	Kozhuhova Olena Oleksandrivna	«Infox Ltd.» branch «Infoxvodokanal»	Leading engineer on maintenance record (MR)
/6/	Klepatskiy Oleg Mykhaylovych	«Infox Ltd.» branch «Infoxvodokanal»	Deputy of Director on technical issues
/7/	Deliy Viktor Stepanovych	«Infox Ltd.» branch «Infoxvodokanal»	Head of the division of controlling and metering equipment
/8/	Kutsak Yevgeniya Danylivna	«Infox Ltd.» branch «Infoxvodokanal»	Job foreman of division №4
/9/	Naumenko Iryna	VEMA S.A.	JI project developer

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APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
Guidelines for Users of the JI PDD form Section A General description of the project				
A.1. Title of the project				
-	Is the title of the project presented?	The title is presented. The title of the project is «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal»	OK	OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scopes to which project pertains are presented.	OK	OK
-	Is the current version number of the document presented?	The current version of the PDD is 03 as of April 7, 2011. See Section A.1.	OK	OK
-	Is the date when the document was completed presented?	The date of completeness of the document: April 7, 2011.	OK	OK
A.2. Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	The project's main goal is reduction of electric energy consumption by modernization and development of centralized water supply, drainage and wastewater treatment systems, which includes replacement and modernization of pumps and water distribution systems, installation of frequency regulators, optimization of the technological process of water pumping and wastewater treatment system (aerotanks) in the city of Odesa. Due to reduction of consumed electric energy from electrical	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		grid of Ukraine used by pumping plants, burning of fossil fuel for electric energy generation to the network will be decreased and this will lead to reduction of greenhouse gases emissions.		
-	Is the history of the project (incl. its JI component) briefly summarized?	**CAR 01.** Please provide more detailed information about the history of the project as well as the documents confirming this information as accompanying ones. **CAR 02.** Please provide clear explanation of how the introduction of cogeneration plants and methane tanks, as well as modernisation of aeration system and methane tanks will lead to decrease of GHG emissions in section A.2 of PDD.	**CAR 01** **CAR 02**	OK OK
A.3. Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Parties involved in the project: «Infox Ltd.» branch «Infoxvodokanal» (Ukraine is the Host Party) and "VEMA S.A." (Switzerland).	OK	OK
A.3	Is the data of the project participants presented in tabular format?	The data of the project participants is presented in tabular format.	OK	OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information on «Infox Ltd.» branch «Infoxvodokanal» and VEMA S.A. is provided in Annex 1 of the PDD.	OK	OK
A.3	Is it indicated, if it is the case, if the Party involved is a host Party?	Ukraine is a Host Party.	OK	OK
A.4 Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine is a Host Party.	OK	OK
-	Region/State/Province etc.	Odesa Region, Ukraine	OK	OK
-	City/Town/Community etc.	The city of Odesa	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	Information about location is given in section A.4.1.4 of PDD. The structural and separate units of «Infox Ltd.» branch «Infoxvodokanal» are presented. **CAR 03.** Please provide information about objects included in the project and their physical location (a list of plants, their addresses, the location of small hydroelectric power plant).	**CAR 03**	OK
A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	PDD Section A.4.3 provides the description of the main stages of the project implementation, some relevant technical data of main equipment to be installed and actions to be implemented by the project as well as the project implementation schedule. **CAR 04.** Project provides for the replacement of obsolete shut-off and control valves with valves of European manufacturers. Please justify the positive changes that will result from the replacement, provide references to the manufacturers. **CAR 05.** Please provide information and characteristics of metering devices, such as energy meters and flow meters, that are planned to be implemented under the project. **CAR 06.** Please provide the information and characteristics of new pumping equipment to be installed. **CAR 07.** Please provide characteristics of frequency regulators and information on their implementation. **CAR 08.** Please provide information and characteristics of cogeneration modules.	**CAR 04** **CAR 05** **CAR 06** **CAR 07** **CAR 08** **CAR 09** **CAR 10** **CAR 11** **CAR 12** **CAR 13** **CAR 14** **CL 01**	OK OK OK OK OK OK OK OK OK OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		CAR 09. Please provide technical characteristics of water supply systems to be replaced. Provide reference to the manufacturer's website. **CAR 10.** Please specify the number and type of equipment that will be introduced at "Pivnichna" treatment plant and Pivdenna" treatment plant. **CAR 11.** The project provides for installation of gas-holders; this is described in Section A.4.2. of PDD. Please indicate the number of gas holders to be installed under the project. **CAR 12.** Please provide a link to the site of producer of turbine to be implemented under the project. **CL 01.** Please explain the technological process at small hydroelectric power plants. Is there any experience in operating small hydroelectric power plants in Ukraine. **CAR 13.** It is stated in Section A.4.2. of PDD that detailed information on the implementation of small hydroelectric power plants are represented in Section E. No information is available. Please make the appropriate corrections. **CAR 14.** Please provide an explanation of why the project implementation schedule provides for implementation of small hydroelectric power plant in later half of 2011 (in this particular time).		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	Project activities, which include modernization of pumps, water distribution networks, installation of frequency regulators, wastewater treatment systems will increase the energy efficiency of water supply and drainage systems so that they will supply, drain and treat the same amount of water, wastewater, while consuming fewer electric energy. Saving of traditional carbon fossil fuels in power plants will reduce tCO_{2e} emissions from the national power grid. **CL 02.** Please provide a detailed explanation of how and by what measures reduction of methane emissions will be achieved.	**CL 02**	OK
A.4.3	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided in Section A.4.3.1.	OK	OK
A.4.3	Is it provided the estimated annual reduction for the chosen credit period in tCO_{2e}?	The estimated annual reduction for the crediting period in tCO_{2e} is provided in Tables 9 and 10 Section A.4.3.1. of PDD (version 3), as well as the estimated annual reduction for the period after the first commitment period within the project is provided in Table 11.	OK	OK
A.4.3	Are the data from questions above presented in tabular format?	Information for the credit period and after the credit period is presented in tabular format. See. PDD tables 9, 10 and 11, section A.4.3.1.	OK	OK
A.4.3.1. Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	The length of crediting period is indicated in the PDD section A.4.3.1.	OK	OK
-	Are estimates of total as well as annual and	Total as well as annual and average annual emission	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	average annual emission reductions in tonnes of CO_2 equivalent provided?	reductions in tonnes of CO_2 equivalent are provided in accordance with the calculated values in the tables of Section A of PDD and the Accompanying documents.		
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**FAR 01.** The project has no approval of the host Party and the country-investor. To obtain the Letter of Approval the final Determination report must be submitted to the National Environmental Investment Agency of Ukraine that includes this determination Protocol to the list of sources of reference information. The Letter of Approval of the Swiss government acting as the country-investor is not obtained at this stage of the project. **FAR 01** will be closed after the Letters of Approval are issued to the Parties involved. **CAR 15.** Please provide information when a Letter of Endorsement for the Joint Implementation project was issued by the National Environmental Investment Agency.The project approval by the Host Party will be provided after the determination statement is issued by the AIE.	**FAR 01** **CAR 15**	Pending OK
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved is Ukraine.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Refer to **FAR 01.**	**FAR 01**	Pending
20	Are all the written project approvals by Parties involved unconditional?	The written project approvals by Parties involved are unconditional.	OK	OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project	Party involved 1: Ukraine (host Party), legal entities are	**FAR 01**	Pending

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	"Infox Ltd." branch "Infoxvodokanal". Party involved 2: Switzerland, legal entity VEMA S.A. Company. The project participants will be authorized in accordance with the issue of the relevant project approvals. Pending a response on **FAR 01.**		
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The chosen baseline is described. A specific JI approach is used for setting the baseline.	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The choice of the applicable baseline for the project category is sufficiently justified; detailed theoretical description is provided in section B.1 of PDD version 3. **CAR 16.** Please provide detailed justification of the baseline chosen in the part of the calculation, of a linear dependence using the method of least squares for all parameters of the project.	**CAR 16**	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?	The baseline is set, the detailed description is presented in Section B of PDD version 3. **CL 03.** Please explain in detail the impossibility of application of approved methodologies. **CAR 17.** Please provide information, what methodologies were the basis for determining a specific approach to the	**CL 03** **CAR 17**	OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	(b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	baseline.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	The basic assumptions of the developed JI specific approach are clearly described in full in Section B.1 of PDD version 3. **CAR 18.** Please provide information on what elements of approved methodologies were used when determining the baseline of the project. **CAR 19**. Please provide detailed information on the historical period chosen for baseline calculation (2000-2003, 2001-2004). **CAR 20.** Provide information on how the indicators stated in PDD for estimation of transferred sludge are used. **CL 04.** Please explain whether any project activity was carried out in 2003 (which is deemed to be the baseline	**CAR 18** **CAR 19** **CAR 20** **CL 04** **CL 05** **CL 06** **CAR 21** **CL 07**	OK OK OK OK OK OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		year)? **CL 05.** Please, explain the choice of the main factors that determine greenhouse gas emissions. **CL 06.** Please, explain, what does the choice of Efficiency factor values of old and new pumps as well as increase in delta unit rely on. **CAR 21.** Please provide reference to the methodologies, which were the basis for determining a specific approach to the baseline of the project. **CL 07.** Please explain which confirmatory documents may be provided by the enterprise re the data of electric meters and flow meters of water.		
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	Carbon emission factors (for electric energy production for the power grid in Ukraine) for 2000-2005 were taken from Table B2 Baseline carbon emission factors for JI projects reducing electricity consumption, з документу Operational guidelines for project design documents of joint implementation projects (volume 1: general guidelines Version 2.3). Carbon emission factors (for electric energy production for the national power grid of Ukraine, CEF) for 2006-2012 are taken from Table 8, "Emission factors for the Ukrainian power grid"of the document – "Ukraine's new calculation estimation, CEF", which was verified by TUV SUD Industrie Service GmbH 17.08.2007 = 0.896 (tCO_2/MW * h)	OK	OK
Approved CDM methodology approach only				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following	Additionality of the project activity is demonstrated and	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	assessted using the "Tools for the demonstration and assessment of additionality" (Version 05.2). Setting of the baseline is in line with mandatory legislation and regulations (see section B.1., B.2. of PDD). None of the alternatives provided in section B.1. contradicts the legislation of Ukraine.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Detailed analysis described in Section A.4.3, B.1 and B.2, shows that emissions of the baseline scenario are likely to exceed emissions of project scenario due to the implementation of project activities.	OK	OK
29 (b)	Are additionality proofs provided?	The baseline scenario provides that all equipment, including obsolete one, characterised by low efficiency, but still serviceable, will work in a normal mode for a long time, and will not reduce emissions. The baseline scenario is described in detail in sections B.1	**CAR 22** **CAR 23**	OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		and B.2 of PDD. The project scenario provides for the reduction of GHG emissions due to a comprehensive modernization of pump and water-distribution equipment, modernisation of aeration system, implementation of small hydroelectric power plant. Project scenario is properly described in section A.4.2. The abovementioned sections of PDD provide the proves. **CAR 22.** Please specify the financial cost of small hydroelectric power plant implementation. **CAR 23**. Please provide detailed information on financial costs of implementation of all works under the project.		
29 (c)	Is the additionality demonstrated appropriately as a result?	The fact that the project activity itself is not a likely baseline scenario is clearly demonstrated in sections A.2, B.1, B.2 .	OK	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	All explanations, descriptions and analyses are made in accordance with the newest version of "Tools for the demonstration and assessment of additionality".	OK	OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant. These are: (i) CO_2 emissions due to electric energy consumption from the national power grid, which is used by water-supply system;	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		(ii) CO_2 emissions due to electric energy consumption, which is used by drainage system; (iii) CO_2 emissions due to electric energy consumption, which is used by wastewater treatment system. Geographical boundaries of the project coincide with the territory of Odesa city. Facilities of water supply system, drainage system and wastewater treatment of "Infoxvodokanal" branch are included in the boundaries of the project.		
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart if it is possible?	The scheme of project boundaries and gases and sources are duly described and grounded in the graphic figures14 and 15 in the section B.3. **CAR 24.** Please provide a table showing an overview of all emission sources that are included and excluded from the project boundaries for both the baseline, and the project scenarios. **CAR 25.** Please correct the scheme of the project boundary for the project scenario (figure 6, Section B.3. PDD version 1). Fossil fuel is not used by cogeneration plant. **CAR 26.** Please complete the scheme of project boundaries for the project scenario in the part of lettering of markings (Fig. 15, Section B.3. of PDD version 2)	**CAR 24** **CAR 25** **CAR 26**	OK OK OK
32 (d)	Are all gases and sources included explicitly	All gases and sources included are explicitly stated. See	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	section B of PDD version 3.		
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The PDD states the starting date of the project is the date on which the participants of "Infox Ltd." Made a decision on start of the implementation of JI project or the implementation or construction or real action of the project begins and the project's starting date is 17/12/2003. **CAR 29.** Please provide documentary evidence of the the project's starting date.	**CAR 27**	OK
34 (a)	Is the starting date after 2000?	The starting date after the beginning of 2000.	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The estimated project's operational lifetime is December 17, 2003 – January 31, 2017 (about 14 years) Real average life-cycle of new equipment that is estimated before the implementation under the project, shall be about 30-40 years and it is confirmed by the equipment certificates. Following the principle of conservatism life-cycle of the project shall be 14 years.	OK	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of the crediting period is specified in section C.3. **CAR 28.** Please, specify the estimated length of the crediting period for the first commitment period and for the period after the first commitment period separately.	**CAR 28**	OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	The starting date of the crediting period is on the date when the first emission reductions are expected, namely January 1, 2004.	OK	OK
34 (d)	Does the PDD state that the crediting period for	The date on which first emission reduction units are	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	expected to be generated was taken as the starting date of the crediting period, namely January 1, 2004. The end of the crediting period will be the final date of commitments to the buyer under the purchase and sales contract, under which their project owner must submit to the buyer approved greenhouse gases anthropogenic emission reductions resulting from this project, namely December 31, 2017.		
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The PDD states that the prolongation of the crediting period beyond 2012 is subject to approval of the host party and estimation of emission reductions of enhancements of net removals is presented separately for those until 2012 and those after 2012 in the relevant sections of PDD.	OK	OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	To define the monitoring a specific approach of joint implementation under the "Criteria for baseline setting and monitoring" is used by the project developer.	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	**CAR 29.** According to the Guidelines for users of the JI PDD forms, Review 04, please clearly indicate: 1) Data and parameters that are not monitored throughout the crediting period, but are determined only once and thus remain fixed throughout the crediting period, and that are available already at the stage of determination of PDD; 2) Data and parameters that are not monitored	**CAR 29** **CAR 30** **CAR 31**	OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination of PDD; 3) Data and parameters that are monitored throughout the crediting period. **CAR 30.** Please state clearly the identification numbers of monitoring data in tables of Section D to simplify cross references. **CAR 31**. Please, present the monitoring data and parameters in Annex 3 provided in section D. All decisive factors for the control and reporting of project performance: quality control (QC) and quality assurance (QA); operational and management structures that will be applied when implementing monitoring plan.		
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specifies variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancement of net removals to be monitored. Data to be monitored are presented in section D of the PDD version 3. Data subject to collection for monitoring of emissions in the project should be presented in Table D.1.1.1. of PDD. **CL 08.** Please clarify whether the data necessary for determination will be stored after the last transfer of ERUs under the project. **CAR 32.** Please include information about each method of archiving the parameters (paper and electronic forms). **CAR 33.** Please include data to be collected to monitor	**CL 08** **CAR 32** **CAR 33**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		emissions after the implementation of the small hydroelectric power plants in the section D.1.1.1.		
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	Default values are provided in the table of Annex 3 to PDD version 3. . They originate from recognized sources and are presented in a transparent manner.	OK	OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	The monitoring plan clearly indicates how the values are to be selected and justified.	OK	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	**CAR 34.** Please, number all formulae of PDD. **CAR 35.** Please provide all the values of emission reductions in tonnes of CO_2 equivalent in the PDD. **CAR 36.** In Section D.1.1.2., please, correct « $E^{y}_{r,\,h}$ -GHG emissions, due to fossil fuel use by boiler equipment in period «*y*» under the project scenario, t CO_2e» and write « $E^{y}_{r,\,h}$ -methane emissions due to implementation of cogeneration power plant (CPP) in period «*y*» under the project scenario, t CO_2e», as it is defined in detailed explanation of formulae in Section D.1.1.4. **CAR 37.** Please provide reference to the methodology, elements of which will be used, as well as factors for determining the baseline of GHG anthropogenic emissions.	**CAR 34** **CAR 35** **CAR 36** **CAR 37**	OK Ok OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Refer to section D of the PDD. **CAR 38.** Please add information regarding collecting and archiving of data on influence of all aspects of the project on the environment.	**CAR 38**	OK
36 (b) (iv)	Are International System Unit (SI units) used?	SI units are used. Also there are data units used in accordance with the applied methodology AM0020 «Baseline methodology for water pumping efficiency improvements» version 02.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases within the project boundary is presented in table D.1.1.3. of PDD.	OK	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients and variables are consistent between the baseline and monitoring plan. Both the baseline and the monitoring plan are based on the approved methodology AM0020 «Baseline methodology for water pumping efficiency improvements» version 02.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan is established taking into account "Guidance on criteria for baseline setting and monitoring".	OK	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored	Monitoring plan explicitly distinguishes between all these three types of data and parameters. Refer the PDD section D.1. See **CAR 29.**	pending **CAR 29**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?			
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	In tables of parameters provided in section D.1.1.1. of the PDD the time of monitoring (frequency) and the source of data to be used, as well as recording method are indicated for all the monitored parameters and data. **CAR 39**. Please, provide information on the collection and archiving of information on the environmental impacts of the project.	**CAR 39**	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained in the PDD. The description of formulae is given in Section D.1.4.	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Refer to section 36 (f) of this table.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	See **CAR 34**	Pending **CAR 34**	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes. Refer to section D of the PDD.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/A	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty level of data is indicated in the table. Refer to section D.2 of the PDD).	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the monitoring plan and in tables.	OK	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The formulae used in the PDD are sufficiently described.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Monitoring under the project does not require changes in existing accounting system and data collection existing at "Infox Ltd." branch "Infoxvodokanal" practice.	OK	OK
36 (f) (vii)	Are references provided as necessary?	**CAR 40**. Please, provide reference to the relevant host Party regulations.	**CAR 40**	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Assumptions referring to the implementation of the small hydroelectric power plant are explained in a transparent manner and clearly stated in the PDD version 3.	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A	OK	OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	Electrical meters and flowmeters are subject to a regular calibration. Quality control and quality assurance (QA) procedures undertaken for the data monitored are presented in the table (section D.2 of the PDD). Thus, the issue of uncertainty range and confidence interval is irrelevant for such measurements.	OK	OK
36 (g)	Does the monitoring plan identify a national or	Monitoring plan refers to the state statistic form 2-TP	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	(vodhosp) and 11-MTP.		
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	Quality control and quality assurance procedures to be used in the monitoring of the measured data are presented in table of section D.2. of PDD.	OK	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Information on monitoring of greenhouse emissions according to the baseline and project scenario shall be archived and stored as electronic and hard copies and will be at disposal of a person responsible for project monitoring. Detailed operational and management structures are given in Appendix 3 to the PDD. **CL 09.** Please explain in section D.4., that VEMA SA and "Infox" branch "Infoxvodokanal" are the participants of the project and make reference to Annex 1.	**CL 09**	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring under the project does not require changes in existing accounting system and data collection procedure.	OK	OK
36 (l)	Does the monitoring plan provide, in tabular	Tables D.1.1.1 and D.1.1.3 provide compilation of all data	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	needed to monitor project and baseline emissions.		
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Data to be monitored and required for determination will be kept for two years after the last transfer of ERUs for the project.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	See Table 14 of the PDD version 3.	OK	OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)?	N/A	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	(c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?			
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	Leakages due to project activity are not expected.	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Leakages due to project activity are not expected.	OK	OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	In the PDD the approach of assessment of emissions or net removals in the baseline scenario and in the project scenario is indicated. Formulae, used to estimate project emissions, are described in section D.1.1.2. of PDD. **CAR 41.** Please, provide the formulae used to estimate project emissions and formulae to estimate baseline emissions. **CAR 42.** Please, check the numbering of tables and make	**CAR 41** **CAR 42** **CAR 43**	OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
		relevand corrections. **CAR 43.** Please, correct the incorrect references in Section E.		
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	PDD provides ex ante estimates of: (a) Emissions for the project scenario (Section E.1); (b) Leakage (Section E.2); (c) Emissions for the baseline scenario (Section E.4); (d) Emission reductions adjusted by leakage (Section E.6).	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A	N/A	N/A
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in	(a) Estimates in 43 and 44 are given on the periodic basis, in tones of CO_2 equivalent, on a source-by-source basis, for each GHG. (b) The formulae used in PDD are consistent. (c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate. (d) Data sources used for calculating the estimates are clearly identified, reliable and transparent. (e) Default values are taken from identified sources. (f) Estimation in 43 is based on conservative assumptions	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the	and the most plausible scenario in a transparent manner. (g) Estimates in 43 are consistent throughout the PDD. The annual average of estimated emission reductions are calculated correctly (by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve).		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
	crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Baseline emissions are estimated on the basis of the approved CDM methodology AM0020 «Baseline methodology for water pumping efficiency improvements» version 02.	OK	OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	The environmental impacts of the project haven't been sufficiently described **CAR 44.** Please provide information about the environmental impact of the introduction of cogeneration plants and implementation of methane tanks. **CL 10.** Please include an analysis of the list of permits and authorization documents that have been provided by the host Party and govern all aspects of the project's impact on the environment.	**CAR 44** **CL 10**	OK OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	According to Ukrainian legislation, projects of new construction, reconstruction and technical re-equipment, industrial and civilian objects must include Environmental Impact Assessment (EIA), the basic requirements thereto are listed in state building codes of Ukraine A.2.2-1-2003. **CAR 45.** Please provide references to regulatory and legislative documents of Ukraine on assessment of the environmental impacts listed in Section F.1. and F.2. of PDD. **CL 11.** Please explain whether it is necessary to assess the environmental impact for a given project activity under the legislation of Ukraine.	**CAR 45** **CL 11**	OK
Stakeholder consultations				

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participant's measures review	Final Conclusion
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	**CR 12.** Please explain how the stakeholder were informed about the project activity. Since the project activities do not imply any negative environmental impact and negative social effect, special public discussions were not necessary. However, "Infox Ltd." branch "Infoxvodokanal" constantly informs the public about the implementations and modernization that are implemented or planned, and the stages of their implementation at the official website of the company. Stakeholders may provide their comments and take part in the discussion of these issues. No comments have been received from the Stakeholders so far.	**CL 12**	OK
Determination regarding small-scale projects (additional elements for assessment)				
Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)				
Determination regarding programmes of activities (additional/alternative elements for assessment)				

Table 2 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICTION REQUESTS

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
FAR 01. The project doesn't have the approval of the host Party and country investor.	19	The project is implemented as a bilateral JI project. The country of project implementation is Ukraine and Switzerland is the country – purchaser. To obtain the Letter of Approval the final Determination report must be submitted to the National Environmental Investment Agency of Ukraine that includes this determination Protocol to the list of sources of reference information. The Letter of Approval of the Swiss government acting as the country-investor is also not obtained at this stage of the project.	**FAR 01** will be closed after the Letter of Endorsement is issued by the Parties involved.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
CAR 01. Please provide more detailed information about the history of the project as well as the documents confirming this information as accompanying ones.	A.2	The management of «Infox Ltd.» branch «Infoxvodokanal» made a decision to implement the JI project at the enterprise during a board meeting on December 17, 2003. December 17, 2003 is a commencement date of elaboration of joint implementation project design documentation. Minutes of the meeting of "Infox Ltd." branch "Infoxvodokanal" management about the JI project in the company were provided as a accompanying document to the PDD	The minutes were provided, information was verified. The issue is closed.
CAR 02. Please provide clear explanation of how the introduction of cogeneration plants and methane tanks, as well as modernisation of aeration system and methane tanks will lead to decrease of GHG emissions in section A.2 of PDD.	A.2	Due to the fact that implementation of methane tanks and, accordingly, cogeneration plants and gas-holders for «Infox Ltd.» branch «Infoxvodokanal» was carried out according to the plan of another JI project, these measures were excluded from the PDD version 3 of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» Aerotanks will be reequiped with a new system of air distribution. Blowers and all pumps (including airlift) will be completely replaced. This will lead to significant savings of electric energy consumption. Detailed information is presented in Section A.2.	The issue is closed based on sufficient informantion and appropriate corrections in PDD version 3.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
CAR 03. Please provide information about objects included in the project and their physical location (a list of plants, their addresses, the location of small hydroelectric power plant).	A.4	Information about the facilities of «Infox Ltd.» branch «Infoxvodokanal» involved in the project are shown in Table 1 of Section A.4.1.4., PDD version 3.	Information has been verified. The issue is closed.
CAR 04. Project provides for the replacement of obsolete shut-off and control valves with valves of European manufacturers. Please justify the positive changes that will result from the replacement, provide references to the manufacturers.	A.4.2	The main function of the shut-off and control valves is connection of appliances and pipes, prevention and control of carrier work flow: shutdowns, balance, regulation of flow pressure. Using of modern shut-off and control valves produced by European and other manufacturers in the systems of domestic water supply and drainage allows to achieve high energy savings and create conditions for rendering high quality service to consumers.	Clarifications are sufficient. The issue is closed.
CAR 05. Please provide information and characteristics of metering devices, such as energy meters and flow meters, that are planned to be implemented under the project.	A.4.2	Characteristics and type of metering equipment to be implemented under the project were given in Table 6 (Characericstics of meters) of Section A.4.2.	The information was verified and analyzed. The issue is closed based on appropriate corrections.
CAR 06. Please provide the information and characteristics of new pumping equipment to be installed.	A.4.2	Characteristics and type of pumping equipment to be implemented under the project were given in Tables 3 and 4 of Section A.4.2.	The information was verified and analyzed. The issue is closed based on appropriate corrections.
CAR 07. Please provide characteristics of frequency regulators and information on their implementation.	A.4.2	The types of frequency regulators, their power and equipment manufacturers were given in Table 7, section A.4.2.	The information was verified and is sufficient. The issue is closed based on appropriate corrections in PDD, version 3.
CAR 08. Please provide information and	A.4.2	Due to the fact that implementation of methane	The issue is closed based on

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
characteristics of cogeneration modules.		tanks and, accordingly, cogeneration plants and gas-holders for «Infox Ltd.» branch «Infoxvodokanal» was carried out according to the plan of another JI project, these measures were excluded from the PDD version 3 of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal»	appropriate justifications.
CAR 09. Please provide technical characteristics of water supply systems to be replaced. Provide reference to the manufacturer's website.	A.4.2	Obsolete pipes will be replaced by fiberglass and plastic pipes that are characterized by durability (over 50 years), effectiveness in operation and corrosion resistance. Details and references to manufacturers' sites are given in section A.4.2.	The information was verified, the issue is closed.
CAR 10. Please specify the number and type of equipment that will be introduced at "Pivnichna" treatment plant and Pivdenna" treatment plant.	A.4.2	Four aerators that were custom designed would be replaced at "Pivnichna" wastewater treatment plant. Complete replacement of aeration systems at "Pivnichna" and "Pivdenna" wastewater treatment plants is planned to be carried out. Detailed information on modernization of equipment and implementation of measures at "Pivnichna" and "Pivdenna" treatment plants is given in section A.4.2.	The issue is closed based on relevant information about equipment that will be introduced at treatment plants.
CAR 11. The project provides for installation of gas-holders; this is described in Section A.4.2. of PDD. Please indicate the number of gas holders to be installed under the project. .	A.4.2	Due to the fact that implementation of methane tanks and, accordingly, cogeneration plants and gas-holders for «Infox Ltd.» branch «Infoxvodokanal» was carried out according to the plan of another JI project, these measures were	The answer was accepted, the issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
		excluded from the PDD version 3 of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal»	
CAR 12. Please provide a link to the site of producer of turbine to be implemented under the project.	A.4.2	Detailed information is presented on the manufacturer's Web: http://www.cink-hydro-energy.com/ru/ Turbine of Francis type produced by CINK Hydro-Energy has the following technical characteristics: N = 400 kW; Q = 1,43 m^3 /s; H = 35 m.	The references were provided. The issue is closed.
CAR 13. It is stated in Section A.4.2.of PDD that detailed information on the implementation of small hydroelectric power plants are represented in Section E. No information is available. Please make the appropriate corrections.	A.4.2	Detailed information on the implementation of small hydroelectric power plant is presented in Section A.4.2. of PDD (version 3). Referenced to Section E were deleted.	The issue is closed based on making appropriate corrections.
CAR 14. Please provide an explanation of why the project implementation schedule provides for implementation of small hydroelectric power plant in the later part of 2011 (in this particular year).	A.4.2	The implementation of small hydroelectric power plant will take place in the later part of 2011 after the implementation of the majority of measures under the project, when servicing in the sphere of water supply becomes more effective.	The issue is closed based on provision of relevant clarifications.
CAR 15. Please provide information when a Letter of Endorsement for the Joint Implementation project was issued by the National Environmental Investment Agency.	19	National Environmental Investment Agency issued a Letter of Endorsement #644/23/7 of the Joint Implementation project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» as of 25.03.2011. See Section A.5.	Information was provided. The issue is closed.
CAR 16. Please provide detailed justification of the baseline chosen in the part of the calculation,	23	Detailed justification of the baseline chosen in the part of the calculation, of a linear dependence	Section B.1. of PDD 3 version was reviewed and verified, the issue is

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
of a linear dependence using the method of least squares for all parameters of the project.		using the method of least squares is provided in Section B.1. of PDD version 3.	closed.
CAR 17. Please provide information, what methodologies were the basis for determining a specific approach to the baseline.	23	The proposed project uses a specific approach for joint implementation projects based on the approved by the UN Framework Convention on Climate Change Executive Committee clean development mechanism methodology baseline:: AM0020 «Baseline methodology for water pumping efficiency improvements», version 2.	The issue is closed based on relevant information concerning the approach to baseline setting provided for in section B.1.
CAR 18. Please provide information on what elements of approved methodologies were used when determining the baseline of the project.	24	The specific approach that was developed for this project uses AM0020 methodology. Application of this methodology that is appropriate for the project is provided in Table 14 of Section B.1.	Based on the provided information the issue is closed.
CAR 19. Please provide detailed information on the historical period chosen for baseline calculation (2000-2003, 2001-2004).	24	In PDD 3 version as a historical period for the calculation of baseline for water supply and wastewater treatment data of 2000-2003 is used and for drainage system - 2001-2004. Detailed information is given in section B.1.	Necessary explanation is provided. The issue is closed.
CAR 20. Provide information on how the indicators stated in PDD for estimation of transferred sludge are used.	24	For the calculation of GHG emission reductions a specific approach is used. It is based on the amount of the sludge transferred to sludge fields. Volume of the transferred sludge is determined by using indicators: - The volume of incoming waste at wastewater treatment plants (determined by flow meters); - The concentration of pollutants in waste	The issue is closed based on information received.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
		water (the main indicator of pollutants of biological origin is BOD_{20} that is determined by means of laboratory tests). See Section B.1.	
CAR 21. Please provide reference to the Methodologies, which were the basis for determining a specific approach to the baseline of the project.	24	References to AM0020 methodology were given in section B.1.	The issue is closed. The references have been verified.
CAR 22. Please specify the financial cost of small hydroelectric power plant implementation.	29 (b)	Information on the financial costs of implementation of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» is provided in Section B.2. of PDD.	The issue is closed based on provided information.
CAR 23. Please provide detailed information on financial costs of implementation of all works under the project.	29 (b)	Section B.2. PDD 3 version gives specific information regarding financial costs of the project "«Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal».	Information is corrected. The issue is closed.
CAR 24. Please provide a table showing an overview of all emission sources that are included and excluded from the project boundaries for both the baseline, and the project scenarios.	32 (c)	Tables 16 and 17 show an overview of all sources of emissions in the baseline and project scenarios. See Section B.3	The necessary informantion was provided in section B.3. The issue is closed.
CAR 25. Please correct the scheme of the project boundary for the project scenario (figure 6, Section B.3. version 1). Fossil fuel is not used by cogeneration plant.	32 (c)	Corrected. The scheme of the project boundary for the project scenario does not include fossil fuels. See Figure 15 in Section B.3. of PDD version 3.	The issue is closed based on corrections made in the project boundaries scheme.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
CAR 26. Please complete the scheme of project boundaries for the project scenario in the part of lettering of markings (Fig. 15, Section B.3. of PDD version 2)	32 (c)	Project boundaries for the project scenario is completed with relevant marking. See Section B.3. of PDD version 3.	Project boundaries for the project scenario is corrected. The issue is closed.
CAR 27. Please provide documentary evidence of the the project's starting date.	34 (a)	Minutes number 1-T of the management meeting of «Infox Ltd.» branch «Infoxvodokanal» dated 12/17/2003, (decision re joint implementation project at the company) were provided as accompanying documents.	The copies of confirmatory documents were provided. The issue is closed.
CAR 28. Please, specify the estimated length of the crediting period for the first commitment period and for the period after the first commitment period separately.	34 (c)	Appropriate information re the length of the crediting period is presented in Section C.3 of PDD.	Relevant information was provided, the issue is closed.
CAR 29. According to the Guidelines for users of the JI PDD forms, Review 04, please clearly indicate: 1) Data and parameters that are not monitored throughout the crediting period, but are determined only once and thus remain fixed throughout the crediting period, and that are available already at the stage of determination of PDD; 2) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination of PDD; 3) Data and parameters that are monitored throughout the crediting	36 (a)	Tables with the description of data and parameters, frequency of measurement and monitoring, data source that was (will be) applied and procedures to ensure quality of measurements, are provided in Sections D.1.1.3. and D.1.1.4. .	The issue is closed based on provision of relevant information.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
period.			
CAR 30. Please state clearly the identification numbers of monitoring data in tables of Section D to simplify cross references.	36 (a)	Cross references serving as identification numbers are provided in tables of Section D.	The issue is closed based on introduction of relevant changes.
CAR 31. Please present the monitoring data and parameters in Annex 3 provided in section D.	36 (a)	Corrected. Data and parameters of monitoring were presented in Annex 3 in the form of tables.	The information provided was verified. The issue is closed.
CAR 32. Please include information about each method of archiving the parameters (paper and electronic forms).	36 (b)	The data necessary to determine the reduction of anthropogenic emissions within the project boundary and how such data will be collected and archived is provided in sections B.1., D.1.1.3., D.1.1.4. in tabular form.	Information was provided in relevant sections. The issue is closed.
CAR 33. Please include data to be collected to monitor emissions after the implementation of the small hydroelectric power plants in the section D.1.1.1.	36 (b)	Necessary data was included in Section D.1.1.1.	Correctioms were made. The issue is closed.
CAR 34. Please, number all formulae of PDD.	36 (b) (ii)	All formulae in PDD were numbered.	Corrections were made. The issue is closed.
CAR 35. Please provide all the values of emission reductions in tonnes of CO_2 equivalent in the PDD.	36 (b) (ii)	Corrected. The values of emission reductions are presented in tonnes of CO_2 equivalent.	The issue is closed based on relevant corrections.
CAR 36. In Section D.1.1.2., please, correct « $E^{y}_{r,\,h}$ -GHG emissions,due to fossil fuel use by boilere quipment in period «*y*» under the project scenario, t CO_2e» and write « $E^{y}_{r,\,h}$ -methane emissions due to implementation of cogeneration power plant (CPP) in period «*y*» under the project scenario, t CO_2e», as it is defined in detailed explanation of formulae in Section D.1.1.4.	36 (b) (ii)	Parameter $E^{y}_{r,\,h}$ was excluded. Cogeneration installations are not provided for by the project; this is indicated in the PDD version 3. See Section D.1.1.2.	The issue is closed based on relevant corrections.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
CAR 37. Please provide reference to the methodology, elements of which will be used, as well as factors for determining the baseline of GHG anthropogenic emissions.	36 (b) (ii)	References to the methodology AM0020, which elements will be used for the calculation of emission reductions, as well as the coefficients, were given in section D of PDD version 3.	The references were verified. The issue is closed.
CAR 38. Please add information regarding collecting and archiving of data on influence of all aspects of the project on the environment.	36 (b) (iii)	"Infox" branch "Infoxvodokanal" will systematically collect data on pollution, which may have a negative impact on the environment. Detailed information is provided in Section D.1.5. of PDD 3 version.	Information is accepted, the issue is closed.
CAR 39. Please, provide information on the collection and archiving of information on the environmental impacts of the project.	36 (e)	All data and documents in paper form should be archived and one back-up copy should be transferred to the project coordinator. All data should be kept for two years after the transfer of emission reduction units generated by the project. See section D.1.5. and Annex 3, paragraph E.	Information on collection and archiving of data was provided. The issue is closed.
CAR 40. Please, provide reference to the relevant host Party regulations.	36 (f) (vii)	References have been provided on Resolution # 554 as of July 27, 1995 "List of activities and objects of high environmental hazard" and Art. 14 of the Law of Ukraine "On ecological expertise", State Construction Standards of Ukraine, carbon emission factors (EF) for 2006-2012 taken from the "Emission Factors for the Ukrainian power grid" from the document "Ukraine - estimation of new EF calculations", which was verified by TUV SUD Industrie Service GmbH on 17.08.2007, in Sections D and F.	The issue is closed based on provision of relevant references.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
CAR 41. Please, provide the formulae used to estimate project emissions and formulae to estimate baseline emissions.	42	Formulae to estimate project and baseline emissions were represented in the accompanying documents 1, 2.1.-2.3.	The formulae were provided, the issue is closed.
CAR 42. Please, check the numbering of tables and make relevand corrections.	42	Numbering of tables was checked and corrected in PDD.	The issue is closed based on relevant corrections made in PDD.
CAR 43. Please, correct the incorrect references in Section E.	42	References in section E were corrected.	The issue is closed based on relevant corrections made in PDD.
CAR 44. Please provide information about the environmental impact for the introduction of cogeneration plants and implementation of methane tanks.	48 (a)	Due to the fact that implementation of methane tanks and, accordingly, cogeneration plants and gas-holders for «Infox Ltd.» branch «Infoxvodokanal» was carried out according to the plan of another JI project, these measures were excluded from the PDD version 3 of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal»	The information was accepted. The issue is closed.
CAR 45. Please provide references to regulatory and legislative documents of Ukraine on assessment of the environmental impacts listed in Section F.1. and F.2. of PDD.	48 (b)	Corrected. References to relevant documents were provided in Sections F.1. and F.2.	The references were verified, the issue is closed.
CR 01. Please explain the technological process at small hydroelectric power plants. Is there any experience in operating small hydroelectric power plants in Ukraine.	A.4.2	Implementation of a small hydroelectric power plant provides for installation of a turbine of Francis type that allows to convert the kinetic energy of the water flow (of wastewater) into electric energy. Treated wastewater after full range of biological treatment at WWTP "Pivdenna" is discharged into the Black Sea. This will create a	The issue is closed based on provision of relevant clarifications.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
		differential pressure (free flow of liquid), which can be used to generate electric energy. Detailed information is provided in Section A.4.2. of PDD (version 3).	
CR 02. Please provide a detailed explanation of how and by what measures reduction of methane emissions will be achieved.	A.4.3	Due to the fact that implementation of methane tanks and, accordingly, cogeneration plants and gas-holders for «Infox Ltd.» branch «Infoxvodokanal» was carried out according to the plan of another JI project, these measures were excluded from the PDD version 3 of the project «Development and improvement of water supply system, drainage system and wastewater treatment of «Infox Ltd.» branch «Infoxvodokanal» Under PDD (version 3) the project does not provide reduction of methane emissions.	Clarifications are accepted., the issue is closed.
CR 03. Please explain in detail the impossibility of application of approved methodologies.	23	During the project development there were no approved CDM methodologies for the projects of this kind. The proposed project uses a specific approach for joint implementation projects based on the approved by the UN Framework Convention on Climate Change Executive Committee clean development mechanism methodology baseline: AM0020 «Baseline methodology for water pumping efficiency improvements» (Version 2) A detailed explanation of the reasons why approved methodologies can not be used, are presented in section B.1. of PDD.	Clarification are provided in section B.1., the issue is closed.
CR 04.Please explain whether any project activity was carried out in 2003 (which is deemed to be the baseline year)?	24	Despite the fact that some project activities started in late 2003, this year is deemed to be the basic year from a conservative point of view.	Clarifications are accepted., the issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
CR 05. Please, explain the choice of the main factors that determine greenhouse gas emissions.	24	The main factors determining the greenhouse gas emissions 1. Greenhouse gas (GHG) emissions due to consumption of electric energy used by water supply system. 2. GHG emissions due to consumption of electric energy used by drainage system. 3. GHG emissions due to consumption of electric energy used by wastewater treatment system. Information is provided in Section B.1.	The issue is closed. Explanation is accepted.
CR 06. Please, explain, what does the choice of Efficiency factor values of old and new pumps as well as increase in delta unit rely on.	24	The choice of values relies on averaged data of the enterprise re efficiency factors of pumps and nameplate data of the equipment. See. Section B.1 of PDD 3 version.	Section B.1. was verified, the issue is closed.
CR 07. Please explain which confirmatory documents may be provided by the enterprise re the data of electric meters and flow meters of water.	24	This is explained in detail in paragraphs B and C of Annex 3 to PDD version 3.	The issue is closed based on provision of necessary clarifications.
CR 08. Please clarify whether the data necessary for determination will be stored after the last transfer of ERUs under the project.	36 (b)	All data should be kept for two years after the transfer of emission reduction units generated by the project. See section D.1.5. and Annex 3, paragraph E.	Clarifications are accepted. The issue is closed.
CR 09. Please explain in section D.4., that VEMA SA and "Infox" branch "Infoxvodokanal" are the participants of the project and make reference to Annex 1.	36 (j)	VEMA S.A. and «Infox Ltd.» branch «Infoxvodokanal» are the participants of the project. The references are added. See section D.4.	Corrected. The issue is closed.
CR 10. Please include an analysis of the list of permits and authorization documents that have been provided by the host Party and govern all aspects of the project's impact on the	48 (a)	The relevant information is provided in Section F.1.	The issue is closed based on clarification, provided in section F of PDD, version 03.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant's responses	Determination team conclusion
environment.			
CR 11. Please explain whether it is necessary to assess the environmental impact for a given project activity under the legislation of Ukraine.	48 (b)	Modernisation of pumping equipment, replacement of water and drainage systems are not the objects of particular environmental hazard and are not subject to state examination in accordance with Resolution # 554 as of July 27, 1995 "List of activities and objects of high environmental hazard "and Art. 14 of the Law of Ukraine "On ecological expertise". Project documentation for the implementation of small hydroelectric power plant (according to State Construction Standards of Ukraine A.2.2-1-2003), which includes environmental impact assessment (EIA) is under development and will be provided during the implementation period.	The issue is closed based on clarification, provided in section F.1. of PDD.
CR 12. Please explain how the stakeholder were informed about the project activity.	49	"Infox Ltd." branch "Infoxvodokanal" constantly informs the public about the implementations and modernizations that are implemented or planned, and stages of their implementation at the official website of the company. Stakeholders may provide their comments and take part in the discussion of these issues. No comments have been fixed from Stakeholders so far.	Explanation re informing of the stakeholders are accepted.