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TÜV Rheinland (China) Ltd. (TÜV Rheinland)

DETERMINATION REPORT

Determination of the Joint Implementation Project

Development and improvement of water supply systems, drainage system and wastewater treatment of CE “Dniprovodokanal”

Report No. 01 998 9105072318 - DR
Revision No. 02

Customer: VEMA S.A.

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DETERMINATION REPORT

Date of first issue: 23/10/2012	Project No.: 01 998 9105072318
Executor: TÜV Rheinland (China) Ltd. (TÜV Rheinland)	Organizational unit: TÜV Rheinland Ukraine Ltd. Technical Competence Center
Customer: VEMA S.A.	Client ref.: Fabian Knodel

Summary:

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed a determination of the JI project Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal" 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 serves as project design objective and complete assessment, and is a requirement for all JI projects. It consists of the following three phases: i) a desk review of the project design documents including analysis of the baseline justification and monitoring plan; ii) follow-up interviews with project stakeholders including on site visit; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract signing to Determination Report & Opinion, was conducted using TÜV Rheinland (China) Ltd. (TÜV Rheinland) internal procedures.

To address TÜV Rheinland (China) Ltd. (TÜV Rheinland) corrective action and clarification requests VEMA S.A. revised the PDD and resubmitted it on 28/11/2012 as version 02.

The determination findings presented in this report relate to the project as described in the PDD version 02 dated 28/11/2012.

In summary, it is TÜV Rheinland (China) Ltd. (TÜV Rheinland) opinion that the project complies with the criteria for baseline setting and monitoring methodology according to developed JI specific approach, and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: 01 998 9105072318 – DR	Subject Group: JI	
Project title: Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal"		
Work carried out by: Dr. Valery Yakubovsky - Team Leader, Technical Competence Center Director Ms. Ganna Zadnipriana – Auditor Ms. Yuliia Makarova – Trainee		☒ No distribution without permission from the Client or responsible organizational unit
Work verified by: Dr. Lixin Li – Technical Reviewer	TÜV Rheinland (China) Ltd. (TÜV Rheinland)	☐ Limited distribution
Determination Report approved by: Dr. Manfred Brinkmann – Accredited Independent Entity Operational manager		☐ Unrestricted distribution
Date of this revision: 03/12/2012	Revision No.: 02	Number of pages: **107**

Abbreviations

CO_2	Carbon Dioxide
AIE	Accredited Independent Entity
AS	Aeration stations
BE	Baseline Emission
CAR	Corrective Action Request
CL	Clarification Request
DNA	Designated National Authority
DPP	Drainage Pumping Plants
DR	Document Review
e	Equivalent
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Greenhouse Gas
I	Interview
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LoA	Letter of Approval
LoE	Letter of Endorsement
MoV	Means of Verification
MP	Monitoring Plan
MWh	Mega Watt Hours
MW	Mega Watt
OSV	On Site Visit
PDD	Project Design Document
PE	Project Emissions
STHS	Stakeholder Survey
t	Tonne
tCO_2e	Tonnes of CO_2 equivalent
UNFCCC	United Nations Framework Convention on Climate Change
WSPP	Water Supply Pumping Plants

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1 DETERMINATION OPINION

The determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed a determination of the JI project Development and improvement of water supply systems, drainage system and wastewater treatment of CE “Dniprovodokanal” in Ukraine under national procedure (Track 1). 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 document (PDD) including analysis of the baseline justification and monitoring plan;
ii) follow-up interviews with project stakeholders including on site visit;
iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

The project participants of the JI project Development and improvement of water supply systems, drainage system and wastewater treatment of CE “Dniprovodokanal” selected the JI specific approach for identifying the baseline, defined in paragraph 22 (a) of the “Determination and Verification Manual” (DVM).

A baseline for the project was set in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). The JI specific approach is provided in paragraph 9 (a) of the “Guidance on criteria for baseline setting and monitoring”, version 03.

The PDD version 02 dated 28/11/2012 provides a description of the chosen baseline in a clear and transparent manner according to “Guidelines for users of the joint implementation project design document form”, version 04, as well as a justification per the “Guidance on Criteria for Baseline Setting and Monitoring” (paragraphs 23 - 29), version 03.

Project participants used the following approach defined in paragraph 28 (c) of the DVM: Application of the "Tool for the demonstration and assessment of additionality" version 06.0.0 (the most recent version of the Tool at the time of PDD development) for demonstration of the additionality. In line with this tool, the PDD version 02 dated 28/11/2012 provides barrier analysis and common practice analysis to determine that the project activity itself is not the baseline scenario.

The JI project is likely to result in reductions of GHG emissions in accordance with the project description. An analysis of the barriers and prevailing practice demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence 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 review of the project design documentation (02 dated 28/11/2012) and the subsequent interviews have provided TÜV Rheinland (China) Ltd. (TÜV Rheinland) with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for JI projects and the relevant host country criteria.

The final version of the PDD (version 02 dated 28/11/2012) was revised based on raised corrective action requests and clarification requests by determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) that were satisfactory resolved.

The determination is based on the information made available to the determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) and the engagement conditions detailed in this report.

2 INTRODUCTION

VEMA S.A. has commissioned TÜV Rheinland (China) Ltd. (TÜV Rheinland) to determinate JI project Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal" (hereinafter called "Project") that is located in Dnipropetrovsk city, Ukraine.

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.

2.1 Objective

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 considered necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, Appendix B of the JI guidelines and the subsequent decisions by the JISC, as well as the host country criteria.

2.2 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.

2.3 JI Project Description

The brief information regarding the project is provided in table 1.

Table 1 - JI project brief information

Project Parties involved:	1. Ukraine (host Party); 2. Switzerland.
Title of the project:	Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal"
Type of JI activity:	Large scale
Baseline and monitoring methodology:	JI specific approach
Project entity participant:	CE "Dniprovodokanal"
Other project participants:	VEMA S.A.
Location of the project:	Dnipropetrovsk city, Ukraine
Starting date of the project:	30/11/2004
Length of the crediting period:	01/01/2005 – 31/12/2020
Length of the part of the crediting period before the first commitment period of the Kyoto Protocol:	01/01/2005 – 31/12/2007
Length of the part of crediting period within the first commitment period of the Kyoto Protocol:	01/01/2008 – 31/12/2012
Length of the part of the crediting period after the end of the first commitment period of the Kyoto Protocol:	01/01/2013 – 31/12/2020

The project's main purpose is reduction of electric energy consumption by modernization and development of central water supply, drainage and wastewater treatment systems, which includes replacement and modernization of pumps, water distribution and water drainage systems, installation of frequency regulators and optimization of the technological process of water transportation in Dnipropetrovsk city. Implementation of the above-mentioned technologies will allow to reduce greenhouse gas emissions (CO_2) and contribute to sustainable city development.

The project provides for GHG emission reductions due to:

- modernization of pumping equipment;
- replacement of pumping equipment;
- optimization of the technological process of water pumping, i.e. change of operation modes of pumping plants;
- replacement of water supply and drainage networks;
- replacement of shut-off and control valves;

- installation of a new set of metering devices;
- installation of frequency regulators;
- modernization of air tanks.

The starting date of the JI project activity was 30/11/2004, when it was commissioned the new equipment on one of the pumping stations of CE “Dniprovodokanal”. The evidence document of starting date was provided by project participants to the determination team as supporting document (please refer to evidence document # /81/ in Table 2, section 3.1. of the Determination Report).

3 METHODOLOGY

The determination consists of the following three phases:

I) a desk review of the project design documents including analysis of the baseline justification and monitoring plan;

II) follow-up interviews with project stakeholders including on site visit;

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

The following sections outline each step in more detail.

3.1 Desk Review of the Project Design Documentation

The Project Design Document (PDD) submitted by VEMA S.A. and additional background documents related to the project design to be checked by an Accredited Independent Entity were reviewed. The list of submitted documentation is provided below. To address TÜV Rheinland (China) Ltd. (TÜV Rheinland) corrective action and clarification requests VEMA S.A. revised the PDD and resubmitted it on 28/11/2012 as version 02.

The determination findings presented in this report relate to the project as described in the PDD version 02 dated 28/11/2012.

The following table outlines the documentation reviewed during the determination. The documents of Category 1 relate directly to the components of the project. The documents of Category 2 relate to the design and/or methodologies employed in the design or other reference documents.

Table 2 - Documents reviewed during the determination

No.	Title of the document
	Documents of Category 1
/1/	PDD Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal", version 01 dated 23/10/2012.
/2/	PDD Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal", version 02 dated 28/11/2012.
/3/	Supporting Document 1 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal", "Calculation of estimated greenhouse gas emissions".
/4/	Supporting Document 2 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal", "Project and monitoring equipment".
/5/	Supporting Document 3 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal", "Replacement of water supply and drainage networks in 2005-2012".

No.	Title of the document
/6/	"Guidelines for users of the Joint implementation project design document form", version 04.
/7/	The approved CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 02.
/8/	"Guidance on criteria for baseline setting and monitoring", version 03.
/9/	"Tool for the demonstration and assessment of additionality", version 06.0.0.
/10/	"Guidelines for objective demonstration and assessment of barriers", version 01.
/11/	Kyoto Protocol to the United Nations Framework Convention On Climate Change.
/12/	Marrakech Accords, JI Modalities.
/13/	JI Guidance. Appendix B to decision 9/CMP.1.
/14/	"Joint implementation determination and verification manual", version 01.
/15/	"Glossary of JI terms", version 03.
/16/	Letter of Endorsement for the project "Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal" # 3311/23/7 dated 31/10/2012.
/17/	Order # 62 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2008" dated 15/04/2011.
/18/	Order # 63 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2009" dated 15/04/2011.
/19/	Order # 43 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2010" dated 28/03/2011.
/20/	Order # 75 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2011" dated 12/05/2011.
/21/	PDD "Development and improvement of water supply system, drainage system and wastewater treatment of City Communal Enterprise "Mykolayivvodokanal", version 03 dated 02/04/2012 (http://ji.unfccc.int/JIITLProject/DB/YJQJMA903XJMSOIFU64OAAIT4I4JV8/details).
/22/	Determination report "Development and improvement of water supply system, drainage system and wastewater treatment of City Communal Enterprise "Mykolayivvodokanal", Report №UKRAINE-DET/0477/2012, dated 06/04/2012 (http://ji.unfccc.int/JIITLProject/DB/YJQJMA903XJMSOIFU64OAAIT4I4JV8/details).
/23/	PDD "Development and improvement of water supply system, drainage system and wastewater treatment of "Infox Ltd." branch "Infoxvodokanal", version 03 dated 07/04/2011 (http://ji.unfccc.int/JIITLProject/DB/7PE5JHSBJFO0Y6V8URCHW2V2GS1NPY/details).
/24/	Determination report "Development and improvement of water supply system, drainage system and wastewater treatment of "Infox Ltd." branch "Infoxvodokanal", Report No. UKRAINE-DET/0265/2011 dated 21/04/2011 (http://ji.unfccc.int/JIITLProject/DB/7PE5JHSBJFO0Y6V8URCHW2V2GS1NPY/details).

No.	Title of the document
/25/	PDD "Reconstruction of water supply and drainage system "Luganskvoda Ltd." version 02 dated 04/10/2010 (http://ji.unfccc.int/JIITLProject/DB/UM92XEB0QFT42Z3UDKOX9QDY30YPL9/details).
/26/	Determination report "Reconstruction of water supply and drainage system "Luganskvoda Ltd." Report No. UKRAINE/0138/2010 dated 04/10/2010 (http://ji.unfccc.int/JIITLProject/DB/UM92XEB0QFT42Z3UDKOX9QDY30YPL9/details).
Documents of Category 2	
/27/	Order # 1025 on storage period of data on JI project at the enterprise CE "Dniprovodokanal" dated 15/12/2004.
/28/	Photographic material. Scheme of Dnipropetrovsk water supply and sewage systems. (14 photos)
/29/	Photographic material. Southern aeration station. (33 photos)
/30/	Photographic material. Acoustic Flow meter with integrator "ECHO-P-02."
/31/	Log book of accounting drainage by measurement equipment, started on 01/01/2007 (13 pages).
/32/	Photographic material. Sewage pumping station #52, CE "Dniprovodokanal" (12 photos).
/33/	Log book of accounting electrical energy of input # 1 and # 2, the TP-6033 and NSV-52 (5 pages).
/34/	Photographic material. Sewage pumping station #61, CE "Dniprovodokanal" (32 photos).
/35/	Log book of accounting electricity consumption of Sewage pumping station #61 (5 pages).
/36/	Form, ultrasound water heat detector, "ERHOMERA-125" # 3378 12, WSPP #2. (4 pages).
/37/	Form, ultrasound water heat detector, "ERHOMERA-125" # 3379 12 WSPP #3. (4 pages).
/38/	Form, ultrasound water heat detector, "ERHOMERA-125" # 3381 12 WSPP #4. (3 pages).
/39/	Form, ultrasound water heat detector, "ERHOMERA-125" # 3382 12 WSPP #5. (4 pages).
/40/	Form, ultrasound water heat detector, "ERHOMERA-125" # 3383 12, KNFS #4. (3 pages).
/41/	List of measuring instruments (MI), which are in operation and are subject to calibration in 2012, electrical and magnetic measurements. Approved 24/10/2012. (4 pages).
/42/	List of measuring instruments (MI), which are in operation and are subject to calibration in 2012, geometrical measurements. Approved 24/10/2012. (4 pages).
/43/	List of measuring instruments (MI), which are in operation and are subject to calibration in 2012, mechanical measurements. Approved 24/10/20122. (2 pages).
/44/	List of measuring instruments (MI), which are in operation and are subject to calibration in 2012, measurement of parameters of flow, flow, level and volume of substances. Approved 24/10/201212. (4 pages).
/45/	Table 3. Introduction of valves (01/01/2012-31/07/2012).
/46/	Certificate of maintenance check of mechanical equipment (commissioning of

No.	Title of the document
	new equipment - pumping unit K 160/20) dated 30/09/2007.
/47/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit K 160/20 A) dated 310/01/2007.
/48/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit DAV 110/180) dated 30/11/2007.
/49/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit DAV 110/180) dated 15/10/2007.
/50/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit K 20/30) dated 21/02/2011.
/51/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 140 D 70) dated 13/04/2005.
/52/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 140 D 70) dated 08/08/2005.
/53/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit CN 400-105) dated 29/08/2005.
/54/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit KM 50-32-125) dated 13/10/2011.
/55/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 80/32) dated 17/11/2007.
/56/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 80/32) dated 24/12/2005.
/57/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 140 D 70) dated 08/08/2008.
/58/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit K 20/30) dated 21/02/2011
/59/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 140 D 70) dated 20/03/2005.
/60/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit DAV 110/180) dated 30/11/2011.
/61/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit H 30-12-125K) dated 31/01/2011.
/62/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit WILO MHI-803) dated 31/08/2011.
/63/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit GNOM 10-10T) dated 31/12/2010.
/64/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit WILO MHI-803) dated 31/07/2010.
/65/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit WILO MHI-803) dated 27/12/2010.
/66/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit UPS2S-800 FM) dated 27/12/2004.
/67/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit) dated 30/09/2009.
/68/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 320-50) dated 30/10/2009.
/69/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 200-90) dated 31/12/2008.
/70/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit VVN-12) dated 31/10/2008.

No.	Title of the document
/71/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SDV 80/18) dated 31/01/2008.
/72/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit WILO) dated 31/01/2008.
/73/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 2000-100) dated 31/12/2007.
/74/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 800/52) dated 17/11/2007.
/75/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 200/90) dated 31/12/2006.
/76/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 2500/62) dated 21/04/2006.
/77/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD2000-21) dated 31/12/2005.
/78/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 160/45) dated 31/07/2005.
/79/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit C-204) dated 30/11/2004.
/80/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit C-204) dated 30/11/2004.
/81/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 140 D 70) dated 30/10/2004.
/82/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 2000-100) dated 20/10/2009.
/83/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit DRO 75/2032V) dated 20/10/2009.
/84/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit КМ 65-50-160) dated 24/04/2007.
/85/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit DRP400/2/80AOF-T-E) dated 16/05/2006.
/86/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit LSWt3BM) dated 12/01/2006.
/87/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit jswm3BM) dated 13/03/2005.
/88/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 10/25) dated 30/09/2007.
/89/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit VVN 1-6) dated 03/10/2008.
/90/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 3k6) dated 12/08/2006.
/91/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit DME 19-6) dated 12/11/2004.
/92/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit x 50-32-125 EC) dated 27/01/2011.
/93/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit x 50-32-125 К) dated 26/01/2011.
/94/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 2500x62) dated 30/03/2007.
/95/	Certificate of maintenance check of mechanical equipment (commissioning of

No.	Title of the document
	new equipment - pumping unit D 2500x62) dated 23/12/2006.
/96/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit X80-65-160 ESD) dated 31/01/2010.
/97/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit К 100-65-200) dated 23/11/2006.
/98/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 200/36) dated 17/11/2007.
/99/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit К 80-50-200) dated 17/11/2007.
/100/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit D 200-36b) dated 17/11/2007.
/101/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 32-40) dated 31/01/2005.
/102/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit MHI 803) dated 22/06/2007.
/103/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SN 80-50-200) dated 23/11/2006.
/104/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit MHI 803) dated 22/07/2007.
/105/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit WILO MHI 803) dated 22/07/2007.
/106/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit WILO MHI 803) dated 30/10/2011.
/107/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit CM 125-30-315/4) dated 25/12/2010.
/108/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit 4NF 8 m3/ch) dated 25/12/2010.
/109/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 800/32) dated 30/05/2008.
/110/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit SD 160/104) dated 31/03/2008.
/111/	Certificate of maintenance check of mechanical equipment (commissioning of new equipment - pumping unit FG 210/14) dated 31/01/2008.
/112/	Emission reductions purchase agreement relating to the Joint Implementation project between VEMA S.A. and Communal Enterprise “Dniprovodokanal” of Dnipropetrovsk City Council, dated 01.08.2011 (17 pages).
/113/	Cover letter on package of documents submission from Orel Kostyantyn Yevgeniyovych (Acting Director of CE “Dniprovodokanal”) to Fabian Knodel (Director, VEMA S.A.).
/114/	Letter # 122 dated 05/12/2011 from Fabian Knodel (Director, VEMA S.A.) to Orel Kostyantyn Yevgeniyovych (Acting Director of CE "Dniprovodokanal”) on receiving package of documents and necessary information in corpore.
/115/	Statement of capital assets availability of CE “Dniprovodokanal” on 30/10/2011 (2 pages).
/116/	Questionnaire for preliminary estimation of greenhouse gas (GHG) emission reductions.
/117/	License series AG № 500019 for central water supply and wastewater, CE “Dniprovodokanal” Dnipropetrovsk City Council. Issued by the National Electricity Regulatory Commission of Ukraine (NERC). Expiry date of

No.	Title of the document
	01/09/2011 to 31/08/2015.
/118/	Resolution # 1521 of 01.09.2011 National Energy Regulatory Commission of Ukraine (NERC). On issuance CE “Dniprovodokanal” Dnipropetrovsk city council license.
/119/	Extract series AAB number 490711 from the unified state register of legal entities and individual entrepreneurs, CE "Dniprovodokanal" Dnipropetrovsk City Council. Date of issue: 18/08/2003.
/120/	Certificate Series AOS number 406766 from 14/08/2003 on state registration of legal entity City Municipal Production Enterprise “Dniprovodokanal”.
/121/	Order № 276-rc from 20/06/2011 Dnipropetrovsk city head of performance of official commitments director CE "Dniprovodokanal" Dnipropetrovsk City Council.
/122/	Special water use permit for CE "Dniprovodokanal" Dnipropetrovsk City Council on 01/01/2012. Issued by State Department of Environmental Protection in the Dnipropetrovsk region (3 pages).
/123/	Certificate # 61. Published Metrological Service Ltd. ("RUDMAH") of the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine December 28, 2011, effective until December 28, 2015.
/124/	A copy of the Statute of CE "Dniprovodokanal" Dnipropetrovsk City Council (revised), Dnipropetrovsk city, 2011, pages 1 and 3. (2 pages).
/125/	List of structural units of CE "Dniprovodokanal" Dnipropetrovsk City Council.
/126/	Technical characteristics of objects CE "Dniprovodokanal" (5 pages).
/127/	Information on meters of water and wastewater in the enterprise (2 pages).
/128/	Certificate # 62/1. Issued by Metrological Service ("RUDMAH" Ltd.) of the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine August 23, 2011, effective until December 27, 2011
/129/	Certificate # 116/1. Issued by Metrological Service ("RUDMAH" Ltd.) of the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine August 23, 2011, effective until December 29, 2013.
/130/	Installation (replacement) of electricity meters to Annex 3 of the Monitoring report of the Project - measures that have been implemented under the project 2008-2011 (3 pages).
/131/	Certificate of validation (replacement) settlement metering electricity dated 01/12/2008, CE “Dniprovodokanal”.
/132/	Certificate of validation (replacement) settlement metering electricity dated 08/09/2008, CE “Dniprovodokanal”.
/133/	Technical data sheet of 3-phase current measuring complex NSV-72.
/134/	The act of filling metering, CE “Dniprovodokanal” TP-1567.
/135/	Contract # 23 dated February 17, 2009 pursuant to contract work between EC “Dniprovodokanal” (Customer) and "Alliance" (Contractor) (2 pages).
/136/	Information on the cost of contract work performed on February 2009 the contract # 23 dated February 2, 2009.
/137/	Act of delivery and acceptance to Contract # 23 dated 17/02/2009.
/138/	Passport. Instruction manual control station has 2 engines "Cascade FC" Ukraine 2008 (4 pages).
/139/	Working Draft automated control system for induction motors st. Yubileyna CE “Dniprovodokanal”, Dnipropeterovsk city using variable-frequency drive, LLC PTTS "Dinamo-continent" (2 pages).
/140/	Contract # 28 dated February 17, 2009 pursuant to contract work between

No.	Title of the document
	CE “Dniprovodokanal” (Customer) and “Alliance” (Contractor) (1 page).
/141/	Act of delivery and acceptance to Contract # 28 dated 17/02/2009.
/142/	Information on the cost of contract work performed on February 2009 the contract # 28 dated February 02, 2009.
/143/	Contract # 27 dated February 17, 2009 pursuant to contract work between CE “Dniprovodokanal” (Customer) and "Alliance" (Contractor) (2 pages).
/144/	Act of delivery and acceptance to Contract # 27 dated 17/02/2009.
/145/	Information on with the cost of contract work performed on February 2009 the contract # 27 dated February 02, 2009.
/146/	Act of delivery and acceptance to Contract # 1375 dated 17/12/2009.
/147/	Expenditure invoice # 4368 dated 30/12/2010.
/148/	Information on the cost of contract work performed on February 2009 the contract # 30 dated February 02, 2009.
/149/	Expenditure invoice # 0-14 dated 22/10/2009.
/150/	Contract # 12/198 dated 21/03/2011 between CE “Dniprovodokanal” (Customer) and PE “Multi-profile private firm “Pivdenbud”" (Contractor) (2 pages).
/151/	Contract # 1808/11 dated 18/08/2011 between CE “Dniprovodokanal” (Customer) and LLC “Dniproremont” (Contractor) (2 pages).
/152/	Contract # 10 dated 05/04/2011 between CE “Dniprovodokanal” (Customer) and PE “Multi-profile private firm “Pivdenbud”" (Contractor) (2 pages).
/153/	Passport of parallel double-disk valve PN 10. Technical description and instruction manual GL 16003-000 PS (GL 16003-050 TO).
/154/	Passport of parallel double-disk valve PN 10. Technical description and instruction manual GL 16003-000 PS (GL 16003-150 TO).
/155/	Passport of parallel double-disk valve PN 10. Technical description and instruction manual GL 16003-000 PS (GL 16003-100 TO).
/156/	Passport of parallel double-disk valve PN 10. Technical description and instruction manual GL 16003-000 PS (GL 16003-300 TO).
/157/	Passport of wedge valve LA 11055-050 250 PS (2 pages).
/158/	Passport of wedge valve LA 11055-080 250 PS (2 pages).
/159/	Passport of wedge valve LA 11055-100 250 PS (2 pages).
/160/	Passport of wedge valve LA 11055-150 250 PS (2 pages).
/161/	Passport of parallel double-disk cast-iron valve 30ch6br PN 10 (2 pages).
/162/	Passport of wedge valve LA 11055-200 250 PS (2 pages).
/163/	Quality certificate # 481/5 dated 04/10/2012. Steel seamless hot-deformed pipes (2 pages) Issued LLC “Interpipe Tube” (2 pages).
/164/	Quality certificate # 3788 dated 15/08/2012. Steel seamless hot-deformed pipes (2 pages) Issued LLC “Interpipe Tube” (2 pages).
/165/	Certificate of conformity of polyethylene pressure pipes of diameters from 16 mm to 315 mm. Operation lifetime period: 15/05/2012 to 14/05/2013.
/166/	Conclusion of the state sanitary-epidemiological examination # 05.03.02-04/7647 dated 13/02/2008 (2 pages).
/167/	Passport No. 692-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/168/	Passport No. 650-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/169/	Passport No. 373-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/170/	Passport No. 504-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/171/	Passport No. 684-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008

No.	Title of the document
/172/	Passport No. 619-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/173/	Passport No. 279-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/174/	Passport No. 298-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/175/	Passport No. 139-12 for polyethylene pressure pipes, DSTU B V.2.7-151:2008
/176/	Passport of centrifugal pumps of type "K" and electropump units on their basis. Technical description and instruction manual (4 pages).
/177/	Photographic material. Determination team.
/178/	Photographic material. General picture of CE “Dniprovodokanal” scheme (2 photos).
/179/	Report on water consumption for Q4 2002 (8 pages).
/180/	Report on water consumption for Q4 2003 (8 pages).
/181/	Report on water consumption for Q4 2004 (8 pages).
/182/	Report on water consumption for Q4 2005 (10 pages).
/183/	Report on water consumption for Q4 2006 (10 pages).
/184/	Report on water consumption for Q4 2007 (10 pages).
/185/	Report on water consumption for Q4 2008 (10 pages).
/186/	Report on water consumption for Q4 2009 (10 pages).
/187/	Report on water consumption for Q4 2010 (10 pages).
/188/	Report on water consumption for Q4 2011 (10 pages).
/189/	Form, ultrasound water heat detector, “ERHOMERA-125" EUS 125 FO, DPP at D. Nechay str. (2 pages).
/190/	Metering Device Calibration Certificate # 19-20/100-11 dated 31/01/2011 valid until 31/01/2012.
/191/	Passport of ultrasound flow meter dated 01/2011.
/192/	Form, ultrasound water heat detector, “ERHOMERA-125" # 034106 2335 WSPP # 4. (3 pages).
/193/	Form, ultrasound water heat detector, “ERHOMERA-125" # 0332 05 WSPP # 5. (3 pages).
/194/	Form, ultrasound water heat detector, "ERHOMERA-125" # 0095 03 WSPP # 6. (3 pages).
/195/	Working Metering Device Calibration Certificate No. 19-20/1057-09 dated 28/04/2009 valid until 28/04/2010
/196/	Working Metering Device Calibration Certificate No. 19-20/906-10 dated 12/04/2010 valid until 12/04/2011
/197/	Working Metering Device Calibration Certificate No. 19-20/1058-09 dated 28/04/2009 valid until 28/04/2010
/198/	Working Metering Device Calibration Certificate No. 19-20/905-10 dated 12/04/2010 valid until 12/04/2011
/199/	Form, ultrasound water heat detector, "ERHOMERA-125" # 2397 11 LNFS. (1 pages).
/200/	Form, ultrasound water heat detector, "ERHOMERA-125" # 1353 08 PK No. 417. (2 pages).
/201/	Form, ultrasound water heat detector, "ERHOMERA-125" # 1354 08 PK No. 417. (2 pages).
/202/	Form, ultrasound water heat detector, “ERHOMERA-125" # 0035 02 KNFS. (3 pages).
/203/	Working Metering Device Calibration Certificate No. 19-20/2070-11 dated 29/08/2011 valid until 29/08/2012

No.	Title of the document
/204/	Working Metering Device Calibration Certificate No. 19-2/2314-10 dated 09/08/2010 valid until 09/08/2011
/205/	Working Metering Device Calibration Certificate No. 19-20/2071-11 dated 29/08/2011 valid until 29/08/2012
/206/	Working Metering Device Calibration Certificate No. 19-2/2312-10 dated 09/08/2010 valid until 09/08/2011
/207/	Form, ultrasound water heat detector, “ERHOMERA-125" # 2489 11 KNFS. (1 sheet).
/208/	Form, ultrasound water heat detector, “ERHOMERA-125" # 2396 11 KNFS. (1 sheet).
/209/	Working Metering Device Calibration Certificate No. 19-20/2759-10 dated 14/09/2010 valid until 14/09/2011
/210/	Working Metering Device Calibration Certificate No. 19-20/2069-11 dated 29/08/2011 valid until 29/08/2012
/211/	Working Metering Device Calibration Certificate No. 19-20/2707-09 dated 04/09/2009 valid until 04/09/2010
/212/	Photographic material. Photos of installed equipment (63 photos).
/213/	Report on fuel, heat and electricity consumption results for 2002 (2 pages).
/214/	Report on fuel, heat and electricity consumption results for 2003 (2 pages).
/215/	Report on fuel, heat and electricity consumption results for January, 2004 (2 pages).
/216/	Report on fuel, heat and electricity consumption results for 2005 (2 pages).
/217/	Report on fuel, heat and electricity consumption results for 2006 (4 pages).
/218/	Report on fuel, heat and electricity consumption results for the first half-year of 2007 (4 pages).
/219/	Report on fuel, heat and electricity consumption results for January, 2008 (3 pages).
/220/	Report on fuel, heat and electricity consumption results for January-December 2009 (4 pages).
/221/	Report on fuel, heat and electricity consumption results for January-December 2010 (4 pages).
/222/	Report on fuel, heat and electricity consumption results for 2011 (4 pages).
/223/	Report on water pipeline (separate drainage network) operation for 2005 (2 pages)
/224/	Report on water pipeline (separate drainage network) operation for 2006 (2 pages)
/225/	Report on water pipeline (separate drainage network) operation for 2007 (2 pages)
/226/	Report on water pipeline (separate drainage network) operation for 2008 (2 pages)
/227/	Report on water pipeline (separate drainage network) operation for 2009 (3 pages)
/228/	Report on water pipeline (separate drainage network) operation for 2010 (2 pages)
/229/	Contract № 25/13186G dated February 03, 2011, for the performance of metrological works (services) between CE “Dniprovodokanal” (Customer) and SE “Dnipropetrovsk Regional State Scientific and Technical Centre of Standardization, Metrology and Certification” (Contractor).
/230/	List of measuring instruments (MI), which are in operation and are subject to

No.	Title of the document
	calibration in 2011 (5 pages).
/231/	Table. Types and manufacturers of flow meters (7 pages).
/232/	Table 3. Types of water flow meters and electricity meters, their calibration and verification intervals (12 pages)
/233/	Information No. 1972/2a dated 20/11/2012 on electricity consumption by water supply, sewage pumping stations and treatment aeration plants of CE “Dniprovodokanal” for the period 1998-2004 years.
/234/	Information No. 1972/1a dated 20/11/2012 on the volume of water and wastewater that is transported by water supply, sewage pumping stations and fallen to treatment aeration plants of CE “Dniprovodokanal” for the period 1998-2004 years.
/235/	Invoice No. 61-266/12 dated December 16, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/236/	Invoice No. 61-266/11c dated December 16, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/237/	Invoice No. 61-266/10 dated November 16, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/238/	Invoice No. 61-266/9 dated October 18, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/239/	Invoice No. 61-266/8п dated September 16, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/240/	Invoice No. 61-266/7 dated August 15, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/241/	Invoice No. 61-266/6 dated July 18, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/242/	Invoice No. 61-266/5 dated Juny 15, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/243/	Invoice No. 61-266/4* dated May 19, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/244/	Invoice No. 61-266/3 dated April 20, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/245/	Invoice No. 61-266/2 dated March 21, 2011, for electricity consumption by the Contract No. 061266 dated 01/04/2004.
/246/	Invoice No. 61-266/1ф+кор. dated February 17, 2011, for electricity consumption by the Contract No. 20/03-11 dated 01/04/2004.
/247/	Invoice No. 8490 dated November 30, 2009, for electricity consumption by the Contract No. 20/03-11 dated 01/04/2004.
/248/	Invoice No. 7442 dated October 31, 2008, for electricity consumption by the Contract No. 20/03-11 dated 01/04/2004.
/249/	Invoice No. *61-266/2 dated March 16, 2012, for electricity consumption by the Contract No. 20/03-11 dated 01/04/2004.
/250/	Invoice No. 579 dated January 31, 2007, for electricity consumption by the Contract No. 20/03-11 dated 01/04/2004.
/251/	Invoice No. 2351 dated March 31, 2006, for electricity consumption by the Contract No. 20/03-11 dated 01/04/2004.

3.2 Interviews with project stakeholders

TÜV Rheinland (China) Ltd. (TÜV Rheinland) performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of CE “Dniprovodokanal” and “CEP” Ltd. were interviewed and their names are summarized in Table 3. The main topics of the interviews are summarized in Table 4.

Table 3 - Persons interviewed

No.	Name	Position	Organization
/1/	S. Gorbanenko	Deputy Director of Legal Affairs	CE “Dniprovodokanal”
/2/	A, Dovgan	Chief Technologist	CE “Dniprovodokanal”
/3/	V. Kolesnikov	Chief mechanic	CE “Dniprovodokanal”
/4/	Y. Volovalskyi	Power engineering specialist	CE “Dniprovodokanal”
/5/	A. Gontar	Foreman	CE “Dniprovodokanal”
/6/	I. Karelina	Head of treatment facilities, South aeration station	CE “Dniprovodokanal”
/7/	V. Getman	Electrician, Sewage pumping station # 52	CE “Dniprovodokanal”
/8/	L. Stroilova	Electrician, Sewage pumping station # 61	CE “Dniprovodokanal”
/9/	I. Naumenko	Consultant of VEMA S.A.	“CEP” Ltd.

Table 4 - Interview topics

No.	Date	Interviewed organization	Interview topics
/1/	14/11/2012	CE "Dniprovodokanal"	➢ Project history; ➢ Design approach; ➢ Project boundaries; ➢ Implementation schedule; ➢ Organizational structure; ➢ Responsibilities and liabilities; ➢ Staff Training; ➢ Quality management procedures and technologies; ➢ Upgrading / installation of equipment (records); ➢ Control of measuring equipment; ➢ Record keeping system of measurements, database; ➢ Design documentation; ➢ Monitoring plan and procedures; ➢ Permits and licenses; ➢ Environmental impact assessment; ➢ Stakeholders' comments.
/2/	14/11/2012	"CEP" Ltd.	➢ Baseline methodology; ➢ Monitoring plan ➢ Additionality proofs; ➢ Estimates of emission reductions; ➢ Project design; ➢ Project related legal issues ➢ Environmental impacts ➢ Approval by the host country

3.3 Resolution of Clarification and Corrective Action Requests

The overall determination, from Contract signing to Determination Report and Opinion, was conducted using TÜV Rheinland (China) Ltd. (TÜV Rheinland) internal procedures. 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 TÜV Rheinland (China) Ltd. (TÜV Rheinland) positive conclusion on the project design.

In order to ensure transparency, a determination protocol (Annex A to the Determination report) was customized for the project, in accordance with the Annex to "Joint Implementation Determination and Verification Manual", version 01. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the

identified criteria. The determination protocol serves the following purposes:

- it organizes, details and clarifies the requirements a JI project is expected to meet;
- it ensures a transparent determination process where the verifier will document how a particular requirement has been determined and the result of the determination.

The determination protocol consists of three tables. The different columns in these tables are described in Figure 1 below.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol (Annex A to the Determination report).

The PDD, final version 02 dated 28/11/2012, was submitted to the determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) for final determination. The final version of the PDD (version 02 dated 28/11/2012) was revised based on the determination protocol (Annex A to the Determination report) with the issued corrective action requests and clarification requests. The major changes in the PDD include: starting date of project activity; length of crediting period; monitoring plan; assessment of GHG emission reductions.

Determination Protocol Table 1: Mandatory Requirement for Joint Implementation (JI) Project Activities			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR), a Clarification Request (CL) or a Forward Action Request (FAR) of risk or non-compliance with stated requirements. The CAR's, CL's and FAR's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, to show how the specific requirement is determined. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comments**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided **(OK)**, or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification. **Forward action request (FAR)** informs the project participants of an issue that needs to be reviewed during the verification.

Determination Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 1, 2**	**Summary of project owner response**	**Determination team conclusion**
If the conclusions from the Determination are a Corrective Action Request, a Clarification Request or a Forward action request, these should be listed in this section.	Reference to the checklist question number in Tables 2 where the Corrective Action Request, Clarification Request or a Forward action request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, under "Final Conclusion".

Figure 1 - Determination protocol tables

3.4 Internal Technical Review

The determination report including the determination findings underwent a technical review before requesting registration of the project activity. The technical review was performed by an internal technical reviewer qualified in accordance with TÜV Rheinland (China) Ltd. (TÜV Rheinland) qualification scheme for JI project determination and verification.

3.5 Determination team

The determination team consists of the following personnel indicated in Table 5 below:

Table 5 - Determination team

Name	Role
Dr. Manfred Brinkmann	AIE Operational manager
Dr. Lixin Li	Technical Reviewer
Dr. Valery Yakubovsky	Team Leader
Ms. Ganna Zadnipriana	Auditor
Ms. Yuliia Makarova	Trainee

4 DETERMINATION FINDINGS

In the following subsections the determination findings are stated as follows:

1) the findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol (Annex A to the Determination report);
2) in case TÜV Rheinland (China) Ltd. (TÜV Rheinland) had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following subsections and are further documented in the Determination Protocol (Annex A to the Determination report). The determination of the Project resulted in 44 Corrective Action Requests (CARs), 16 Clarification Requests (CLs) and 4 Forward Action Requests (FAR) that will be considered during the first verification;
3) the conclusions for determination subject are presented in each subsection.

The considerations, findings and means of verification for areas of determination are provided below in accordance with the Determination and Verification Manual (DVM). All information indicated in the following subsections relates to the PDD version 02 dated 28/11/2012 (hereinafter called "PDD").

4.1 Project approval by Parties Involved

In accordance with paragraphs 19 - 20 of the DVM the assessment of this area focuses on whether the designated focal points (DFPs) of all Parties listed as "Parties involved" in the PDD have provided written project approvals. It also should be assessed whether the written project approvals referred to above are unconditional.

The project has no written project approvals by Parties involved. "Glossary of joint implementation terms", version 03 defines the following:
a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines;
b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

To obtain a written project approval by the host Party (Ukraine) a final Determination Report should be submitted to the State Environmental Investment Agency of Ukraine. Written project approval by Switzerland (a Party involved in the project, other than the host Party) will be obtained before the first periodic verification.

The FAR 01 was raised. It will be closed after issuing written project approvals by Parties involved.

Identified problem areas for project approval, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination Report (refer to CAR 16, FAR 01).

4.2 Authorization of project participants by Parties involved

In accordance with paragraph 21 of the DVM the assessment of this area focuses on whether each of the legal entities listed as project participants in the PDD is authorized by a Party involved, which is also listed in the PDD, through: a written project approval by a Party involved, explicitly stating the name of the legal entity; or any other form of project participant authorization in writing, explicitly stating the name of the legal entity.

The following entities have been specified in the PDD as project participants:

- CE "Dniprovodokanal"
- VEMA S.A.

The detailed information on project participants was indicated in section A.3. of the PDD. The contact information on project participants, explicitly stating the name of the legal entities, was provided in Annex 1 to the PDD.

Identified problem areas for authorization of project participants by Parties involved, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination Report (refer to CARs 05, 06, FAR 01).

4.3 Baseline Setting

In accordance with paragraphs 22 - 26 of the DVM the assessment of this area focuses on various aspects of the baseline setting by project participants.

The paragraph 22 of the DVM defines two following approaches selected for identifying the baseline:
(a) By using a methodology for baseline setting and monitoring developed in accordance with Appendix B of the JI guidelines (hereinafter referred to as JI specific approach);

(b) By using a baseline and monitoring methodology approved by the CDM Executive Board in its totality (hereinafter referred to as approved CDM methodology approach).

The project participants of the project Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal" selected the JI specific approach for identifying the baseline.

A baseline for the project was set in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). The JI specific approach is provided in paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03.

The PDD provides a description of the chosen baseline in a clear and transparent manner according to "Guidelines for users of the joint implementation project design document form", version 04, as well as a justification per the "Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23 - 29).

The desk review of the PDD and follow-up interviews provided enough reasons for TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that the baseline for this JI project is established:

a) **By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.**
Plausible future scenarios are listed below:

- Operation of existing equipment will continue (continuation of the current situation), and electric energy consumption will increase.
- Modernization (the proposed project activity) without the use of the Joint Implementation mechanism.
- Reduction of the project activity, the exclusion of any non-key activities from the project, for example, exclusion of frequency controls implementation from the project, etc.

All scenarios, except Scenario - Operation of existing equipment will continue (continuation of the current situation), face prohibitive barriers. Therefore, continuation of the existing situation is the most plausible future scenario and is the baseline scenario for the project.

b) **Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.**
In this context, the TÜV Rheinland (China) Ltd. (TÜV Rheinland) assessed whether the key factors that affect a baseline were taken into account. The project participants established the baseline taking into account the following key factors:
- National legislation in the water supply and environmental legislation;
- Availability of financial resources for implementation project activities;

- Tariffs for water supply system and drainage system that are regulated by the state;
- Modern technologies and the possibility of their implementation in water supply systems, drainage system and wastewater treatment.

c) **In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors.**

Project participants used the following assumption in project's baseline setting:

"Specific electricity consumption in the baseline scenario is calculated, taking into account the assumption of its linear increase in course of time".

This specific approach was chosen by project participants as an approach for baseline setting already taken in comparable JI cases.

The following JI projects that can be considered as comparable and for which determination is deemed final are indicated in the PDD:

- "Development and improvement of water supply system, drainage system and wastewater treatment of City Communal Enterprise "Mykolayivvodokanal"(http://ji.unfccc.int/JIITLProject/DB/YJQJMA903XJMSOIFU64OAAIT4I4JV8/details);
- "Development and improvement of water supply system, drainage system and wastewater treatment of "Infox Ltd." branch "Infoxvodokanal"(http://ji.unfccc.int/JIITLProject/DB/7PE5JHSBJFO0Y6V8URCHW2V2GS1NPY/details).

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has assessed the above mentioned projects that can be considered as comparable in accordance with paragraph 12 of "Guidance on criteria for baseline setting and monitoring", version 03 on the following conditions:

- GHG mitigation measure. The project boundary of the proposed project and projects that can be considered as comparable encompass similar sources of GHG emissions, namely emissions from power plant(s) in the process of electric energy generation for the national power grid, and the emission reductions are achieved by similar measures - modernization of pumping equipment, replacement of pumping equipment, optimization of the technological process of water pumping, i.e. change of operation modes of pumping plants, replacement of water supply and drainage networks, replacement of shut-off and control valves, installation of a new set of metering devices, installation of frequency regulators, modernization of air tanks.
- Geography and time. The proposed project and projects that can be considered as comparable are hosted by the same Party – Ukraine, and the period of time between starting dates of the proposed and projects that can be considered as comparable is not more than five years.
- Scale. The difference between the proposed project and projects that can be considered as comparable is less than 50 per cent in terms of the project's output.
- Regulatory framework. Between the starting dates of the proposed project and projects that can be considered as comparable the

regulatory framework has not changed in a manner that would affect the baseline of these projects.

d) **Taking into account of uncertainties and using conservativeness assumptions.**
Project participants used default values to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations. Values of parameters that were determined at the stage of PDD development were calculated on the basis of historical data for 1998 - 2004 years prior to the project implementation and using assumption on "Specific electricity consumption in the baseline scenario" linear increase in course of time. Appropriate evidence documents for values of "Baseline quantitative values of key parameters used in the project" for 1998 - 2004 years were provided to the determination team by project participants in supporting documentation (please see supporting documents # /233/, /234/ in table 2, section 3.1.of Determination report).

e) **In such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure.**
According to the proposed approach emission reductions will be earned only within the project activity, so no emission reductions can be earned due to any changes outside the project activity 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.**
The PDD draws on the list of standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring", version 03 as appropriate: BE_y PE_y, $EF_{CO2,ELEC,y}$, $EC_{y,}SEC_{xx,yy}$.

As the result of this analysis TÜV Rheinland (China) Ltd. (TÜV Rheinland) can confirm that the baseline for this project is established in accordance with criteria stated in the Appendix B of the JI guidelines and justified in accordance with paragraphs 23 - 29 of the "Guidance on criteria for baseline setting and monitoring", version 03.

Identified problem areas for baseline setting, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CARs 17-28, CLs 11, 12).

4.4 Additionality

In accordance with paragraphs 27 - 31 of the DVM the assessment of this area focuses on whether a project provides "a reduction in emissions by sources, or an enhancement of net removals by sinks, that is additional to any that would otherwise occur" in accordance with Article 6 of the Kyoto Protocol.

The paragraph 28 of the DVM defines three approaches used to demonstrate additionality – items (a), (b), (c) for JI specific approach. Project participants used the "Tool for the demonstration and assessment of additionality" version 06.0.0 (hereinafter “Tool”) for demonstration additionality (approach indicated in item (c) of paragraph 28 of the DVM). The “Guidance on criteria for baseline setting and monitoring” (paragraph 44 (c) of the Annex 1), version 03 defines the application of the most recent version of the "Tool" approved by the CDM Executive Board for demonstrating that the project provides reductions in emissions by sources that are additional to any that would otherwise occur. At the time of the PDD development, the version 06.0.0 was the most recent version of the "Tool”.

The following steps were taken as per "Tool for the demonstration and assessment of additionality" version 06.0.0:
Step 1. Identification of alternatives to the project activity consistent with current laws and regulations;
Step 2. Investment Analysis (not applied);
Step 3. Barrier analysis;
Step 4. Common practice analysis.

The determination team's assessment on application of each step according to the Tool is presented below.

Step 1. Identification of alternatives to the project activity consistent with current laws and regulations.

As per “Tool for the demonstration and assessment of additionality” version 06.0.0 TÜV Rheinland (China) Ltd. (TÜV Rheinland) assessed that project participants defined the following alternative baseline scenarios that include:
(a) **The proposed project activity undertaken without being registered as a JI project activity**:

- Modernization (the proposed project activity) without the use of the Joint Implementation mechanism.

(b) **Other realistic and credible alternative scenarios to the proposed JI project activity scenario that deliver outputs services or services with comparable quality, properties and application areas:**

- Reduction of the project activities, the exclusion of any non-key activities from the project, for example, exclusion of frequency control from the project implementation, etc.

(c) **Continuation of the current situation:**

- continuation of existing situation (there aren't any project activities or other alternatives), i.e. scenario "business as usual" with carrying out of minimal repair works against the background of total degradation of the water supply, drainage and wastewater treatment system.

The analysis of each alternative baseline scenario was assessed by TÜV Rheinland (China) Ltd. (TÜV Rheinland) through the desk review of the PDD with presented references on publicly available information and follow-up interviews. All abovementioned scenarios do not contradict with all applicable legislation in force of Ukraine.

The alternative baseline scenario that includes the continuation of the current situation is the most plausible one in case of the project absence, and is regarded as realistic and credible alternative scenario to the project activity.

Step 2. Investment Analysis.

This step was not applied by project participants. As per "Tool for the demonstration and assessment of additionality", version 06.0.0 the project participants may apply either "Investment Analysis" or "Barrier analysis".

Step 3. Barrier analysis.

Project participants applied the barrier analysis (step 3) as per "Tool for the demonstration and assessment of additionality" version 06.0.0 to identify barriers and to assess which alternatives are prevented by these barriers. The latest approved version of the "Guidelines for objective demonstration and assessment of barriers", version 01 was taken into account by determination team when assessing the barrier analysis.

The desk review of the PDD with presented references on publicly available information and follow-up interviews enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess financial, technological and organizational barriers that were defined in comparable JI projects implemented under comparable circumstances (same GHG mitigation measure, same country, similar technology, similar scale) and for which determination is deemed final:

- "Reconstruction of water supply and drainage system "Luganskvoda Ltd."(http://ji.unfccc.int/JIITLProject/DB/UM92XEB0QFT42Z3UDKOX9QDY30YPL9/details);
- "Development and improvement of water supply system, drainage system and wastewater treatment of City Communal Enterprise "Mykolayivvodokanal"(http://ji.unfccc.int/JIITLProject/DB/YJQJMA903XJMSOIFU64OAAIT4I4JV8/details);
- "Development and improvement of water supply system, drainage system and wastewater treatment of "Infox Ltd." branch "Infoxvodokanal"(http://ji.unfccc.int/JIITLProject/DB/7PE5JHSBJFO0Y6V8URCHW2V2GS1NPY/details).

Defined barriers do not prevent one of the alternatives to the project activity - continuation of existing situation, i.e. scenario "business as usual" with carrying out of minimal repair works against the background of total degradation of the water supply, drainage and wastewater treatment system.

Determination team assessed through the desk review of the PDD and supporting documents that the barrier analysis is presented in a transparent manner and provide all the relevant assumptions according to the "Tool for the demonstration and assessment of additionality" version 06.0.0. and "Guidelines for objective demonstration and assessment of barriers" version 01.

Step 4. Common practice analysis.

Section B.2. of the PDD provides the analysis of any other activities that are similar to the proposed project activity, which showed a lack of similar projects in Ukraine, except of projects implemented under the Joint Implementation mechanism.

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that all explanations, descriptions and analyses in the demonstration of additionality were made in accordance with Tool. The all key pieces of evidence for the barrier analysis were checked. The evidences were transparently reviewed by the determination team and considered to be effective.

The barrier analysis clearly demonstrates that the proposed project activity faces prohibitive barriers for implementation. Common practice analysis was carried out showing that the proposed project activity is not common without JI in Ukraine. Therefore, the proposed project activity is not business-as-usual, i.e. the proposed project activity provides the reductions in emissions by sources that are additional to any that would otherwise occur.

Identified problem areas for additionality of the project, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CARs 29 - 34).

4.5 Project boundary

In accordance with paragraphs 32 - 33 of the DVM the assessment of this area focuses on correct and complete delineation of the project boundary, inclusion and exclusion of any sources of greenhouse gases (GHGs) related to the baseline or the project.

It was assessed through the desk review of submitted documentation and follow-up interviews that project participants used the JI specific approach towards baseline setting in this project and establishing the project boundary.

The details on the project boundary were provided in section B.3. of the PDD. The desk review of submitted documentation enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that the project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are:
• under the control of the project participants;
• reasonably attributable to the project; and
• significant.

The baseline emission sources of GHGs that are included in the project boundaries are listed below.

- Emissions from power plant(s) in the process of electric energy generation for the national power grid;

The project emission sources of GHGs that are included in the project boundaries are listed below.

- Emissions from power plant(s) in the process of electric energy generation for the national power grid;

All gases and sources included in the project boundary were explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD by using figures 8 - 9 and the details were provided by tables 16 - 17 in section B.3.

Identified problem areas for project boundaries were not identified.

4.6 Crediting period

In accordance with paragraph 34 of the DVM the assessment of this area focuses on correct and complete provision of information on the projects starting date, expected operational lifetime and the length of the crediting period.

It was assessed through the desk review of submitted documentation and follow-up interviews that the project participants had correctly stated in the PDD:

- **the starting date of the project** is 30/11/2004 (the date when it was commissioned the new equipment on one of the pumping stations of CE "Dniprovodokanal"). The starting date of the project is after the beginning of 2000.

- **the expected operational lifetime** of the project in years and months is 16 years and 1 months or 193 months.

- **the length of the crediting period** (01/01/2005 – 31/12/2020) in years and months is 16 years or 192 months.
  Project participants stated 3 parts of crediting period in years and months in the PDD for this project that are:
  - **Part of crediting period before the first commitment period of the Kyoto Protocol** – 01/01/2005 – 31/12/2007.
    Length of the part of crediting period before the first commitment period of the Kyoto Protocol is 3 year or 36 months.
  - **Part of crediting period within the first commitment period of the Kyoto Protocol** – 01/01/2008 – 31/12/2012.
    Length of the part of crediting period within the first commitment period of the Kyoto Protocol is 5 year or 60 months.
  - **Part of the crediting period after the end of the first commitment period of the Kyoto Protocol** – 01/01/2013 – 31/12/2020.
    Length of the part of crediting period after the first commitment period of the Kyoto Protocol is 8 years or 96 months.

  The starting date of the crediting period is after the date the first emission reductions are generated by the project.

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that all information on the projects starting date, expected operational lifetime and the length of the crediting period is correct and complete.

The evidence documents of projects' starting date, operational lifetime, starting date of the crediting period were provided by project participants to the determination team as supporting documents (please refer to evidence documents # /81/ in Table 2, section 3.1. of the Determination Report).

Identified problem areas for crediting period, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CARs 35, 36).

4.7 Monitoring plan

In accordance with paragraphs 35 - 39 of the DVM the assessment of this area focuses on assessing the completeness and correctness of the established monitoring plan and whether it meets the necessary requirements.

The paragraph 35 of the DVM defines two following approaches selected for establishment of the monitoring plan:
(a) JI specific approach;
(b) approved CDM methodology approach.

The project participants of the project Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal" selected the JI specific approach for establishment of the monitoring plan.

The monitoring plan was established in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). JI specific approach is defined in paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03.

The information indicated below, that refers to the components of monitoring plan, was assessed by TÜV Rheinland (China) Ltd. (TÜV Rheinland) through the desk review of the submitted documentation and follow-up interviews.

I. The established monitoring plan includes all procedures necessary for accurate and conservative calculation of emission reductions, describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance.

II. The established monitoring plan specifies the indicators, constants and variables that are reliable and provide consistent and accurate values; are valid and clearly connected with the effect to be measured, and that provide a transparent picture of the emission reductions to be monitored. The default values which were used in the monitoring plan were selected by carefully balancing accuracy and reasonableness. These values originate from recognized sources, are supported by statistical analyses providing reasonable confidence levels and are presented in a transparent manner in the PDD.

III. For those values that are to be provided by the project participants it is clearly indicated, how the values are to be selected and justified by explanation of what types of sources are to be used and the vintage of data to be used. For all values the precise references from which these values are taken are clearly indicated in section D and in Annex 3 to the PDD and the conservativeness of the values is justified.

IV. The International System Units (SI units) are used for values provided by the project participants.

V. Any parameters, coefficients, variables that are used to calculate baseline emissions but are obtained through monitoring are noted. The consistency between the baseline and monitoring plan is ensured.

VI. The project activity will include monitoring of GHG emissions in the baseline and project scenarios. Variables that are determined only once and variables to be monitored in the baseline and project scenarios include the parameters listed in tables 6 and 7 below.

Table 6 - Data and parameters that are not monitored throughout the crediting period, but are determined only once and that are available already at the stage of determination regarding the PDD.

Parameter	Unit	Description
$V^{j}_{b,w}$	1000 m^3	Total water pumped by water supply system *w* in period *j* in the baseline scenario
$V^{j}_{b,m}$	1000 m^3	Total volume of wastewater pumped over by drainage system *m* in period *j* of the baseline scenario
$V^{j}_{b,t}$	1000 m^3	Total volume of wastewater treated by air tank system *t* in period *j* of the baseline scenario
$EC^{j}_{b,w}$	MWh	Total electricity consumption by water supply system *w* in period *j* in the baseline scenario,
$EC^{j}_{b,m}$	MWh	Total electricity consumption by water drainage system *m* in period *j* in the baseline scenario
$EC^{j}_{b,t}$	MWh	Total electricity consumption by air tank system *t* in period *j* in the baseline scenario

Table 7 - Data and parameters that are monitored throughout the crediting period.

Parameter	Unit	Description
$EF_{CO2,ELEC,y}$	t CO_2e/MWh	Carbon dioxide emission factor from electricity consumption from the national power grid of Ukraine in period *y*
$V^{j}_{r,w}$	1000 m^3	Total water pumped by water supply system *w* in period *y* in the project scenario
$V^{j}_{r,m}$	1000 m^3	Total volume of wastewater pumped over by drainage system *m* in period *y* of the project scenario
$V^{j}_{r,t}$	1000 m^3	Total volume of wastewater purified by air tank system *t*, in the period *y* of the project scenario

Parameter	Unit	Description
$EC^{j}_{r,w}$	MWh	Total electricity consumption by water supply system *w* in period *y* in the project scenario
$EC^{j}_{r,m}$	MWh	Total electricity consumption by water drainage system *m* in period *y* in the project scenario
$EC^{j}_{r,t}$	MWh	Total electricity consumption by air tank system *t* in period *y* of the project scenario

There are no such data and parameters in the project 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 regarding the PDD.

Values of data that are not monitored throughout the crediting period, but are determined only once and that are available already at the stage of determination regarding the PDD (table 6) are presented in section A.2. of the PDD (table 1) and Supporting Document 1 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE "Dniprovodokanal", "Calculation of estimated greenhouse gas emissions" /3/. Appropriate evidence documents were provided to the determination team by project participants in supporting documentation (please see supporting documents # /233/, /234/ in table 2, section 3.1.of Determination report).

VII. The monitoring plan draws on the list of standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring", version 03, as appropriate: BE_y PE_y, $EF_{CO2,ELEC,y}$, $EC_{y,}SEC_{xx,yy}$.

VIII. The established monitoring plan describes the methods employed for data monitoring (including its frequency) and recording. This information is provided in the tabular format in section D. and Annex 3 to the PDD. The monitoring plan also elaborates all algorithms and formulae used for the calculation of baseline emissions and project emissions. The necessary algorithms and formulae is explained as necessary. The project participants used consistent variables, equation formats, subscripts etc.; numbered all equations throughout the PDD; defined and indicated all variables and constants with units.

IX. The conservativeness of the algorithms and procedures is justified and methods to quantitatively account for uncertainty in key parameters are included, to the extent possible. References for all parameters are provided as necessary. It is clearly stated in Annex 3 to the PDD which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed. The desk

review of the documentation showed that the consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline is ensured.

X. Log book of water consumption (drainage) by water-metering devices and equipment, the standard form “# ПОД-11” (# POD-11) approved by the Order of State Statistics Committee of Ukraine dated 27/07/1998 # 264 is used as a primary accounting form of water use, and is indicated as the data source for monitoring parameters: “$V^{y}_{r,w}$” - total water pumped by water supply system *w* in period *j* in the project scenario; “$V^{y}_{r,m}$” - total volume of wastewater pumped over by drainage system *m* in period *j* of the project scenario; “$V^{y}_{r,t}$” - total volume of wastewater treated by air tank system *t* in period *j* of the project scenario. Information on water use by CE “Dniprovodokanal” is provided quarterly to Dnipropetrovsk Department of Water Resources in the form of state statistical reporting “# 2-ТП (водгосп)” (# 2-TP (water industry)) “Report on water use” (quarterly) approved by the Order of State Statistics Committee of Ukraine dated 30/09/1997 # 230.

XI. A clear management structure will be identified to establish the division of responsibilities for gathering monitoring data. Respective services of CE “Dniprovodokanal” will collect relevant data in the form of technical reports and other statistical documents. All monitored data will be stored both electronically and in hard copy. The quality of collected data will be secured by conducting regular calibrations of applied meters and sensors. Calibration interval will be chosen as per passport or technical manual data. The detail information on calibration of measuring equipment was provided to the determination team by project participants in Supporting document 2 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE “Dniprovodokanal”, “Project and monitoring equipment” /4/.

XII. The document which indicates that data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project was provided to the AIE in supporting documentation (please refer to the evidence document # /27/ in Table 2, section 3.1. of the Determination Report).

XIII. The monitoring plan, on the whole, reflects good monitoring practices: the structure of data collection is clearly defined; all data concerning the greenhouse gas emissions within the project boundaries is monitored and used in calculations appropriately; all meters are properly calibrated and precisely indicate values of the measured parameters.

The evidence documents that relates to the completeness and correctness of the established monitoring plan were provided by project participants to the determination team as supporting documents (please refer to evidence documents # /31/, /33/, /35/, /41/-/44/, /127/-/134/, /230/-/232/ in Table 2, section 3.1. of the Determination Report).

Identified problem areas for monitoring plan, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CARs 37-40, CLs 13-15).

4.8 Leakage

In accordance with paragraphs 40 - 41 of the DVM this area focuses on checking of the assessment of the potential leakage in the project.

Project participants of the project Development and improvement of water supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal" used the JI specific approach with elements of an approved CDM methodology for baseline setting.

As per approved CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 2, elements of which are used in this project together with a JI specific approach, there is no potential sources of leakage from the project activity.

The problem areas for project's leakage were not identified.

4.9 Estimation of emission reductions

In accordance with paragraphs 42 - 47 of the DVM the assessment of this area focuses on checking the completeness and correctness of the provided methods and results of emission reduction estimates in the JI project.

The paragraph 42 of the DVM defines two following approaches to estimate the emission reductions or enhancement of net removals generated by the project selected the JI specific approach:
(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario; or
(b) Direct assessment of emission reductions.

As per JI specific approach project participants chose the following approach to estimate the emission reductions generated by the project: assessment of emissions in the baseline scenario and in the project scenario. According to this approach emission reductions were calculated as follows:

$$ER^y = BE^y_b - PE^y_r \quad (1)$$

Де:
ER^y – emission reduction units [tCO_2e];
BE^y_b – GHG emissions in period y in the baseline scenario [tCO_2e];
PE^y_r – GHG emissions in period y in the project scenario [tCO_2e];

Ex ante estimates of emissions for the project scenario (within the project boundary), emissions for the baseline scenario (within the project boundary) and emission reductions are provided in section E of the PDD. These estimates in the PDD are given on a periodic basis, from the beginning until the end of the crediting period, in tonnes of CO_2 equivalent, using appropriate emission factors. The formula used for calculating these estimates are consistent throughout the PDD.

The baseline emissions of the project are calculated under the formula:

$$BE^{y}_{r,e} = BE^{y}_{b,w} + BE^{y}_{b,m} + BE^{y}_{b,t}, \quad (2)$$

Де:
$BE^{y}_{r,w}$ - GHG emissions due to electricity consumption by water supply system w in period y in the baseline scenario [tCO_2e];
$BE^{y}_{r,m}$ - GHG emissions due to electricity consumption by water drainage system m in period y in the baseline scenario [tCO_2e];
$BE^{y}_{r,t}$ - GHG emissions, due to electricity consumption by air tank system t in period y in the baseline scenario [tCO_2e];

The detailed algorithms and formulae for estimating emissions in the baseline scenario of the project are described under sections B.1 and D.1. of the PDD. The details of the calculation are provided in the calculation spreadsheet in Excel format, Supporting Document 1 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE “Dniprovodokanal”, “Calculation of estimated greenhouse gas emissions” /3/.

The project emissions of the project are calculated under the formula:

$$PE^{y}_{r,e} = PE^{y}_{r,w} + PE^{y}_{r,m} + PE^{y}_{r,t}, \quad (3)$$

Де:
$PE^{y}_{r,w}$ - GHG emissions, due to electricity consumption by water supply system w in period y in the project scenario [tCO_2e];
$PE^{y}_{r,m}$ - GHG emissions, due to electricity consumption by water drainage system m in period y in the project scenario [tCO_2e];
$PE^{y}_{r,t}$ - GHG emissions, due to electricity consumption by air tank system t in period y in the project scenario [tCO_2e];

The detailed algorithms and formulae for estimating emissions in the project scenario of each subproject are described under section D.1. of the PDD. The details of the calculation are provided in the calculation spreadsheet in Excel format, Supporting Document 1 to the PDD of JI project Development and improvement of water supply system, drainage system and wastewater treatment of CE “Dniprovodokanal”, “Calculation of estimated greenhouse gas emissions” /3/.

No leakages take place during the project activities.

It was assessed by the desk review of submitted documentation, especially GHG emission reductions calculation spreadsheet in Excel format /3/ that key factors influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account. Data sources used for calculating the estimates referred above are clearly identified, reliable and transparent. Emission factors used for calculating the estimates referred to above, were selected by carefully balancing accuracy and reasonableness, and the choice is appropriately justified. The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner. The estimates of emission reductions are consistent throughout the PDD. The annual average of estimated emission reductions over the crediting period is calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

According to the PDD and GHG emission reductions calculation spreadsheet in Excel format /3/ the emissions for the project scenario, emissions for the baseline scenario and emission reductions are provided in tables 8, 9 and 10 below.

Table 8 – Estimated emission reductions generated by the project over the part of crediting period before the first commitment period of the Kyoto Protocol

Period:	**01/01/2005 – 31/12/2007**
Emissions for the project scenario, tCO_2e:	424 580
Leakage, tCO_2e	0
Emissions for the baseline scenario, tCO_2e:	630 989
Emission reductions, tCO_2e:	206 409
Annual average of estimated emission reductions, tCO_2e:	68 803

Table 9 – Estimated emission reductions generated by the project over the part of crediting period within the first commitment period of the Kyoto Protocol

Period:	**01/01/2008 – 31/12/2012**
Emissions for the project scenario, tCO_2e:	722 835
Leakage, tCO_2e	0
Emissions for the baseline scenario, tCO_2e:	1 217 315
Emission reductions, tCO_2e:	494 480
Annual average of estimated emission reductions, tCO_2e:	98 896

Table 10 - Estimated emission reductions generated by the project over the part of the crediting period after the end of the first commitment period of the Kyoto Protocol

Period:	**01/01/2013 – 31/12/2020**
Emissions for the project scenario, tCO_2e:	1 036 584
Leakage, tCO_2e	0
Emissions for the baseline scenario, tCO_2e:	1 711 856
Emission reductions, tCO_2e:	675 272
Annual average of estimated emission reductions, tCO_2e:	84 409

Identified problem areas for calculation of GHG emission reductions, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CARs 41 - 43, CL 16).

4.10 Environmental impacts

In accordance with paragraph 48 of the DVM the assessment of this area focuses on checking the completeness and correctness of the provided information on the assessment of the environmental impacts of the JI project.

The host Party for the project is Ukraine. It is indicated in the PDD that modernization of pumping plants, replacement of water supply networks are not the objects of particular environmental hazard and are not subject to state expertise in accordance with Resolution # 554 as of July 27, 1995 "A list of activities and objects of high environmental hazard" and Article 14 of the Law of Ukraine "On ecological expertise". The information on environmental impacts of the project is provided in section F.1. of the PDD. The project does not have any transboundary impact.

The evidence documents on environmental impacts were provided by project participants to the determination team as supporting documents (please refer to evidence documents # /122/, /123/ in Table 2 – Documents reviewed during the determination in section 3.1. of the Determination Report).

The problem areas for environmental impacts of the project were not identified.

4.11 Stakeholder consultation

In accordance with paragraph 49 of the DVM the assessment of this area focuses on checking if stakeholder consultation was undertaken in accordance with procedures as required by the host Party.

The host Party for the project is Ukraine. Since the project activities do not imply any negative environmental impact and negative social effect, special public discussions were not necessary. However, CE “Dniprovodokanal” constantly informs the public about the decisions of implementations and modernization that are realized or planned, and also about the stages of their implementation at the official website of the enterprise.

The problem areas for stakeholder consultation were not identified.

4.12 Other areas

In accordance with paragraphs 50 - 73 of the DVM the assessment of the areas such as additional elements for assessment in determination regarding small-scale projects, determination regarding land use, land-use change and forestry projects, determination regarding programmes of activities is not applicable to this JI project.

5 SUMMARY OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

According to paragraph 32 of the JI Guidelines, the AIE shall make the project design document publicly available through the secretariat, subject to confidentiality provisions set out in paragraph 40 of the JI Guidelines, and receive comments from Parties, stakeholders and UNFCCC accredited observers on the project design document and any supporting information for 30 days from the date the project design document is made publicly available.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) published the project design document (version 01 dated 23/10/2012) on the website (http://www.tuv.com.ua/content/view/168/1/) on 23/10/2012 and invited comments within 22/11/2012 by Parties, stakeholders and UNFCCC accredited observers.

There were no comments from Parties, stakeholders and UNFCCC accredited observers received.

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ANNEX A: JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**FAR 01**	**FAR 01.** The project has no approval from the Parties involved. "Glossary of JI terms", version 03, defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest. To obtain a Letter of Approval a final Determination Report should be submitted to the State Environmental Investment Agency of Ukraine, including the Determination Protocol and a list of reference information.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			Letter of Approval from the Party involved, other than the Host Party (Switzerland), will be obtained before the first verification of the project.
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	**OK**	Please refer to Table 2, Section B.
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	**OK**	Article 5 requires: "Each Party included in Annex I shall have in place, no later than one year prior to the start of the first commitment period, a national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases". According to the Article 7: "Annex I Parties to submit annual greenhouse gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol". Switzerland provided its Initial Report on November 10, 2006: http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/initial_report_def_081106_.pdf
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	**OK**	Please refer to Table 2, section B.2.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	**OK**	Ukraine has designated its Focal Point. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine: State Environmental Investment Agency of Ukraine 35 Urytskoho Str., Kyiv, 03035 Phone: +380 44 594 91 11 Fax: +380 44 594 91 15 Ukrainian national guidelines and procedures for the approval of JI projects are available at the site www.seia.gov.ua. On February 22, 2006 the Cabinet of Ministers of Ukraine adopted Resolution #206, which established assessment and implementation procedures of JI projects within the Kyoto Protocol.
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	**OK**	Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at February 4th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	**OK**	The arranged extent for Ukraine is 100% of its emissions by 1990. In the Initial Report (Ukraine's Initial Report Under Article 7, Paragraph 4, of The Kyoto Protocol) submitted by Ukraine to the UNFCCC Secretariat,

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			on the 26 May 2006 the AAUs are quantified with: 925 362174,39 (×5) = 4 626 810872 tCO_2e. http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_report.pdf Currently Ukraine has submitted to the UNFCCC its fifth national communication on climate change under the Kyoto Protocol.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	**OK**	The designed system of the national registry has been described in the Initial Report: http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_report.pdf
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	**OK**	Project participants submitted PDD that contains all information needed for the determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	**OK**	TÜV Rheinland (China) Ltd. (TÜV Rheinland) published the project design document at the web-site http://www.tuv.com.ua/content/view/168/1/ in the period from 23/10/2012 to 22/11/2012.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			There were no comments from Parties, stakeholders and UNFCCC accredited observers received.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	**OK**	Please refer to Table 2, section F.
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, Section B.
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, Section B.
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, Section B.
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	**OK**	Please refer to Table 2, section D.
16. A project participant is a legal entity authorized by a Party involved to participate in the JI project.	"Glossary of JI terms", version 03.	Conclusion is pending a follow-up on **FAR 01.**	Table 1, question 1.

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
A. General description of the project					
A.1. Title of the project					
1.1. Is the title of the project activity presented?	/1/, /2/	DR	The title is presented: "Development and improvement of water-supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal".	OK	OK
1.2. Is(are) the sectoral scope(s) to which the project pertains presented?	/1/, /2/	DR	The sectoral scope is presented: Sector 3 - Energy consumption.	OK	OK
1.3. Are the version number and date of the document presented?	/1/, /2/	DR	Initial PDD version: PDD, version 01 dated 23/10/2012. Final PDD version: PDD, version 02 dated 28/11/2012	OK	OK
A.2. Description of the project					
2.1. Is the purpose of the project indicated (with the concise, summarizing explanation of the situation existing prior to the starting date of the project, baseline scenario and project scenario)?	/1/, /2/	DR	The project's main purpose is reduction of electric energy consumption by modernization and development of central water supply, drainage and wastewater treatment systems, which includes replacement and modernization of pumps and water distribution and water drainage systems, installation of frequency regulators and optimization of the technological process of water pumping in Dnipropetrovsk city. Implementation of the above-mentioned technologies will allow for a decrease of	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			greenhouse gas emissions (CO_2) and promote sustainable development of city.		
2.2. Is the history of the Project including its JI component summarized?	/1/, /2/, /16/, /81/, /112/	DR	**CAR 01.** Please add the date when the Letter of Endorsement for the project was obtained to the project history. **CAR 02.** Please provide the information on the documentary evidence of the starting date of the project in section A.2. of the PDD. **CAR 03.** The pumping set model, 140 D 70, mentioned in the document which confirms the project starting date "Certificate of maintenance check of mechanical equipment (commissioning of new equipment) dated 30/11/2004" does not correspond with one indicated in section A.2. of the PDD: D 1250-125A. Please make necessary corrections. **CL 01.** Please provide for consideration the document "Agreement for emission reductions purchase relating to the JI project" dated 01/08/2012, mentioned in section A.2. of the PDD.	**CAR 01** **CAR 02** **CAR 03** **CL 01**	OK OK OK OK
2.1.1. Is it clarified how the proposed project activity reduces GHG emissions that would occur in the baseline scenario?	/1/, /2/, /233/, /234/	DR	Due to reduction of consumed electric energy from the electrical grid of Ukraine used by the pumping plants, burning of fossil fuel for electric energy generation to the grid will be decreased, which will cause lower GHG emissions into the atmosphere. **CAR 04.** The presented "Baseline quantitative	**CAR 04** **CL 02**	OK OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			values of key parameters used in the project" for 2002-2004 years indicated in table 1, section A.2. of the PDD do not correspond with the values mentioned in the provided supporting documents ("Report on water use" - Form #2-TP (vodhosp), "Report on fuel, heat and electricity consumption" – Form #11-MTP). Please provide detailed explanation on the source of data for "Baseline quantitative values of key parameters used in the project" and make relevant corrections in the PDD and the Excel calculation file, if necessary. **CL 02.** "Information on volumes of services and electricity expenses" in Excel format was provided to determination team as documentary evidence of the presented "Baseline quantitative values of key parameters used in the project" for 1998-2001 years indicated in table 1 of section A.2. of the PDD. Please provide the documentary evidence from CE "Dniprovodokanal" of values indicated in the above mentioned Excel spreadsheet.		
A.3 Project participants					
3.1. Are project participants and Party(ies) involved in the project listed?	/1/, /2/	DR	Parties involved in the project: CE "Dniprovodokanal" (Ukraine - the host Party) and VEMA S.A. (Switzerland).	**CAR 05**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 05. Table in section A.3. does not comply with the form provided in the Guidelines for users of the JI PDD form Version 04.		
3.2. Is contact information provided in Annex 1 of the PDD that is indicated in section A.3?	/1/, /2/	DR	Annex 1 to the PDD provides contact information of the project participants: CE "Dniprovodokanal" and VEMA S.A. **CAR 06.** Tables in Annex 1 does not comply with the form provided in the Guidelines for users of the JI PDD form Version 04.	**CAR 06**	OK
3.3. Is it indicated, if the Party involved is a Host Party?	/1/, /2/	DR	Ukraine - host Party	OK	OK
3.4. Is it indicated, if it is the case, if the Party involved wishes to be considered as a project participant?	/1/, /2/	DR	The Parties involved in the project do not wish to be considered as project participants.	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project					
4.1.1. Host Party(ies)	/1/, /2/	DR	Ukraine - host Party **CL 03.** Please provide references to the thesis mentioned in section A.4.1.1. of the PDD (on Ukraine's ratification of Kyoto Protocol to the UNFCCC).	**CL 03**	OK
4.1.2. Region/State/Province etc.	/1/, /2/	DR	Dnipropetrovsk region, Ukraine	OK	OK
4.1.3. City/Town/Community etc.	/1/, /2/	DR	Dnipropetrovsk city.	OK	OK
4.1.4. Detail of the physical location, including information allowing the unique identification of the project (maximum one					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
page) (This section should not exceed one page)					
4.1.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s) (this section should not exceed one page)?	/1/, /2/	DR	Information about location is given in Section A.4.1.4 of the PDD. The structural and separate units of CE "Dniprovodokanal". **CAR 07.** Please provide documentary evidence indicating that subdivisions which take part in the JI project belongs to CE "Dniprovodokanal". Please also provide in the PDD (Section A.4.1.4. or Annex) a list of CE "Dniprovodokanal" subdivisions taking part in the JI project, along with their location addresses.	**CAR 07**	OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
4.2.1. Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project described?	/1/, /2/, /4/	DR, I	PDD Section A.4.2 provides the description of project milestones, some relevant technical data relating to main equipment to be installed as well as project activities. Project engineering represents the current cutting-edge practice **CAR 08.** Please provide in specifications the information on power of pumping equipment. **CAR 09.** Figure 3 b) does not match the legend. Please make relevant amendments. **CAR 10.** Please provide data on power of VLT AQUA FC 202 P-160 regulator in Table 8. "Characteristics of frequency regulators". **CAR 11.** Please add data on quantitative	**CAR 08** **CAR 09** **CAR 10** **CAR 11** **CL 04** **CL 05** **CL 06** **CL 07**	OK OK OK OK OK **FAR 02** OK **FAR 03**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			indicators of project activities for each measure to section A.4.2 of the PDD, and provide a general table listing all the implemented project measures (as of the date of the PDD version, with quantitative indicators). **CL 04.** Please provide a legend to Figure 6 in the text of the PDD in the relevant section. **CL 05.** Supporting Document 2 that presents the project and monitoring equipment, the following project measures are mentioned: pump replacement, cutting of pump rotor, electric engine replacement, flow meter replacement, and electricity meter replacement. Please provide the document confirming all the implemented project measures mentioned in section A.4.2. of the PDD. **CL 06.** Please describe the procedure of pipeline replacement at CE "Dniprovodokanal". **CL 07.** Please provide a clear explanation on documentary evidence of implementation of each project measure mentioned in section A.4.2. of the PDD.		
4.2.1.1. Does the project design engineering reflect current good practices?	/1/, /2/	DR, I	**CL 08.** Please clarify whether the project equipment reflect current good practices.	**CL 08**	OK
4.2.1.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any	/1/, /2/	DR, I	Please refer to **CL 08.**	**CL 08**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
commonly used technologies in the host country?					
4.2.1.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	/1/, /2/	DR, I	Taking into consideration the general economic circumstances, replacement of technologies proposed in the project by more effective technologies is unlikely to take place in the nearest 20-30 years.	OK	OK
4.2.2. Are all relevant technical data and the implementation schedule indicated?	/1/, /2/, /4/, /5/, /46/ - /111/	DR	PDD duly indicates all data on relevant technical data and project schedule. **CAR 12.** Table 9 - Project implementation schedule - section A.4.2. of the PDD indicates that the starting date of project implementation is 2006 whereas the starting date of the project is 30/11/2004. Please also specify the information on each project stage implementation by years, in the table. Please make corresponding amendments to the PDD. **CL 09.** During on site visit the determination team received the documents on the replacement of pumping equipment ("Certificates of maintenance check of mechanical equipment (commissioning of new equipment)"). However the indicated models do not correspond with those mentioned in Supporting Document 2. Please provide the clarification. **CL 10.** Please explain which document is the source of the values of "Network length" and "Reconstructed network length" mentioned in	**CAR 12** **CL 09** **CL 10**	OK **FAR 02** **FAR 04**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			Supporting Document 3 "Replacement of water supply and drainage networks in 2005-2012".		
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					
4.3.1. Is it indicated how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed project?	/1/, /2/	DR	Reduction of greenhouse gas emissions will be achieved due to the following measures: – GHG emissions due to lower electricity consumption from the national power grid after replacement and modernization of pipes, water distribution networks, installation of frequency regulators, optimization of technological processes.	OK	OK
4.3.2. Is it stated why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances?	/1/, /2/	DR	The baseline scenario provides that all equipment, including obsolete units with low efficiency, but still able to operate, works in a normal mode for a long time, and no emission reduction takes place. **CAR 13.** Please provide the information, with relevant documentary evidence, on taking into account national and/or sectoral policies and circumstances when assessing the JI project additionality (regional or national programmes for water management etc., at the moment of the project activities starting date). Please add relevant information to section B.2. of the PDD.	**CAR 13**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
4.3.3. Are the estimates of anticipated total reductions provided in tonnes of CO_2 equivalent as determined in section E of the PDD? (This section should not exceed one page).	/1/, /2/	DR	The estimated annual reduction for the first commitment period in tCO_2e is provided, as well as the estimated annual reduction for the period before and after the first commitment period within the project.	OK	OK
A.4.3.1. Estimated amount of emission reductions over the crediting period					
4.3.1.1. Is it provided the length of the crediting period and estimates of total as well as annual emission reductions using the appropriate tabular format?	/1/, /2/, /3/	DR	**CAR 14.** Table 10 in Section A.4.3.1 of the PDD does not comply with the form provided in the Guidelines for users of the JI PDD form Version 04. **CAR 15.** Length of the crediting period indicated in Table 10 is incorrect. Please correct.	**CAR 14** **CAR 15**	OK OK
4.3.1.2. 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 crediting period and multiplying by twelve?	/1/, /2/, /3/	DR	The annual average of estimated emission reductions in tCO_2eq is calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve.	OK	OK
A.5. Project approval by the Parties involved					
5.1. Are written project approvals by the Parties involved attached? Are they unconditional?	/1/, /2/, /16/	DR	PDD Section A.5 states the project has obtained Letter of Endorsement from the focal point of Ukraine. Project approvals from the host country and the investor country is expected before the first project verification. **CAR 16.** PDD Section A.5. should specify	**CAR 16** **FAR 01**	OK **FAR 01**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			when written project approvals are expected to be obtained. Please provide the necessary information. Please refer to **FAR 01.**		
B. Baseline					
B.1.Description and justification of the baseline chosen					
1.1. Is it indicated in the PDD: - a detailed theoretical description of the baseline in a complete and transparent manner, as well as a justification of chosen baseline using the step-wise approach; - a justification of baseline setting; - references on regulations according to baseline setting.	/1/, /2/, /7/	DR	The chosen baseline is described in section A.1. and section B.1 of the PDD. A specific JI approach is used for setting the baseline. **CAR 17.** In section B.1 of the PDD, please provide the justification of the chosen baseline, using a step-wise approach defined in Guidelines for users of the JI PDD form, version 04. **CAR 18.** The title of the Guidance used to set the baseline is incorrect. Please make corresponding amendments.	**CAR 17** **CAR 18**	OK OK
1.2. Does the PDD explicitly indicate the approach used for identifying the baseline with references on regulations?	/1/, /2/, /7/	DR	A JI specific approach with elements of CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 02 was used for setting the baseline. **CAR 19.** Provide information on version of the Guidance used to set the baseline. **CAR 20.** Please specify that the baseline was set using elements of approved CDM methodology AM0020.	**CAR 19** **CAR 20**	OK OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.3. Is it indicated in the PDD that baseline was established:					
1.3.1. by listing and describing plausible (alternative) future scenarios on the basis of conservative assumptions and selecting the most plausible one?	/1/, /2/	DR	The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline was established: (a) Identifying plausible future scenarios and choosing the most plausible one. As a result of evaluation of several alternatives the most plausible of them have been identified and will be used as a baseline: - Alternative 1.1: Operation of existing equipment will continue (continuation of the current situation), and electricity consumption will increase. - Alternative 1.2: Modernization (proposed project activity) without the use of the JI mechanism. - Alternative 1.3: Reduction of project activities, the exclusion of any non-key activities from the project, such as exclusion of frequency control from the implementation project, etc.	OK	OK
1.3.2. taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector?	/1/, /2/	DR	The baseline was set taking into account key factors such as technological rules of Ukraine's water supply and drainage sector, Ukrainian environmental legislation and other national legislation, as well as key relevant factors, such as the ability of financing the construction	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			and reconstruction of drinking water supply and drainage systems.		
1.3.3. in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?	/1/, /2/	DR	The choice of the applicable baseline for the project category is sufficiently justified; detailed theoretical description is provided in section B.1 of of the PDD.	OK	OK
1.3.4. taking account of uncertainties and using conservative assumptions?	/1/, /2/	DR	The baseline was set taking into account of uncertainties and using conservative assumptions **CAR 21.** Section B.1 of the PDD states that "Specific electricity consumption in the baseline scenario is calculated, taking into account the assumption of its linear increase in course of time". Whereas the approved CDM methodology "Baseline methodology for water pumping efficiency improvements", version 02 defines the baseline period as one year (mostly, the last available year) or, in the event of significant differences year-to-year (due to weather conditions etc.), a longer baseline period should apply, which is to ensure better pre-project average efficiency (e. g. average value for three years). Please justify the assumption of linear increase of "Specific electricity consumption in the baseline scenario" in course of time (method of least squares) and indicate the relevant information	**CAR 21**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			in the PDD.		
1.3.5. in such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure?	/1/, /2/	DR	The baseline was set in such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure	OK	OK
1.3.6. by drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring"?	/1/, /2/	DR	The baseline is identified, the detailed description is given in Section B of the PDD version 02. **CAR 22.** Please correct the abbreviations of parameters through all the PDD and the Supporting Documents, according to Annex B to the "Guidance on Criteria for Baseline Setting and Monitoring". **CAR 23.** The title of AM0020 CDM methodology in Section B.1 of the PDD (Main factors determining GHG emissions) is incorrect. Please correct. **CAR 24.** Section B.1. shall contain formulae to calculate baseline emissions. Please make necessary additions to the PDD. **CAR 25.** Data units for parameters $EC^{j}_{b,m}$, $V^{j}_{b,w}$, $V^{j}_{b,t}$ in section B.1 of the PDD are incorrect. Please correct. **CAR 26.** In section B.1 of the PDD, please provide reference to methodology whose elements are used in baseline setting.	**CAR 22** **CAR 23** **CAR 24** **CAR 25** **CAR 26**	OK OK OK OK OK
1.4. If a multi-project emission factor is used, does the PDD provide appropriate justification?	/1/, /2/	DR	When calculating emissions reductions the following factors are used:	**CAR 27**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			$EF_{CO2,ELEC,y}$ - specific indirect carbon dioxide emission factors from electricity consumption from the national power grid of Ukraine. **CAR 27.** Please provide the correct reference to information about baseline calculation and the following source "research of Global Carbon B.V".		
1.5. Are the title, reference number and version of the approved CDM methodology clearly indicated in the context of the project?	/1/, /2/, /7/	DR	The project participants have chosen a JI specific approach with elements of CDM methodology AM0020 for baseline identification.	OK	OK
1.6. Is the applied version of the CDM methodology the most recent one and/or is this version still applicable?	/1/, /2/, /7/	DR	The project participants have chosen a JI specific approach with elements of CDM methodology AM0020 for baseline identification.	OK	OK
1.7. Is it described how the chosen approach is applied in the context of the project?	/1/, /2/, /7/	DR	A JI specific approach with elements of CDM methodology AM0020, applied in the context of this project is described in Section B.1. of the PDD in a complete and clear manner. **CL 11.** Please clarify in detail why the approved CDM methodology AM0020 cannot be applied for baseline identification.	**CL 11**	OK
1.8. Are the key information and data used to establish the baseline (variables, parameters, data sources etc.) indicated in tabular form?	/1/, /2/, /7/	DR	The main data, parameters and factors applied for baseline setting are provided in Section B.1. of the PDD. **CAR 28.** Please provide the project schedule in section B.1 of the PDD, in tables featuring	**CAR 28**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			baseline parameters, values of these parameters in the defined baseline period (1998-2004) or present these values in Annex 2. Please also present in Section B.1 the value of parameter $EF_{y.}$		
1.9. Are all regulations and sources clearly referenced?	/1/, /2/	DR	PDD clearly indicates references to standards and sources.	OK	OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
2.1. Is the demonstration of project additionality indicated and described in the PDD using the step-wise approach?	/1/, /2/	DR	Additionality of the project activity is demonstrated and assessed using the "Tools for the demonstration and assessment of additionality" (Version 06.0.0). **CAR 29.** In section B.2 of the PDD, please provide the demonstration of project additionality, using a step-wise approach set by the Guidelines for users of the JI PDD form, version 04. **CAR 30.** In section B.2 of the PDD, please clearly state the approach set by paragraph 44 of the "Guidance on Criteria for Baseline Setting and Monitoring", version 03, used to demonstrate the project's additionality.	**CAR 29** **CAR 30**	OK OK
2.2. Does the PDD provide a justification of the applicability of the approach with a clear and transparent description with relevant reference on regulations?	/1/, /2/	DR	**CAR 31.** Please provide a reference to the "Tool for the demonstration and assessment of additionality" in Section B.2 of the PDD.	**CAR 31**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.3. Is it described how the chosen approach is applied in the context of the project?	/1/, /2/	DR	Description of the chosen approach in the context of the project is provided in sufficient manner. Ref. to Section B.2. of the PDD.	OK	OK
2.4. Are additionality proofs provided?					
2.4.1. If the application of the most recent version of the "Tool for the demonstration and assessment of additionality" is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	/1/, /2/	DR	**CAR 32.** "Tool for the demonstration and assessment of additionality" version 05.2 used in section B.2. of the PDD is not the latest version. Please use the latest version of this document for demonstration of the additionality. **CAR 33.** The title of the "Tool for the demonstration and assessment of additionality" in Sub-step 2, Section B.2. of the PDD is incorrect. Please correct. **CAR 34.** The demonstration of the project's additionality does not contain any documental evidence. Please provide, in a transparent manner, confirmation of the existence and significance of the identified barriers and the fact that these barriers can prevent the proposed project activity.	**CAR 32** **CAR 33** **CAR 34**	OK OK OK
2.4.2. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	/1/, /2/	DR	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 the project scenario due to the implementation of project activities.	OK	OK
2.4.3. Is it demonstrated that the project activity itself is not a likely baseline scenario?	/1/, /2/	DR	The fact that the project activity itself is not the baseline scenario is clearly demonstrated in	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			sections A.2, B.1, B.2 .		
2.5. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	/1/, /2/	DR	National policies and circumstances relevant to the baseline of the proposed project activity are summarized in Sections B.1. and B.2. PDD	OK	OK
B.3. Description of how the definition of the project boundary is applied to the project					
3.1. Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: - under the control of the project participants; - reasonably attributable to the project; - significant.	/1/, /2/, /28/	DR	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are: - CO_2 emissions from power plant(s) due to electricity generation to the National Power Grid; Spatial boundary of the project was defined. The geographical boundary of the project correspond to the territory of Dnipropetrovsk city. Facilities of water supply, drainage and wastewater treatment systems of CE "Dniprovodokanal" are included into the project boundary.	OK	OK
3.2. Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 3.1. above?	/1/, /2/	DR	Project boundary is determined on the basis of a case-by-case assessment.	OK	OK
3.3. 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 as appropriate?	/1/, /2/	DR	Project boundary and source of emissions of respective gases are specified in Section B.3. of the PDD in Figures 8 and 9	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
3.4.Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	/1/, /2/	DR	All gases and sources included are stated in Tables 16 and 17 of Section B.3. of the PDD.	OK	OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	/1/, /2/	DR	The date of the baseline setting is presented in Section B.4. of the PDD: 12.12.2011.	OK	OK
4.2. Is the contact information of persons setting the baseline provided?	/1/, /2/	DR	The contact information of persons/organisations setting the baseline is provided in Section B.4. of the PDD.	OK	OK
4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	/1/, /2/	DR	Yes, the entities which defined the baseline are project participants listed in Annex 1 of PDD.	OK	OK
C. Duration of the project/crediting period					
C.1. Starting date of the project					
1.1. Is the project's starting date clearly defined?	/1/, /2/, /81/	DR	The project's starting date is identified and specified in Section C.1. of the PDD: 30.11.2004. **CAR 35.** Please provide the justification of the chosen starting date of the project in section C.1. of the PDD.	**CAR 35**	OK
1.2. 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?	/1/, /2/	DR	According to the Guidelines for users of JI PDD form (version 04), the starting date of the project is the date on which the real action of the project begins.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.3. Is the starting date after the beginning of 2000?	/1/, /2/	DR	The starting date is after the beginning of 2000.	OK	OK
C.2. Expected operational lifetime of the project					
2.1. Is the project's operational lifetime clearly defined in years and months?	/1/, /2/	DR	**CAR 36.** Expected operational lifetime of the project is defined incorrectly. Please make necessary corrections.	**CAR 36**	OK
C.3. Length of the crediting period					
3.1. Is the length of the crediting period specified in years and months?	/1/, /2/	DR	The length of the crediting period in years and months is stated in Section C.3. of the PDD.	OK	OK
3.2. Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	/1/, /2/	DR	The PDD states that according to the Kyoto Protocol to the UN Framework Convention on Climate Change, the first commitment period is 5 years (January 1, 2008 – December 31, 2012).	OK	OK
3.3. 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?	/1/, /2/	DR	If after the first commitment period under the Kyoto protocol it is prolonged, the crediting period under the project will be prolonged by 8 years/96 months until December 31, 2020.	OK	OK
D. Monitoring plan					
D.1. Description of monitoring plan chosen					
1.1. Is it indicated in PDD a detailed theoretical description in a complete and transparent manner, as well as a justification of chosen monitoring plan using the step-	/1/, /2/, /7/	DR	A detailed theoretical description in a complete and transparent manner, as well as a justification of chosen monitoring plan was provided by project participants in Section D.1.	**CAR 37** **CAR 38**	OK OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
wise approach?			of the PDD. **CAR 37.** Please specify other sources used in monitoring plan development. **CAR 38.** In section D.1 of the PDD, please provide the justification of the chosen monitoring plan, using a stepwise approach set by the Guidelines for users of the JI PDD form, version 04.		
1.2. Does the PDD explicitly indicate the chosen approach used for monitoring with references on regulations?	/1/, /2/	DR	The monitoring plan was developed by using a JI specific approach and with elements of CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 02.	OK	OK
1.3. Is the applied methodology considered being the most appropriate one?	/1/, /2/	DR	The monitoring plan was developed by using a JI specific approach and with elements of CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 02. The analysis of AM0020 methodology application to the project activities is presented in Section B.1 of the PDD.	OK	OK
1.4. If national or international monitoring standart has to be applied to monitor certain aspects of the project, is this standart identified and is the reference as to where a detailed description of the standart can be found provided?	/1/, /2/	DR	National monitoring standards should be applied to certain aspects of the project monitoring. The relevant information is presented in Annex 3 to the PDD.	OK	OK
1.5. Are the description of the assumptions, formulas,	/1/, /2/	DR	The assumptions, formulas, parameters, data sources and key factors are described in	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
parameters, data sources and key factors indicated?			Section D and Annex 4 to the PDD.		
1.5.1.Is it stated how uncertainties are taken into account and conservativeness is safeguarded?	/1/, /2/	DR	Section D of the PDD describes how uncertainties are taken into account and conservativeness is safeguarded. Please refer to **CAR 21.**	**CAR 21**	OK
1.6. Is it described how the chosen approach is applied in the context of the project?	/1/, /2/	DR	PDD Section D explains how the chosen approach is applied in the context of the project. The monitoring plan was developed by using a JI specific approach and with elements of CDM methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 02.	OK	OK
1.7. Does the monitoring plan explicitly and clearly distinguish: 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 regarding the 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 regarding the PDD; 3) data and parameters that are monitored throughout	/1/, /2/	DR	The monitoring plan defines procedures for: - data and parameters that are not monitored throughout the crediting period, but are determined only once, and that are available already at the stage of determination of the PDD; - 3) data and parameters that are monitored throughout the crediting period. Data and parameters that are not monitored throughout the crediting period, but are determined only once, but that are not already available at the stage of determination regarding the PDD, are absent from the monitoring plan.	OK	OK

<table>
<tr><th>CHECKLIST QUESTION</th><th>Ref.*</th><th>MoV**</th><th>COMMENTS</th><th>Draft Concl.</th><th>Final Concl.</th></tr>
<tr><td>the crediting period;</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1.8. Are alternative tables used instead of using the tables provided in sections D.1.1.1., D.1.1.3., D.1.2.1., D.1.3.1. and D.2. in line with the approach regarding monitoring chosen for all data/parameters?</td><td>/1/, /2/</td><td>DR</td><td>The tables provided in sections D.1.1.1., D.1.1.3., D.1.2.1., D.1.3.1. and D.2. were used.</td><td>OK</td><td>OK</td></tr>
<tr><td>1.8.1. Are all the required data / parameters according to the used methodology indicated?</td><td>/1/, /2/</td><td>DR</td><td>N/A</td><td>OK</td><td>OK</td></tr>
<tr><td>1.9. Checklist for parameters
<table>
<tr><th>Data Checklist</th><th>Parameter Title</th></tr>
<tr><td>Is the title in line with methodology?</td><td></td></tr>
<tr><td>Are data units correctly expressed?</td><td></td></tr>
<tr><td>Is the appropriate description of parameter indicated?</td><td></td></tr>
<tr><td>Is the time of monitoring clearly indicated?</td><td></td></tr>
<tr><td>Is the source clearly referenced?</td><td></td></tr>
<tr><td>Is the correct value provided?</td><td></td></tr>
<tr><td>Has this value been verified?</td><td></td></tr>
<tr><td>Is the choice of data correctly justified or is the measurement method correctly described?</td><td></td></tr>
</table></td><td>/1/, /2/</td><td>DR</td><td>N/A</td><td>OK</td><td>OK</td></tr>
</table>

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
Are quality control and quality assurance procedures indicated?					
D.1.1. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario					
1.1.1. Is the option 1 used for monitoring of the emissions in the project scenario and the baseline scenario?	/1/, /2/	DR	Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario is applied as per Section D of the PDD.	OK	OK
D.1.1.1. Data to be collected in order to monitor emissions from the project, and how these data will be archived					
1.1.1.1. Are the data to be collected in order to monitor emissions from the project described?	/1/, /2/	DR	Table D.1.1.1. of the PDD indicates data to be collected in order to monitor emissions from the project.	OK	OK
1.1.1.2. Is it indicated how the data will be archived?	/1/, /2/	DR	Section D.1.1.1. of the PDD states that all data will be stored both electronically and in hard copies.	OK	OK
1.1.1.3. Is it indicated that data monitored are to be kept for two years after the last transfer of ERUs for the project?	/1/, /2/, /27/	DR	Data monitored and required for determination and verification, as well as any other data related to the project, will be kept for two years after the last transfer of ERUs for the project. **CL 12.** Please provide the documentary guidance indicating that data monitored are to be kept for two years after the last transfer of ERUs for the project according to the Guidelines for users of the JI PDD form, version 04.	**CL 12**	OK
D.1.1.2. Description of formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
equivalent)					
1.1.2.1 Are the formulae clearly and consistently indicated throughout the PDD?	/1/, /2/	DR	The formulae applied for project emission estimation are clearly and consistently indicated in Section D.1.1.2 of the PDD. **CAR 39.** Please check data units for all parameters related to electricity consumption and water transportation in section D of the PDD.	**CAR 39**	OK
D.1.1.3. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived					
1.1.3.1. Are the data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary described?	/1/, /2/	DR	Relevant data necessary for setting the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary are described in Section D.1.1.3 of the PDD. **CAR 40.** In Annex 2 to the PDD the number of the Decree "On approval of carbon dioxide emission factors for 2011" is incorrect. Please correct. **CL 13.** Please provide the "Acts of supplied electric energy" stated as the supporting document of electricity value used by water pumping stations, drainage pumping plants and aeration tank system. **CL 14.** Please provide the justification of electricity consumer class according to which the value of "Specific carbon dioxide emissions" is stated in Supporting Document 1	**CAR 40** **CL 13** **CL 14**	OK OK OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			(WSPP - 1 class, DPP, AS - 2 class).		
1.1.3.2. Is it indicated how data will be archived?	/1/, /2/	DR	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.	OK	OK
D.1.1.4. Description of formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent)					
1.1.4.1. Are the formulae clearly and consistently indicated throughout the PDD?	/1/, /2/	DR	Formulae used to estimate project emissions are described in Section D. of the PDD.	OK	OK
D.1.2. Option 2 - Direct monitoring of emission reductions from the project (values should be consistent with those in section E.)					
1.2.1. Is Option 2 used for monitoring of the emissions in the project scenario and the baseline scenario?	/1/, /2/	DR	N/A	OK	OK
D.1.2.1. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived					
1.2.1.1. Are the data to be collected in order to monitor emissions from the project described?	/1/, /2/	DR	N/A	OK	OK
1.2.1.2. Is it indicated how data will be archived?	/1/, /2/	DR	N/A	OK	OK
1.2.1.3. Is it indicated that data monitored are to be kept for two years after the last transfer of ERUs for the project?	/1/, /2/	DR	N/A	OK	OK
D.1.2.2. Description of formulae used to calculate emission reductions from the project (for each gas, source etc.;					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
emissions/emission reductions in units of CO_2 equivalent)					
1.2.2.1. Are the formulae clearly and consistently indicated throughout the PDD?	/1/, /2/	DR	N/A	OK	OK
D.1.3. Treatment of leakage in the monitoring plan					
1.3.1. Are data and information that will be collected in order to monitor leakage effects of the project described, if applicable?	/1/, /2/, /7/	DR	According to approved CDM methodology AM0020, applied in this project along with the JI specific approach, there are no potential sources of leakage from the project activity.	OK	OK
1.3.2. Are formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO_2 equivalent) described?	/1/, /2/, /7/	DR	According to approved CDM methodology AM0020, applied in this project along with the JI specific approach, there are no potential sources of leakage from the project activity.	OK	OK
D.1.4. Description of formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent)					
1.4.1. Are the formulae clearly and consistently indicated throughout the PDD?	/1/, /2/	DR	The formulae used for estimating project emission reductions are presented in Section D.1.4. of the PDD.	OK	OK
D.1.5. Where applicable, in accordance with procedures as required by the host Party, information on the collection and archiving of information on the environmental impacts of the project					
1.5.1. Is information on the collection and archiving of information on the environmental impacts of the project indicated?	/1/, /2/	DR	Information on the collection and archiving of information on the environmental impacts of the project is indicated in the PDD.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.5.2. Is reference to the relevant host Party regulation(s) provided?	/1/, /2/	DR	Main ecological Law of Ukraine: Law of Ukraine "On environmental protection" CE "Dniprovodokanal" will systematically collect data on pollution, which may have a negative impact on the environment. Skilled workers of CE "Dniprovodokanal" will be engaged in monitoring, meter's data collection (electricity meters, flowmeters) and archiving. All data should be stored for two years after the transfer of emission reduction units generated by the project.	OK	OK
1.5.3. If not applicable is it stated so?	/1/, /2/	DR	N/A	OK	OK
D.2. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored					
2.1. Are the quality assurance and control procedures for the monitoring process established? This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request?	/1/, /2/	DR, I	The monitoring plan specifies all decisive factors for the control and reporting of project performance: quality control (QC) and quality assurance (QA) procedures; operational and management structures that will be applied when implementing the monitoring plan. Detailed information on quality control and quality assurance procedures to be applied in the course of data monitoring is presented in Annex 3 to the PDD.	OK	OK
2.2. Are data corresponded with those in section D.1?	/1/, /2/	DR	Yes, these data are consistent with the data in Section D.1. of the PDD.	OK	OK
D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
3.1 Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project?	/1/, /2/	DR, I	Operational structure includes Supplier's (CE "Dniprovodokanal") operational departments (repair-and-renewal operations, etc.) and personnel for pumping plants operation. Management structure includes administration departments of the Supplier and specialists – developers of the project (VEMA S.A.). Detailed information on operational and managerial structure is presented in Annex 3 to the PDD.	OK	OK
3.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	/1/, /2/	DR, I	Responsibilities and institutional arrangements for data collection and archiving are provided in Annex 3 to the PDD.	OK	OK
3.3. Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?	/1/, /2/	DR, I	The monitoring plan, on the whole, reflects good monitoring practices appropriate to the project type.	OK	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
4.1. Is the contact information of person(s)/entity(ies) establishing the monitoring plan provided?	/1/, /2/	DR	The contact information of the entities establishing the monitoring plan is provided in Section D.4 of the PDD.	OK	OK
4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	/1/, /2/	DR	Yes, the indicated entities are project participants listed in Annex 1 of PDD.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project (for each gas, source etc.; emissions in units of CO_2 equivalent)?	/1/, /2/, /3/	DR	The formulae used to estimate anthropogenic emissions by source of GHGs due to the project (for each gas, source etc.; emissions in units of CO_2 equivalent) are duly described in Section D of the PDD.	OK	OK
1.1.1. Is there a description of calculation of GHG project emissions in accordance with the formula? (Supporting documentation)	/1/, /2/, /3/	DR	The calculation of GHG project emissions is provided in accordance with the formulae and presented in the supporting documents, Excel calculation tables.	OK	OK
1.1.2. Have conservative assumptions been used to calculate project GHG emissions?	/1/, /2/, /3/	DR	The estimated of emission reductions are based on conservative assumptions and the most likely scenarios in a transparent manner.	OK	OK
E.2. Estimated leakage					
2.1. Are the formulae used to estimate leakage due to the project activity described where required (for each gas, source etc.; emissions in units of CO_2 equivalent)?	/1/, /2/, /7/	DR	According to approved CDM methodology AM0020, applied in this project along with the JI specific approach, there are no potential sources of leakage from the project activity.	OK	OK
2.1.1. Is there a description of calculation of leakage in accordance with the formula? (supporting documentation)	/1/, /2/, /7/	DR	According to approved CDM methodology AM0020, applied in this project along with the JI specific approach, there are no potential sources of leakage from the project activity.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.2. Have conservative assumptions been used to calculate leakage?	/1/, /2/, /7/	DR	According to approved CDM methodology AM0020, applied in this project along with the JI specific approach, there are no potential sources of leakage from the project activity.	OK	OK
2.3. If not applicable, is it stated in the PDD?	/1/, /2/, /7/	DR	According to approved CDM methodology AM0020, applied in this project along with the JI specific approach, there are no potential sources of leakage from the project activity.	OK	OK
E.3. Sum of E.1 and E.2.					
3.1. Does the sum of E.1. and E.2. represent the project activity emissions?	/1/, /2/, /3/	DR	Yes. The sum of E.1. and E.2. represents the project activity emissions.	OK	OK
E.4. Estimated baseline emissions					
4.1. Are the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline described (for each gas, source etc.; emissions in units of CO2 equivalent)?	/1/, /2/, /3/	DR	The formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline are described in Section D.1.1.4 of the PDD (for each gas, source etc.; emissions in units of CO_2 equivalent).	OK	OK
4.1.1. Is there a description of calculation of GHG baseline emissions in accordance with the formula? (supporting documentation)	/1/, /2/, /3/	DR	The calculation of GHG emissions according to the baseline scenario is provided in accordance with the formulae and presented in the supporting documents, Excel calculation tables. **CAR 41.** Please check the numbering of tables and make corresponding corrections.	**CAR 41** **CAR 42**	OK OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 42. Please check the values of "Specific carbon dioxide emissions" stated in "Supporting Document 1".		
4.2. Have conservative assumptions been used to calculate baseline emissions?	/1/, /2/, /3/	DR	Conservative assumptions were used to calculate baseline emissions.	OK	OK
E.5. The difference between E.4. and E.3. represents the emission reductions due to the project					
5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	/1/, /2/, /3/	DR	The difference between E.4. and E.3. represents the emission reductions due to the project during a given period.	OK	OK
E.6. Table providing values obtained when applying formulae above					
6.1. Is the data provided under this section in consistency with data as presented by other chapters E of the PDD?	/1/, /2/, /3/	DR	The data provided under section E.6. are in consistency with data as presented by other chapters of the PDD.	OK	OK
6.2. Is there a table providing the total value of emission reductions?	/1/, /2/, /3/	DR	Yes. The table providing the total value of emission reductions is provided in Section E. **CAR 43.** The sum of GHG emission reductions for 2005-2007 is incorrect. Please check Table 26 of Section E.6. of the PDD. **CL 15.** Please explain what causes the gradual decrease of emission reduction values beginning from 2008, especially in 2011.	**CAR 43** **CL 15**	OK OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
F. Environmental impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
1.1. Has an analysis of the possible environmental impacts of the project been sufficiently described?	/1/, /2/	DR	In general, the project "Development and improvement of water-supply systems, drainage system and wastewater treatment of CE "Dniprovodokanal" will have positive impact on the environment.	OK	OK
1.2. Are transboundary environmental impacts considered in the analysis?	/1/, /2/	DR	Transboundary impacts from the project activity, according to their definition in the text of "Convention on long-range transboundary pollution" ratified by Ukraine, will not take place.	OK	OK
1.3. Are all regulations and sources clearly referenced?	/1/, /2/	DR	All regulations and sources are clearly referenced in PDD Section F.	OK	OK
F.2. If environmental impacts are considered significant by the project participants or the host Party, provision of conclusions and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party					
2.1.Is a viewpoint regarding significant environmental impacts of the project participants or the host Party	/1/, /2/	DR	In general, the project is environmentally friendly, because it causes lower pollution level	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
indicated?			than in the baseline scenario.		
2.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA)?	/1/, /2/	DR	Modernisation of pumping plants, replacement of water supply and drainage networks are not the objects of particular environmental hazard and are not subject to state examination in accordance with Resolution No. 554 dated July 27, 1995, "A list of activities and objects of high environmental hazard".	OK	OK
2.3. Have conclusions and all references to the supporting documentation on the analysis of the environmental impacts been indicated?	/1/, /2/	DR	Conclusions and all references to the supporting documentation on the analysis of the environmental impacts have been indicated in PDD Section F.	OK	OK
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
1.1. Have relevant stakeholders been consulted and how?	/1/, /2/	DR	**CAR 44.** Please provide in section G.1 of the PDD information on informing the community on implementations and modernizations implemented or planned at the company.	**CAR 44**	OK
1.1.1. Have appropriate media been used to invite comments by local stakeholders?	/1/, /2/	DR	Please refer to **CAR 44.**	**CAR 44**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.2. Is there a list of stakeholders from whom comments on the project have been received?	/1/, /2/	DR	Please refer to **CAR 44.**	**CAR 44**	OK
1.3. Is the nature of comments provided?	/1/, /2/	DR	Please refer to **CAR 44.**	**CAR 44**	OK
1.4. Has due account been taken of any stakeholder comments received?	/1/, /2/	DR	Please refer to **CAR 44.**	**CAR 44**	OK
Annexes					
Annex 1. Contact information on project participants					
1.1. Is the information provided in consistency with the one given under section A.3?	/1/, /2/	DR	Information provided in Annex 1 is consistent with the one given in Section A.3.	OK	OK
1.2. Are the mandatory fields for each organisation listed in section A.3. of the PDD filled notably organisation, name of contact person, street, city, postal code, country, telephone number(s) and fax number or e-mail address?	/1/, /2/	DR	Yes. The mandatory fields for each organisation listed in section A.3. of the PDD are filled.	OK	OK
Annex 2. Baseline information					
2.1. Is a table containing the key elements of the baseline (including variables, parameters and data sources) provided?	/1/, /2/	DR	Baseline information is provided in Section B and Annex 2 to the PDD.	OK	OK
2.2. If additional background information on baseline data is provided: is this information in consistency with data presented by other sections of the PDD?	/1/, /2/	DR	Baseline information provided in Annex 2 is consistent with other PDD sections. Please refer to **CAR 28.**	**CAR 28**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
Annex 3. Monitoring plan					
3.1. Is the detail description of all key elements of monitoring plan provided?	/1/, /2/	DR	All necessary information is provided in Annex 3 of the PDD. **CL 16.** Please explain how cross-checking of output data for each monitoring parameter is carried out, and add the necessary information to Annex 3 of the PDD.	**CL 16**	OK
3.2. Is the provided information on monitoring plan in consistency with data presented in section D of the PDD?	/1/, /2/	DR	Information on monitoring plan is consistent with the one provided in Section D of the PDD.	OK	OK

Ref.* - gives reference to Category 1 and Category 2 documents (see section 3.1. of the Determination Report) where the answer to the checklist question or item is found.
MoV** - Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I).N/A means not applicable.

Table 3 - Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
FAR 01. The project has no approval from the Parties involved.	Table 1, checklist question 1	Response 1: 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 State Environmental Investment Agency of Ukraine that includes this Determination Protocol and the list of sources of Reference Information. Letter of Approval from Switzerland at this stage of the project is not obtained.	Conclusion 1: JISC Glossary of joint implementation terms, version 03 defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
			publication in accordance with paragraph 38 of the JI guidelines, at the latest. FAR 01 will be closed after issuing written project approvals by Parties involved.
CAR 01. Please add the date when the Letter of Endorsement for the project was obtained to the project history.	Table 2, check item A.2.2.	Response 1: 31/10/2012 – obtaining of a Letter of Endorsement for this project. For further details refer to Section A.2 of the PDD.	Conclusion 1: Information on the date when Letter of Endorsement was obtained is provided in section A.2. of PDD version 02 dated 28/11/2012. **The issue is closed.**
CAR 02. Please provide the information on the documentary evidence of the starting date of the project in section A.2. of the PDD.	Table 2, check item A.2.2.	Response 1: Certificate of commissioning of new equipment - pumping unit 140 D 70 dated 30/10/2004- the document confirming the starting date of the project.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012 and provided supporting document.
CAR 03. The pumping set model, 140 D 70, mentioned in the document which confirms the project starting date "Certificate of maintenance check of mechanical	Table 2, check item A.2.2.	Response 1: Certificate of commissioning of new 140 D-70 pumping unit dated 30/11/2004	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
equipment (commissioning of new equipment) dated 30/11/2004" does not correspond with one indicated in section A.2. of the PDD: D 1250-125A. Please make necessary corrections.			
CAR 04. The presented "Baseline quantitative values of key parameters used in the project" for 2002-2004 years indicated in table 1, section A.2. of the PDD do not correspond with the values mentioned in the provided supporting documents ("Report on water use" - Form #2-TP (vodhosp), "Report on fuel, heat and electricity consumption" – Form #11-MTP). Please provide detailed explanation on the source of data for "Baseline quantitative values of key parameters used in the project" and make relevant corrections in the PDD and the Excel calculation file, if necessary.	Table 2, check item A.2.1.1.	Response 1: Quantitative indexes for baseline emission calculation are sourced from the "Information on electricity consumption by water supply, drainage pumping plants and water treatment aeration plants of CE "Dniprovodokanal" in 1998-2004" and the "Information on volumes of water and wastewater transported by water supply, drainage pumping plants and supplied to water treatment aeration plants of CE "Dniprovodokanal" for 1998-2004".	Conclusion 1: **The issue is closed** based on provided documents, namely "Information on electricity consumption by water supply, sewage pumping stations and treatment aeration plants of CE "Dniprovodokanal" for the period 1998-2004 years" and "Information on the volume of water and wastewater that is transported by water supply, sewage pumping stations and fallen to treatment aeration plants of CE "Dniprovodokanal" for the period 1998-2004 years".
CAR 05. Table in section A.3. does not comply with the form provided in	Table 2, check item A.3.1.	Response 1: The table has been corrected in	Conclusion 1: **The issue is closed** based

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
the Guidelines for users of the JI PDD form Version 04.		accordance with the Guidelines for Users of the JI PDD form. Version 04, JISC.	on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 06. Tables in Annex 1 does not comply with the form provided in the Guidelines for users of the JI PDD form Version 04.	Table 2, check item A.3.2.	Response 1: The tables have been corrected in accordance with the Guidelines for Users of the JI PDD form. Version 04, JISC.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 07. Please provide documentary evidence indicating that subdivisions which take part in the JI project belongs to CE "Dniprovodokanal". Please also provide in the PDD (Section A.4.1.4. or Annex) a list of CE "Dniprovodokanal" subdivisions taking part in the JI project, along with their location addresses.	Table 2, check item A.4.1.4.1	Response 1: To confirm the belonging of the subdivisions which take part in the JI project to CE "Dniprovodokanal", the document was provided: "Daily stock sheet for 30/10/2011 for CE "Dniprovodokanal"	Conclusion 1: **The issue is closed** based on provided clarifications.
CAR 08. Please provide in specifications the information on power of pumping equipment.	Table 2, check item A.4.2.1.	Response 1: The power of the engine is 250-1600 kW. The information is provided in Table 3 of the PDD.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 09. Figure 3 b) does not match the legend. Please make relevant amendments.	Table 2, check item A.4.2.1.	Response 1: Figure 3 b) depicts Horizontal double-entry pump of 18NDS type. Respective	Conclusion 1: **The issue is closed** based on appropriate corrections in

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
		picture is added.	the PDD version 02 dated 28/11/2012.
CAR 10. Please provide data on power of VLT AQUA FC 202 P-160 regulator in Table 8. "Characteristics of frequency regulators".	Table 2, check item A.4.2.1.	Response 1: The power of VLT AQUA FC 202 P-160 regulator is 132-630 kW.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 11. Please add data on quantitative indicators of project activities for each measure to section A.4.2 of the PDD, and provide a general table listing all the implemented project measures (as of the date of the PDD version, with quantitative indicators).	Table 2, check item A.4.2.1.	Response 1: The quantity of equipment, its type and technical characteristics are provided in Section A.4.2, and are presented in Accompanying documents for each measure provided for by the JI project: More detailed information will be provided at the monitoring stage.	Conclusion 1: **The issue is closed** based on provided clarifications.
CAR 12. Table 9 - Project implementation schedule - section A.4.2. of the PDD indicates that the starting date of project implementation is 2006 whereas the starting date of the project is 30/11/2004. Please also specify the information on each project stage implementation by years, in the table. Please make corresponding amendments to the PDD.	Table 2, check item A.4.2.1.	Response 1: The implementation of the project activity starts on 30/11/2004. Relevant corrections have been made in the PDD. More detailed information will be provided at the monitoring stage.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012 and provided clarifications.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
CAR 13. Please provide the information, with relevant documentary evidence, on taking into account national and/or sectoral policies and circumstances when assessing the JI project additionality (regional or national programmes for water management etc., at the moment of the project activities starting date). Please add relevant information to section B.2. of the PDD.	Table 2, check item A.4.3.2	Response 1: In Ukraine there exists Decree No. 148 "On the Comprehensive State Programme for Energy Saving in Ukraine" dated February 5, 1997*, created to ensure the efficient use of energy resources and promote energy independence of Ukraine. But the project measures to be implemented are not mandatory under this document.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 14. Table 10 in Section A.4.3.1 of the PDD does not comply with the form provided in the Guidelines for users of the JI PDD form Version 04.	Table 2, check item A.4.3.1.	Response 1: The table is corrected to comply with the form provided in the Guidelines for users of the JI PDD form. Version 04, JISC.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 15. CAR 15. Length of the crediting period indicated in Table 10 is incorrect. Please correct.	Table 2, check item A.4.3.1.	Response 1: The duration of the crediting period of 2005-2007 is 3 years. Relevant corrections have been made in the PDD.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 16. PDD Section A.5. should	Table 2, check item	Response 1:	Conclusion 1:

* http://zakon3.rada.gov.ua/laws/show/148-97-n

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
specify when written project approvals are expected to be obtained. Please provide the necessary information.	A.5.1	After analysing the project, the PDD and Determination report will be submitted to the National Environmental Investment Agency of Ukraine to obtain a Letter of Approval. The second letter of approval will be received from the other party of the Joint Implementation project.	**The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 17. In section B.1 of the PDD, please provide the justification of the chosen baseline, using a step-wise approach defined in Guidelines for users of the JI PDD form, version 04.	Table 2, check item B.1.1.	Response 1: The relevant justification is provided in Section B.1.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 18. The title of the Guidance used to set the baseline is incorrect. Please make corresponding amendments.	Table 2, check item B.1.1.	Response 1: "Guidance on Criteria for Baseline Setting and Monitoring". Relevant corrections have been made in the PDD.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 19. Provide information on version of the Guidance used to set the baseline.	Table 2, check item B.1.2	Response 1: "Guidance on Criteria for Baseline Setting and Monitoring", version 03. The relevant information is provided.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 20. Please specify that the baseline was set using elements of	Table 2, check item B.1.2	Response 1: The relevant information is provided in	Conclusion 1: **The issue is closed** based

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
approved CDM methodology AM0020.		Section B.1. of the PDD.	on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 21. Section B.1 of the PDD states that "Specific electricity consumption in the baseline scenario is calculated, taking into account the assumption of its linear increase in course of time". Whereas the approved CDM methodology "Baseline methodology for water pumping efficiency improvements", version 02 defines the baseline period as one year (mostly, the last available year) or, in the event of significant differences year-to-year (due to weather conditions etc.), a longer baseline period should apply, which is to ensure better pre-project average efficiency (e. g. average value for three years). Please justify the assumption of linear increase of	Table 2, check item B.1.3.4.	Response 1: This spesific approach of choosing the baseline (liear increase of "Specific electricity consumption in the baseline scenario" in course of time (method of least squares) is based on the choice of the baseline scenario in the previously determined projects: "Development and improvement of water supply system, drainage system and wastewater treatment of City Communal Enterprise "Mykolaivvodokanal"*. "Development and improvement of water supply system, drainage system and wastewater treatment of "Infox Ltd." branch "Infoxvodokanal"†	Conclusion 1: **The issue is closed** based on appropriate additions in the PDD version 02 dated 28/11/2012.

* http://ji.unfccc.int/JIITLProject/DB/YJQJMA903XJMSOIFU64OAAIT4I4JV8/details
† http://ji.unfccc.int/JIITLProject/DB/7PE5JHSBJFO0Y6V8URCHW2V2GS1NPY/details

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
"Specific electricity consumption in the baseline scenario" in course of time (method of least squares) and indicate the relevant information in the PDD.			
CAR 22. Please correct the abbreviations of parameters through all the PDD and the Supporting Documents, according to Annex B to the "Guidance on Criteria for Baseline Setting and Monitoring".	Table 2, check item B.1.3.6.	Response 1: The relevant corrections were made to the PDD and Supporting documents.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 23. The title of AM0020 CDM methodology in Section B.1 of the PDD (Main factors determining GHG emissions) is incorrect. Please correct.	Table 2, check item B.1.3.6.	Response 1: CDM baseline methodology AM0020 "Baseline methodology for water pumping efficiency improvements", version 02.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 24. Section B.1. shall contain formulae to calculate baseline emissions. Please make necessary additions to the PDD.	Table 2, check item B.1.3.6.	Response 1: The formulae are provided. Ref. to PDD version 02.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 25. Data units for parameters $EC^{j}_{b,m}$, $V^{j}_{b,w}$, $V^{j}_{b,t}$ in section B.1 of the PDD are incorrect. Please correct.	Table 2, check item B.1.3.6.	Response 1: $EC^{j}_{b,\,m}$ - total eletricity required for wastewater transportation via the drainage system *m* by pumping plants	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
		in the period, MWh. $V_{b,w}^{j}$ - Total water supplied to consumers via the water supply system *w* for the period, 1000 m^3. $V_{b,t}^{j}$ -Total volume of wastewater pumped over by aerotank system *t* over the period, 1000 m^3.	
CAR 26. In section B.1 of the PDD, please provide reference to methodology whose elements are used in baseline setting.	Table 2, check item B.1.3.6.	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 27. Please provide the correct reference to information about baseline calculation and the following source "research of Global Carbon B.V".	Table 2, check item B.1.4.	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 28. Please provide the project schedule in section B.1 of the PDD, in tables featuring baseline parameters, values of these parameters in the defined baseline period (1998-2004) or present these values in Annex 2. Please also	Table 2, check item B.1.8	Response 1: The relevant corrections were made to the PDD. Ref. to A.2., Table 2 of the PDD version 02 and B.1.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
present in Section B.1 the value of parameter EFy.			
CAR 29. In section B.2 of the PDD, please provide the demonstration of project additionality, using a step-wise approach set by the Guidelines for users of the JI PDD form, version 04.	Table 2, check item B.2.1	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 30. CAR 30. In section B.2 of the PDD, please clearly state the approach set by paragraph 44 of the "Guidance on Criteria for Baseline Setting and Monitoring", version 03, used to demonstrate the project's additionality.	Table 2, check item B.2.1	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 31. Please provide a reference to the "Tool for the demonstration and assessment of additionality" in Section B.2 of the PDD.	Table 2, check item B.2.2.	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 32. "Tool for the demonstration and assessment of additionality" version 05.2 used in section B.2. of the PDD is not the latest version. Please use the latest version of this document for demonstration of the	Table 2, check item B.2.4.1.	Response 1: Additionality of the project activity is demonstrated and assessed below using the "Tool for the demonstration and assessment of additionality" (Version 06.0.0).	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
additionality.			
CAR 33. The title of the "Tool for the demonstration and assessment of additionality" in Sub-step 2, Section B.2. of the PDD is incorrect. Please correct.	Table 2, check item B.2.4.1.	Response 1: The following steps are made in line with the CDM Executive Board "Tool for the demonstration and assessment of additionality", version 06.0.0.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 34. The demonstration of the project's additionality does not contain any documental evidence. Please provide, in a transparent manner, confirmation of the existence and significance of the identified barriers and the fact that these barriers can prevent the proposed project activity.	Table 2, check item B.2.4.1.	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02	Conclusion 1: **The issue is closed** based on appropriate additions in the PDD version 02 dated 28/11/2012.
CAR 35. Please provide the justification of the chosen starting date of the project in section C.1. of the PDD.	Table 2, check item C.1.1.	Response 1: The starting date of the project is deemed 30/11/2004 when the Management of CE "Dniprovodokanal" made a decision to implement a JI project.	Conclusion 1: **The issue is closed** based on provided supporting document.
CAR 36. Expected operational lifetime of the project is defined incorrectly. Please make necessary corrections.	Table 2, check item C.2.1.	Response 1: 30/11/2004 - 31/12/2020 (16 years and 1 month, or 193 months) Real average life-cycle of new equipment for pumps and water-	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
		distribution networks, equipment is estimated to be about 30-40 years and it is confirmed by the equipment certificates. Following the principle of conservatism the life-cycle of the project will be 16 years and one month.	
CAR 37. Please specify other sources used in monitoring plan development.	Table 2, check item D.1.1.	Response 1: The choice of the baseline and monitoring is made according to requirements of the Guidance on criteria for baseline setting and monitoring with consideration of Decision 9/CMP.1, Appendix «B» "Criteria for baseline setting and monitoring" and paragraphs 23-29 of the "Guidance on criteria for baseline setting and monitoring" (version 03). According to these Guidances, the project developer uses JI specific approach and elements of AM0020 "Baseline methodology for water pumping efficiency improvements" (version 02) to establish monitoring.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 38. In section D.1 of the PDD, please provide the justification of the chosen monitoring plan, using a	Table 2, check item D.1.1.	Response 1: The relevant corrections were made to the PDD.	Conclusion 1: **The issue is closed** based on appropriate corrections in

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
stepwise approach set by the Guidelines for users of the JI PDD form, version 04.		Ref. to PDD version 02	the PDD version 02 dated 28/11/2012.
CAR 39. Please check data units for all parameters related to electricity consumption and water transportation in section D of the PDD.	Table 2, check item D.1.1.2.1.	Response 1: Data units for all parameters related to electricity consumption and water transportation are checked. Relevant corrections have been made.	Conclusion 1: The corrections are made, **the issue is closed**.
CAR 40. In Annex 2 to the PDD the number of the Decree "On approval of carbon dioxide emission factors for 2011" is incorrect. Please correct.	Table 2, check item D.1.1.3.1.	Response 1: All the formulae given in Section D of the PDD version 03 were numbered.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 41. Please check the numbering of tables and make corresponding corrections.	Table 2, check item E.4.1.1.	Response 1: Numbering of tables was corrected in the PDD version 02.	Conclusion 1: **The issue is closed** based on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 42. Please check the values of "Specific carbon dioxide emissions" stated in "Supporting Document 1".	Table 2, check item E.4.1.1.	Response 1: The relevant corrections were made to the PDD. Ref. to PDD version 02 and Supporting Document 1	Conclusion 1: **The issue is closed** based on appropriate corrections in "Supporting Document 1".
CAR 43. The sum of GHG emission reductions for 2005-2007 is	Table 2, check item E.6.2.	Response 1: Relevant corrections have been made.	Conclusion 1: **The issue is closed** based

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
incorrect. Please check Table 26 of Section E.6. of the PDD.			on appropriate corrections in the PDD version 02 dated 28/11/2012.
CAR 44. Please provide in section G.1 of the PDD information on informing the community on implementations and modernizations implemented or planned at the company.	Table 2, check item G.1.1.	Response 1: CE "Dniprovodokanal" constantly informs the community on implementations and modernizations being implemented or planned, as well as their implementation stages, at the company's web-site. Stakeholders may provide their comments and take part in the discussion of these issues. No negative comments have been received.	Conclusion 1: The information is checked. **The issue is closed.**
CL 01. Please provide for consideration the document "Agreement for emission reductions purchase relating to the JI project" dated 01/08/2012, mentioned in section A.2. of the PDD.	Table 2, check item A.2.2.	Response 1: The relevant document was provided.	Conclusion 1: **The issue is closed** based on provided supporting document.
CL 02. "Information on volumes of services and electricity expenses" in Excel format was provided to determination team as documentary evidence of the presented "Baseline quantitative values of key	Table 2, check item A.2.1.1.	Response 1: The relevant documents were provided.	Conclusion 1: **The issue is closed** based on provided documents, namely "Information on electricity consumption by water supply, sewage

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
parameters used in the project" for 1998-2001 years indicated in table 1 of section A.2. of the PDD. Please provide the documentary evidence from CE "Dniprovodokanal" of values indicated in the above mentioned Excel spreadsheet.			pumping stations and treatment aeration plants of CE "Dniprovodokanal" for the period 1998-2004 years" and "Information on the volume of water and wastewater that is transported by water supply, sewage pumping stations and fallen to treatment aeration plants of CE "Dniprovodokanal" for the period 1998-2004 years".
CL 03. Please provide references to the thesis mentioned in section A.4.1.1. of the PDD (on Ukraine's ratification of Kyoto Protocol to the UNFCCC).	Table 2, check item A.1.1.	Response 1: Relevant reference has been provided. Ref. to Section 4.1.1. of the PDD.	Conclusion 1: **The issue is closed** based on appropriate reference provided in the PDD version 02 dated 28/11/2012.
CL 04. Please provide a legend to Figure 6 in the text of the PDD in the relevant section.	Table 2, check item A.4.2.1.	Response 1: Figure 6. of Section A.4.2. of the PDD depicts FLOWTITE fiberglass pipes.	Conclusion 1: The explanation is provided. **The issue is closed.**
CL 05. Supporting Document 2 that presents the project and monitoring equipment, the following project measures are mentioned: pump replacement, cutting of pump rotor, electric engine replacement, flow	Table 2, check item A.4.2.1.	Response 1: More detailed information will be provided at the monitoring stage.	Conclusion 1: Due to the absence of the document indicating all measures implemented under the project, as described in section A.4.2.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
meter replacement, and electricity meter replacement. Please provide the document confirming all the implemented project measures mentioned in section A.4.2. of the PDD.			PDD during the project determination, the following FAR 02 was raised. **FAR 02.** Document indicating the detailed information on all measures implemented under the project as described in section A.4.2. PDD should be provided to the AIE during first verification of the project.
CL 06. Please describe the procedure of pipeline replacement at CE "Dniprovodokanal".	Table 2, check item A.4.2.1.	Response 1: CE "Dniprovodokanal" conducts annual calculation of water loss in the network. The enterprise determines planned replacements based on these calculations. If water losses in the site do not exceed the standard water losses, the enterprise is not obliged to conduct planned replacements of pipelines. Pipelines to be replaced as a result of the project are not a part of technical maintenance (emergencies or planned replacements). Pipeline replacements are carried out in the	Conclusion 1: **The issue is closed** based on provided clarifications.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
		sites which do not exceed planned water losses yet but are in a poor condition.	
CL 07. Please provide a clear explanation on documentary evidence of implementation of each project measure mentioned in section A.4.2. of the PDD.	Table 2, check item A.4.2.1.	Response 1: More detailed information will be provided at the monitoring stage.	Conclusion 1: Due to the absence of the documents conforming the implementation of each project measure, as described in section A.4.2. PDD during the project determination, the following FAR 03 was raised. **FAR 03.** The documentary evidence of each project measure implementation, as described in section A.4.2. PDD should be provided to the AIE during first verification of the project.
CL 08. Please clarify whether the project equipment reflect current good practices.	Table 2, check item A.4.2.1.1.	Response 1: Technologies to be realized by the project are state-of-the-art in the sphere of water supply. For more details see Section A.4.2. of the PDD.	Conclusion 1: **The issue is closed** based on provided clarifications.
CL 09. During on site visit the	Table 2, check item	Response 1:	Conclusion 1:

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
determination team received the documents on the replacement of pumping equipment ("Certificates of maintenance check of mechanical equipment (commissioning of new equipment)"). However the indicated models do not correspond with those mentioned in Supporting Document 2. Please provide the clarification.	A.4.2.2	More detailed information will be provided at the monitoring stage.	Due to the absence of the document indicating all measures implemented under the project, as described in section A.4.2. PDD during the project determination, the issue is not closed. Please refer to **FAR 02.**
CL 10. Please explain which document is the source of the values of "Network length" and "Reconstructed network length" mentioned in Supporting Document 3 "Replacement of water supply and drainage networks in 2005-2012".	Table 2, check item A.4.2.2	Response 1: The value of the total length of networks on the balance sheet that are listed in the Supporting Document 3 were provided by the accounting department of the company. (They are also supported by a document).	Conclusion 1: Due to the absence of the document that is the source of values of "Network length" and "Reconstructed network length" during the project determination, the following FAR 04 was raised. **FAR 03.** The document indicating values of "Network length" and "Reconstructed network length" should be provided to the AIE during first verification of the project.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
CL 11. Please clarify in detail why the approved CDM methodology AM0020 cannot be applied for baseline identification.	Table 2, check item B.1.7.	Response 1: The choice of this approach is based on the previously determined projects: "Development and improvement of water supply system, drainage system and wastewater treatment of City Communal Enterprise "Mykolaivvodokanal"*. "Development and improvement of water supply system, drainage system and wastewater treatment of "Infox Ltd." branch "Infoxvodokanal"†	Conclusion 1: **The issue is closed** based on provided clarifications.
CL 12. Please provide the documentary guidance indicating that data monitored are to be kept for two years after the last transfer of ERUs for the project according to the Guidelines for users of the JI PDD form, version 04.	Table 2, check item D.1.1.3.	Response 1: The relevant Order indicating that data monitored are to be kept for two years after the last transfer of ERUs for the project according to the Guidelines for users of the JI PDD form, version 04, was provided.	Conclusion 1: **The issue is closed** based on provided supporting document.
CL 13. Please provide the "Acts of supplied electric energy" stated as the supporting document of electricity value used by water	Table 2, check item D.1.1.3.1.	Response 1: The relevant documents were provided.	Conclusion 1: **The issue is closed** based on provided supporting documents.

* http://ji.unfccc.int/JIITLProject/DB/YJQJMA903XJMSOIFU64OAAIT4I4JV8/details
† http://ji.unfccc.int/JIITLProject/DB/7PE5JHSBJFO0Y6V8URCHW2V2GS1NPY/details

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
pumping stations, drainage pumping plants and aeration tank system.			
CL 14. Please provide the justification of electricity consumer class according to which the value of "Specific carbon dioxide emissions" is stated in Supporting Document 1 (WSPP - 1 class, DPP, AS - 2 class).	Table 2, check item D.1.1.3.1.	Response 1: The relevant documents were provided.	Conclusion 1: **The issue is closed** based on provided supporting documents.
CL 15. Please explain what causes the gradual decrease of emission reduction values beginning from 2008, especially in 2011.	Table 2, check item E.6.2.	Response 1: A water services company provides services used by consumers, whose number changes frequently. Because they are not only individuals, but also companies, the output of which can often vary over time. These changes influence the consumption of water supply / drainage and, therefore, the amount of reduction of GHG emissions into the atmosphere.	Conclusion 1: **The issue is closed** based on provided clarifications.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
CL 16. Please explain how cross-checking of output data for each monitoring parameter is carried out, and add the necessary information to Annex 3 of the PDD.	Table 2, check item to Annex 3.1.	Response 1: The readings of electricity meters and flowmeters are registered daily and logged in appropriate form (e. g., PDO-11). Pumping stations dispatchers monthly register the readings of electricity meters and flowmeters that are then entered into electricity consumption "Reporting acts" (Act of supplied electric energy) and acts of volume of pumped water / wastewater from each unit of CE "Dniprovodokanal". Whereupon the Acts are submitted to the Planning Department of the enterprise and later form the reporting forms - 11 MTP and 2-TP (vodhosp). More detailed information was provided in Section C, Annex 3.	Conclusion 1: **The issue is closed** based on provided clarifications.