DETERMINATION REPORT

"MT-INVEST CARBON" LLC

DETERMINATION OF THE "INTRODUCTION OF SUGAR PRODUCTION ORGANIC WASTE MANAGEMENT SYSTEM AT THE "PODILSKI SUGAR MILLS" LTD"

REPORT NO. UKRAINE-DET/0804/2012

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

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29/11/2012	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
"MT-Invest Carbon" LLC	Iaroslav Falendysh

Summary:

Bureau Veritas Certification has made the determination of the "Introduction of sugar production organic waste management system at the "Podilski sugar mills" Ltd" project of «MT-Invest Carbon» LLC located in Vinnytsia Region of Ukraine, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

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

Report No.:	Subject Group:
UKRAINE-det/0804/2012	JI

Project title:

"Introduction of sugar production organic waste management system at the "Podilski sugar mills" Ltd"

Work carried out by:

Kateryna Zinevych – Team leader, lead verifier
Volodymyr Kulish – Team member, verifier

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Bureau Veritas Certification Holding SAS

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1 INTRODUCTION

«MT-Invest Carbon» LLC has commissioned Bureau Veritas Certification to determine its JI project “Introduction of sugar production organic waste management system at the “Podilski sugar mills” Ltd” (hereafter called “the project”) in Vinnytsia Region of 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.

1.1 Objective

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

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

1.2 Scope

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

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

1.3 Determination team

The determination team consists of the following personnel:

Kateryna Zinevyh
Team Leader, Bureau Veritas Certification Climate Change Lead Verifier

Volodymyr Kulish
Team Member, Bureau Veritas Certification Climate Change Verifier

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

Olena Manziuk
Bureau Veritas Certification Technical Specialist

2 METHODOLOGY

The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

The completed determination protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) submitted by «MT-Invest Carbon» LLC and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Approved CDM methodology and/or Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, «MT-Invest Carbon» LLC revised the PDD and resubmitted it as version 2.0.

The determination findings presented in this report relate to the project as described in the PDD versions 1.0 dated 28/09/2012, 2.0 dated 28/11/2012.

2.2 Follow-up Interviews

On 08/11/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of “Podilski sugar mills” Ltd and «MT-Invest Carbon»

LLC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
"Podilski sugar mills" Ltd	➢ Implementation schedule ➢ Project management organization ➢ Evidence and records on reconstruction and new equipment and its operation ➢ Environmental impact assessment ➢ Responsibilities and authorities on project monitoring ➢ Monitoring equipment ➢ Quality control and quality assurance procedures ➢ Negative environmental impact ➢ Local stakeholders and community comments
CONSULTANT: «MT-Invest Carbon» LLC	➢ Applicability of methodology ➢ Baseline and Project scenarios ➢ Barrier analysis ➢ Additionality justification ➢ Common practice analysis ➢ Monitoring plan ➢ Conformity of PDD to JI requirements

2.3 Resolution of Clarification and Corrective Action Requests

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

If the determination team, in assessing the PDD and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to JI project requirements, it will raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake in the published PDD that is not in accordance with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw;

(b) Clarification request (CL), requesting the project participants to provide additional information for the determination team to assess compliance with the JI project requirement in question;

(c) Forward action request (FAR), informing the project participants of an issue, relating to project implementation but not project design, that needs to be reviewed during the first verification of the project.

The determination team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the determination.

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

3 PROJECT DESCRIPTION

The project aims at improving and modernizing the practice of recycling of organic waste at sugar plants, included in the project boundaries. The project activity results in decrease of the amount of sugar beet pulp to be disposed in landfills, where due to decomposition of organic matter in the pulp under anaerobic conditions the methane releases, which is a greenhouse gas.

The project has been implemented at three sugar plants of the Vinnytsia Region of Ukraine. “Podilski sugar mills” Ltd coordinates the project activity.

Situation before the project implementation

Before the project realization, equipment and infrastructure (warehouses, adjusted logistics system) necessary to decrease moisture content in the pulp, wherefore it quickly deteriorated, and this valuable feed resource turned into organic waste, which at first was stored in pulp pits (up to three months) and then transported to landfills. When emptying the pulp pits from deteriorated pulp, 3-5% of its mass left at the pit bottom, containing a large number of microorganisms that rapidly contaminated new pulp and speeded up the pace of its deterioration. Due to the use of this practice, the pulp produced at the JI project plants could not be used for feeding cattle and was disposed at landfills.

Baseline scenario

In the baseline scenario in the absence of the project the situation would continue: companies would still store sugar beet pulp in pits in the substance as it was produced, with no additional actions aimed at reduction of its moisture content. After filling the pulp pits with pulp, it would be transported and disposed at landfills. This scenario foresees decomposition of organic matter with the generation of landfill gas containing greenhouse gas – methane.

Sugar production is a main business activity of the sugar plants. However, other products or waste is secondary and those to which not much attention is paid. The base

scenario envisaged the continuation of the pulp handling practice that used to be applied by the plants. This scenario does not require any changes to the technical process of the plant, investment and does not face any barriers.

Project scenario

Project scenario assumes installation of equipment for decreasing of moisture content in the pulp, which allows its beneficial utilization as feed for cattle, thus it is not to be disposed at landfills and methane does not release into the atmosphere in result of pulp decomposition.

Project history

The project was initiated by “Podilski sugar mills” Ltd in early 2005. Along with the ratification of the Kyoto Protocol, the opportunity to receive additional financial benefits from reducing greenhouse gases has appeared that was an additional argument for the introduction of such activities at other plants of the Vinnytsia Region. Implementation of the main project activity took place during 2005-2007.

Emission reductions will be sold as ERUs in the international emission trading market, and the funds obtained will improve the financial performance of the project to a level that justifies the means that were used for its implementation. From the very beginning, the joint implementation mechanism was one of the prominent factors of the project, and financial benefits under this mechanism plays an important role in deciding on the start of the operation and is considered to be one of the reasons to launch the project realization.

Project implementation schedule.

12/03/2005	Decision making on the project realization
01/04/2006 - 01/05/2007	Investment stage
23/05/2006 - 28/07/2007	Construction-assembly and administration works
01/08/2007 - 31/12/2026	Operation stage
01/01/2008 - 31/12/2026	Emission reduction generation

The identified areas of concern as to the project description, project participants response and BVC’s conclusion are described in Appendix A (refer to CAR 01-CAR 05).

4 DETERMINATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 23 Corrective Action Requests and 7 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

After receiving JI Project Determination Report from the Accredited Independent Entity the project documentation will be submitted to the State Environmental Investment Agency of Ukraine for receiving a Letter of Approval.

The identified areas of concern as to the project approvals by Parties involved, project participants' response and BVC's conclusion are described in Appendix A (refer to CAR 10 and CAR 11).

The project has no approvals by the Parties involved, therefore CAR 11 remains pending. This CAR will be closed after providing the written approvals.

4.2 Authorization of project participants by Parties involved (21)

The participation of each project participant will be authorized by the Letter of Approval from appropriate party explicitly stating the name of the legal entity.

The project has no approvals by the Parties involved, therefore CAR 11 remains pending. This CAR will be closed after providing the written approvals.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that JI specific approach was the selected approach for identifying the baseline.

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:

a. Continuation of existing situation that does not require any additional investment;
b. Utilization of sugar beet pulp along with the production of biogas;
c. Preparation of pulp for use as feed for cattle;
d. Production of beet pectin, pectin glue or dietary fiber from pulp.

(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 following key factors that affect a baseline are taken into account:

a. Complex production process
b. Prices fluctuation on electricity and natural gas in Ukraine
c. Long pay-off period
d. The implementation of the proposed project requires sufficient investment and personnel
e. Ukraine has one of the lowest tariffs in Europe. Due to this it is hard to invest funds in the reconstruction and repair of equipment

In order to establish the baseline scenario project participants have chosen the use of JI specific approach and "Combined tool to identify the baseline scenario and demonstrate additionality" (version 04.0.0).

All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the identified JI specific approach and the baseline is identified appropriately.

The identified areas of concern as to the baseline setting, project participants response and BVC's conclusion are described in Appendix A (refer to CAR 07-CAR 08).

4.4 Additionality (27-31)

The barrier and common practice analyses were used for the demonstration of additionality. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

The additionality was justified by:

1. Identification of four alternatives to the project activity;
2. The identified financial and other barriers may hinder the planned project activity implementation without it being registered as JI project;
3. Common practice analysis that complements the barrier analysis

Additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

The identified areas of concern as to the additionality, project participants response and BVC's conclusion are described in Appendix A (refer to CAR 09).

4.5 Project boundary (32-33)

The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants:
- CH_4 emissions due to anaerobic fermentation of sugar production waste (pulp)

(ii) Reasonably attributable to the project:
- CH_4 emissions due to anaerobic fermentation of pulp (that has not been processed, if this condition is satisfied).

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD.

The AIE determined the project boundary by:
a) Detailed analysis of the documentation (the list of all reviewed documentation is provided in the Category 2 Documents below).
b) Interviews and observations during the site visit to “Podilski sugar mills” Ltd dated 08/11/2012 (The list of persons interviewed is provided in the Persons Interviewed Table below).

Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

The identified areas of concern as to the project boundary, project participants response and BVC’s conclusion are described in Appendix A (refer to CAR 10).

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the real action of the project began, and the starting date is 12/03/2005, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 19 years or 228 months.

The PDD states the length of the crediting period in years and months, which is 19 years or 228 month, and its starting date as 01/01/2008, which is on the date the first emission reductions or enhancements of net removals are generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

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

The identified areas of concern as to the crediting period, project participants response and BVC's conclusion are described in Appendix A (refer to CAR 14 – CAR15, CL 01 – CL 05).

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was the selected.

The monitoring plan 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.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. are clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions to be monitored.

The monitoring plan draws on the list of standard variables indicated in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC.

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination.

(ii) Data and parameters that are not monitored 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, such are not applicable.

(iii) Data and parameters that are monitored throughout the crediting period, such as baseline emissions.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording according to the type indicated in the key parameters tables in the Section B of the PDD.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions or direct monitoring of emission reductions from the project, leakage, as appropriate.

Project emissions:

Calculation formula for identifying the amount of emissions after the project implementation:

$$PE_y = \sum_{i=1}^{n} PE_{i,biomass,y}, \quad \text{(Equation 1)}$$

where:

PE_y,	Project GHG emissions due to project implementation in period y, tCO_2e;
$PE_{i,biomass,y}$	Project methane emissions due to the decomposition of organic waste of the plant i at the landfill in the period y, (tCO_2e);
i	Project plant index;
n	Number of project plants.

Project methane emissions from decomposition of organic waste at the landfill are calculated as follows:

$$PE_{i,biomass,y} = (1-f) \cdot GWP_{CH4} \cdot (1-OX) \cdot {}^{16}/_{12} \cdot F \cdot DOC_f \cdot MCF \cdot \sum_{x=1}^{y} P_{i,x} \cdot DOC \cdot e^{-k\cdot(y-x)} \cdot (1-e^{-k}),$$

(Equation 2)

where:

$PE_{i,biomass,y}$	Project methane emissions due to the decomposition of organic waste of the plant at the landfill in the period *y*, tCO_2e;
$P_{i,x}$	Amount of sugar production waste (pulp) that was not sold by the plant in period *x* and was disposed at the landfill, t;
f	CH_4 fraction captured and utilized at the landfill, fraction;
GWP_{CH4}	Global warming potential for methane, tCO_2e/tCH_4 (According to the UNFCCC decision and the Kyoto Protocol);
OX	Oxidation factor reflects the amount of CH_4 that is oxidised in other material covering the waste, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.15);
F	Fraction of CH_4, by volume, in generated landfill gas, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.15);
DOC_f	Fraction of the degradable organic carbon that decomposes, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.13);
MCF	CH_4 correction factor, fraction (2006 IPCC);
DOC	Fraction of the degradable organic carbon in the waste of j-type (pulp), tC/t of pulp (Laboratory testing data. Results are in the range provided by 2006 IPCC Volume 5: Waste, Chapter 2, Page 2.14);
k	Waste (pulp) decomposition factor, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.17);
x	Period during the crediting period: $x \in (1; y)$;
y	Period for which methane emissions are calculated.

Baseline emissions:

The baseline emissions are calculated as follows:

$$BE_y = \sum_{i=1}^{n} BE_{i,biomass,y}, \quad \text{(Equation 3)}$$

where:

BE_y	Baseline GHG emissions in the period y, tCO_2e;
$BE_{i,biomass,y}$	Baseline CH_4 emissions from degradable organic waste of plant at the landfill in the period y, tCO_2e.
i	Project plant index;
n	Number of project plants.

Baseline CH_4 emissions from degradable organic waste at the landfill are calculated as follows:

$$BE_{i,biomass,y} = (1-f) \cdot GWP_{CH4} \cdot (1-OX) \cdot {}^{16}/_{12} \cdot F \cdot DOC_f \cdot MCF \cdot \sum_{x=1}^{y} W_{i,x} \cdot DOC \cdot e^{-k \cdot (y-x)} \cdot (1-e^{-k}), \quad \text{(Equation 4)}$$

where:

$BE_{i,biomass,y}$	Baseline CH_4 emissions from degradable organic waste of plant at the landfill in the period y, tCO_2e;
Wx	Amount of sugar production waste, which would be disposed at the landfill in period x, t (Parameter B-1);
φ	Correction factor to account for model uncertainties, ratio (Study on modeling landfill gas formation);
f	CH_4 fraction captured and utilized at the landfill, fraction;
GWP_{CH4}	Global warming potential for methane, tCO_2e/tCH_4 (According to the UNFCCC Decision and the Kyoto Protocol);
OX	Oxidation factor reflects the amount of CH_4 that is oxidized in other material covering the waste, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.15);
F	Fraction of CH_4 by volume, in generated landfill gas, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.15);
DOC_f	Fraction of the degradable organic carbon that decomposes, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.13);
MCF	CH_4 correction factor, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.14);
DOC	Fraction of the degradable organic carbon in the waste of j-type (pulp), tC/t of pulp (Laboratory testing data. Results are in the range provided by 2006 IPCC Volume 5: Waste, Chapter 2, Page 2.14);
k	Waste (pulp) decomposition factor, fraction (2006 IPCC Volume 5: Waste, Chapter 3, Page 3.17);
x	Period during the crediting period: $x \in (1; y)$;
y	Period for which methane emissions are calculated.

Leakage

Leakages in the period *y* are calculated in the following way:

$$LE_y = 0 \quad \text{(Equation 5)}$$

where

LE_y Leakages due to the project in the period *y*, tCO_2e.

Emission Reductions:

Annual emission reductions are calculated as follows:

$$ER_y = BE_y - LE_y - PE_y \quad \text{(Equation 12)}$$

where

ER_y	emission reductions following the project implementation in the period *y*, tCO_2e;
LE_y	leakage as a result of implementation of the project in the period *y*, tCO_2e;
BE_y	baseline emissions of the project in the period *y*, tCO_2e;
PE_y	project emissions in the period *y*, tCO_2e;

The monitoring plan presents the quality assurance and control procedures for the monitoring process. 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.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities.

On the whole, the monitoring plan reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

The identified areas of concern as to the monitoring plan, project participants response and BVC's conclusion are described in Appendix A (refer to CAR 16 – CAR 17).

4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential indirect CO_2, CH_4, leakage in the process of fuel production and transportation and appropriately explains that sources can be neglected.

There are no outstanding issues concerning the leakage.

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

The PDD indicates assessment of emissions in the baseline scenario and in the project scenario as the approach chosen to estimate the emission reductions or enhancement of net removals generated by the project.

The PDD provides the ex ante estimates of:

(a) Emissions or net removals for the project scenario (within the project boundary), which are:

Estimated project emissions during the first crediting period:

Year	Project emissions from anaerobic fermentation of pulp, t CO_2 e	**Total project emissions during the first crediting period, t CO_2 eq**
2008	0	**0**
2009	0	**0**
2010	0	**0**
2011	0	**0**
2012	0	**0**
Total	**0**	**0**

Estimated project emissions after the end of the first crediting period (2013-2026):

Year	**Project emissions due to organic waste decay at landfill, t CO_2 eq**
2013	0
2014	0
2015	0
2016	0
2017	0

2018	0
2019	0
2020	0
2021	0
2022	0
2023	0
2024	0
2025	0
2026	0
Estimated project emissions after the end of the first crediting period, t CO_2 eq	**0**

(b) Leakage, as applicable, which are:

Estimated leakages during the first crediting period:

	2008	**2009**	**2010**	**2011**	**2012**	**Total**
Estimated leakage during the first crediting period, t CO_2 eq	**0**	**0**	**0**	**0**	**0**	**0**

Estimated leakages after the end of the first crediting period (2013-2026):

Year	**Leakages**
2013	0
2014	0
2015	0
2016	0
2017	0
2018	0
2019	0
2020	0
2021	0
2022	0
2023	0
2024	0
2025	0
2026	0
Estimated leakages after the end of the first crediting period, t CO_2 eq	**0**

(c) Emissions for the baseline scenario (within the project boundary), which are:

Estimated baseline emissions during the first crediting period:

Year	Project emissions from anaerobic fermentation of pulp, t CO_2 e	**Total project emissions during the first crediting period, t CO_2 eq**
2008	293 294	**293 294**
2009	307 369	**307 369**
2010	412 032	**412 032**
2011	546 998	**546 998**
2012	591 255	**591 255**
Total	**2 150 948**	**2 150 948**

Estimated baseline emissions after the end of the first crediting period (2013-2026):

Year	**Baseline emissions due to organic waste decay at landfill, t CO_2 eq**
2013	628 037
2014	658 606
2015	684 013
2016	705 129
2017	722 678
2018	737 263
2019	749 385
2020	759 459
2021	767 832
2022	774 791
2023	780 574
2024	785 381
2025	789 376
2026	792 696
Estimated baseline emissions after the end of the first crediting period, t CO_2 eq	**10 335 220**

(d) Emission reductions or enhancements of net removals adjusted by leakage (based on (a)-(c) above), which are:

Emission reductions during the first crediting period:

	2008	**2009**	**2010**	**2011**	**2012**	**Всього**
Emission reductions during the first crediting period, t CO_2 eq	293 294	307 369	412 032	546 998	591 255	**2 150 948**

Emission reductions after the first crediting period (2013-2026):

Year	Emission reductions due to organic waste decay at landfill after the first crediting period, t CO_2 eq
2013	628 037
2014	658 606
2015	684 013
2016	705 129
2017	722 678
2018	737 263
2019	749 385
2020	759 459
2021	767 832
2022	774 791
2023	780 574
2024	785 381
2025	789 376
2026	792 696
Estimated emission reductions after the first crediting period, t CO_2 eq	**10 335 220**

The estimates referred to above are given:

(a) On a periodical basis;

(b) From 01/01/2008 to 31/12/2026, covering the whole crediting period;

(c) On a source-by-source basis;

(d) For each GHG gas, which is CO_2;

(e) In tonnes of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formulas used for calculating the estimates referred above are consistent throughout the PDD.

For calculating the estimates referred to above, 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, as appropriate.

Data sources used for calculating the estimates referred to above are clearly identified, reliable and transparent.

Emission factors were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The estimates referred to above 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.

The PDD includes an illustrative ex ante emissions calculation.

No outstanding issues were raised concerning the emission reductions assessment.

4.10 Environmental impacts (48)

According to the legislation of Ukraine, a detailed EIA for this project is not needed.

Implementation of the project activity also has a positive social impact through removing of the concentrated odour beetroot pulp storage facilities and improving working conditions at the sugar plant.

Since the project does not lead to negative impacts on the environment, transboundary impacts that occur in any other country, and are caused by implementation of this project, which is physically located entirely within Ukraine, are absent.

The identified areas of concern as to the environmental impacts, project participants response and BVC's conclusion are described in Appendix A (refer to CAR 18).

4.11 Stakeholder consultation (49)

Stakeholder consultation was not undertaken as it is not required by the host party.

4.12 Determination regarding small scale projects (50-57)

Not applicable

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable

4.14 Determination regarding programmes of activities (65-73)

Not applicable

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

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

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the “Introduction of sugar production organic waste management system at the “Podilski sugar mills” Ltd” Project in Vinnytsia Region of Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases:

i) a desk review of the project design and the baseline and monitoring plan;
ii) follow-up interviews with project stakeholders;
iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

Project participants used the latest Tool for demonstration and assessment of the additionality. In line with this tool, the PDD provides barrier analysis and common practice analysis, to determine that the project activity itself is not the 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 determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 2.0 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 2.0) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies

and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

7 REFERENCES

Category 1 Documents:
Documents provided by «MT-Invest Carbon» LLC that relate directly to the GHG components of the project.

/1/ Project Design Document “Introduction of sugar production organic waste management system at the “Podilski sugar mills” Ltd” version 01 dated 28/09/2012
/2/ Project Design Document “Introduction of sugar production organic waste management system at the “Podilski sugar mills” Ltd” version 02 dated 28/11/2012
/3/ GHG emission reductions calculation spreadsheet “Kryazh_ER.xls”
/4/ Letter of Endorsement #3663/23/7 issued by the State Environmental Investment Agency dated 28/11/2012

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

“Kapustianskyi sugar" LLC

/1/ Resolution # 263/05 of 2005 on the disposal of waste in 2006
′2/ The limit on the generation and disposal of waste in 2006
′3/ Resolution # 162/06 of 2006 on the disposal of waste in 2007.
′4/ The limit on the generation and disposal of waste in 2007 Dated 08/11/2006
′5/ Resolution # 643/09 dated 02/07/2010, on the disposal of waste in 2010
′6/ The limit on the generation and disposal of waste in 2010 dated 27/10/2010
′7/ Resolution # 252/10 dated 02/07/2010, on the disposal of waste in 2011
′8/ Resolution # 645/11 of 12/12/2011, on the disposal of waste in 2012
′9/ The limit on the generation and disposal of waste in 2011 dated 27/10/2010
′10/ Report on air protection in 2011
′11/ Report on air protection in 2010
′12/ Documents substantiating emissions to permit the emission of pollutants into the air from stationary sources for business unit "Kapustiansky sugar" Ltd «Podilski sugar mills» from 2010

“Moivskiy Sugar” LLC

′13/ Resolution № 524984801-3 on emissions of pollutants into the air from stationary sources Ltd. "Podilski sugar mills" from 01/11/10 till 01/11/15 dated 01/11/2010

/14/ Resolution № 524984801-1 on emissions of pollutants into the air from stationary sources Ltd. "Moyivskyi sugar" from 19/10/07 till 19/10/12 dated 19/10/2007
/15/ Resolution number 278/10 dated 06/07/2010, on the disposal of waste in 2011.
/16/ Resolution number 647/09 dated 06/07/2010, on the disposal of waste in 2010
/17/ The limit on the generation and disposal of waste in 2011 dated 27/10/2010
/18/ The limit on the generation and disposal of waste in 2010 dated 27/10/2009
/19/ "Podilski sugar mills" JV "Moyivskyi sugar" These weights pulp.
/20/ Order #23 "On the establishment of a working group on improving the practice of recycling organic waste" dated 13/03/2005

“Sokolivsk Sugar” LLC

/21/ Report on inventory of emissions of pollutants into the air from stationary sources structural unit "Sokolivsky sugar" Ltd "Podilski sugar mills" from 2010
/22/ Documents substantiating emissions to permit the emission of pollutants into the air from stationary sources for business unit "Sokolivsk sugar" Ltd «Podilski sugar mills» dated 2010
/23/ Resolution № 521986201-3 on emissions of pollutants into the air from stationary sources Ltd «Podilski sugar mills» from 01/11/10 till 01/11/15 dated 01/11/2010
/24/ Report on air protection in 2009
/25/ Report on air protection in 2010
/26/ Report on air protection in 2011
/27/ Resolution number 253/10 dated 02/07/2010, on the disposal of waste in 2011
/28/ Resolution number 158/09 dated 02/10/2009, on the disposal of waste in 2010
/29/ Resolution number 612/08 dated 12.10.2009 for disposal in 2009
/30/ Ltd «Podilski sugar mills» JV "Sokolivsk sugar" These weights pulp
/31/ Order № 124-p "On the establishment of a working group on improving the practice of recycling organic waste" dated 12.03.2005

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

	Podilski Sugar Mills – Sokolivsk Sugar	
/1/	Trach Sergiy	- Director
/2/	Lavrik Vladimir	- Chief Engineer
/3/	Severenchuk Anna	- Chief Technologist
/4/	Bondar Grygoriy	- Chief Power Engineer
	Podilski Sugar Mills – Kapustyanskiy Sugar	
/5/	Mizernyuk Oleksiy	- Director
/6/	Svyaschuk Oleksander	- Chief Engineer
/7/	Demkovich Valentina	- Chief Technologist
/8/	Ivanyuk Ivan	- Chief Power Engineer
	Podilski Sugar Mills – Moivskiy Sugar	
/9/	Loboda Oleksander	- Director
/10/	Sandul Mykhailo	- Specialist of Public Relations
/11/	Gordyak Oleksander	- Chief Technologist
	Podilski Sugar Mills	
/12/	Selitbovskyi Vladislav	- Head of Development the sugar industry department
/13/	Yuzkov Roman	– Assistant Head of Development the sugar industry department

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APPENDIX A: DETERMINATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	"Introduction of sugar production organic waste management system at the "Podilski sugar mills" Ltd"	OK	OK
-	Is the sectoral scope to which the project pertains presented?	13. Waste handling and disposal	OK	OK
-	Is the current version number of the document presented?	PDD version 2.0	OK	OK
-	Is the date when the document was completed presented?	Date of completion: 28/11/2012	OK	OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	Corrective Action Request 01 Please add brief description of the baseline scenario. Corrective Action Request 02 Please add technical summery of the project scenario. Corrective Action Request 03 Please use in the PDD the font prescribed by the JI PDD Form, version 01.	CAR 01 CAR 02 CAR 03	OK
-	Is the history of the project (incl. its JI component) briefly summarized?	Corrective Action Request 04 Please specify the starting date of the project and provide the justifying document to the AIE.	CAR 04	OK
Project participants				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Are project participants and Party(ies) involved in the project listed?	The list of the parties involved and project participants is provided in Section A.3 of the PDD. Parties involved: Ukraine (Host country). The second Party: The Netherlands. Corrective Action Request 05 The Table A.3 of the PDD has to comply with the format envisaged by the Guidelines for Users of the JI PDD Form, version 04.	CAR 05	OK
-	Is the data of the project participants presented in tabular format?	Yes, the data of the project participants is presented in tabular format.	OK	OK
-	Is contact information provided in Annex 1 of the PDD?	Yes, the contact information is provided in Annex 1 of the PDD. Corrective Action Request 06 Old information concerning KVED types of economic activities is presented in Annex 1. Please update the information as per valid certificate.	CAR 06	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Yes.	OK	OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Vinnytsia Region	OK	OK
-	City/Town/Community etc.	Sokolivka Village, Kryzhopil District Kapustiany Village, Trostianets District Moivka Village, Chernivetskyi District Corrective Action Request 07 The Section A.4.1 has to comply with the format envisaged by the Guidelines for Users of the JI PDD Form, version 04.	CAR 07	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	The geographic coordinates of the site are: SU "Sokolivsk sugar": 48°26'31.00"N 28°59'32.00"E SU "Kapustianskiy sugar": 48°31'57.00"N 29°1'43.00"E SU "Moivskiy sugar": 48°27'48.17"N 28°13'23.35"E	OK	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	The summary of activities to be implemented within the project boundary is listed in the section A.4.2 of the PDD.	OK	OK
Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	Yes, it is stated in the PDD how anthropogenic GHG emission reductions are to be achieved by the proposed project.	OK	OK
-	Is it provided the estimation of emission reductions over the crediting period?	Corrective Action Request 08: Please provide the reference on the relevant Excel spreadsheet with calculations.	CAR 08	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	Yes, the estimated annual reduction for the proposed crediting period is provided in tCO_2e. Corrective Action Request 09 Please provide in the Section A.4.3.1 the total amount of emission reductions estimated for the crediting period.	CAR 09	OK
-	Are the data from questions above presented in tabular format?	Yes.	OK	OK
Estimated amount of emission reductions over the crediting period				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Is the length of the crediting period Indicated?	Yes, the duration of the crediting period is 19 years.	OK	OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	Yes, the estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent are provided in section A.4.3.1 of the PDD.	OK	OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	Corrective Action Request 10 The names of the DFP (of the Parties involved) authorizing the project have to be indicated in the Section A.5. Corrective Action Request 11 There are no Letters of Approval from the Parties involved.	CAR 10 CAR 11	Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	Yes, Ukraine is the host Party.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Refer to CAR 11 above.	Pending	Pending
20	Are all the written project approvals by Parties involved unconditional?	Refer to CAR 11 above.	Pending	Pending
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	Refer to CAR 11 above.	Pending	Pending
Baseline setting				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The PDD describes the JI specific approach which is used for setting the baseline. Corrective Action Request 12: The PDD doesn't explicitly state the approach chosen for setting the baseline. Please correct.	CAR 12	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	Yes, the PDD provides a detailed theoretical description of the project in a complete and transparent manner.	OK	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on	The PDD provides justification that the baseline is established by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	criteria for baseline setting and monitoring", as appropriate?			
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	"Combined tool to identify the baseline scenario and demonstrate additionality" (version 04.0.0) was used for baseline setting and demonstration of additionality. *Guidelines for objective demonstration and assessment of barriers* (version 01) were also taken into account.	OK	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	Not applicable	N/A	N/A
Approved CDM methodology approach only – Not Applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-	The Section B.1 of the PDD provides the analysis of the project additionality showing that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions. The analysis was performed based on the "Combined tool to identify the baseline scenario and demonstrate additionality" (version 04.0.0) approved by the CDM Executive Board and fully applicable for JI projects.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	month grace period) or any other method for proving additionality approved by the CDM Executive Board".			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The barrier analysis and common practice analysis are used for the demonstration of project activity additionality.	OK	OK
29 (b)	Are additionality proofs provided?	Yes, the additionality proofs are provided in the Section B.1 of the PDD.	OK	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	Corrective Action Request 13: The PDD doesn't indicate how registration of the project as JI activity will aid to overcoming the barriers.	CAR 13	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	All explanations, descriptions and analyses were made in accordance with "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 04.0.0).	OK	OK
Approved CDM methodology approach only - Not applicable				
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	Corrective Action Request 14 The defined monitoring plan includes project GHG emissions connected with organic wastes utilization. This parameter, though, is absent in the Table 7 of the PDD. Please make amendments.	CAR 14	OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Yes, the project boundary is defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above.	OK	OK
32 (c)	Are the delineation of the project boundary and	Yes, the project boundary is provided in the Figure 3.1 and	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	Figure 3.2 and in tabular format in the Table 4.		
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	Please refer to the CAR 14 above.	OK	OK
Approved CDM methodology approach only				
33	Is the project boundary defined in accordance with the approved CDM methodology?	Not applicable	N/A	N/A
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	12/03/2005 is the starting date of the project	OK	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes.	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	20 years (240 months). Clarification Request 01: Please specify the expected operational lifetime of the project, also provide the documented evidence of equipment operation.	CL 01	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	Corrective Action Request 15 Please indicate the total duration of the crediting period Clarification Request 02 Please clarify the date of “the end of the crediting period” in the Section C.3. Clarification Request 03: Please indicate in section C.3 length of the crediting period after the first commitment period.	CAR 15 CL 02 CL 03	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	Yes, the starting date of the crediting period is after the date of the first emission reductions generated by the project.	OK	OK
34 (d)	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?	Clarification Request 04: Please specify 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.	CL 04	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	Clarification Request 05: Please specify that if the crediting period extends beyond 2012, such extension is subject to the host Party approval.	CL 05	OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	JI specific approach was used.	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	Corrective Action Request 16: Please provide the information on key characteristics and their monitoring during the project activity in tabular format.	CAR 16	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	Yes, the monitoring plan specifies the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions to be monitored.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	Corrective Action Request 17: There is no reference on source and page for some parameters (e. g. *f* - share of methane being captured and utilized at the disposal site) used for the ERUs calculation. Please correct.	CAR 17	OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	Yes. The monitoring plan clearly indicates how the values are to be selected and justified.	OK	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	Corrective Action Request 18: Please indicate why the data from IPCC 2006 instead of National Inventory are used.	CAR 18	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Corrective Action Request 19: Please indicate in the PDD the procedure to be followed if expected data are unavailable.	CAR 19	OK
36 (b) (iv)	Are International System Unit (SI units) used?	Yes.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	Yes, the amount of sugar production organic waste (pulp), that was not sold within period x and was transported to the disposal site is used in calculations of baseline scenario and are obtained through monitoring. Clarification Request 06: Please provide information on how to obtain data "Number sugar production waste (pulp) that have not been	CL 06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		implemented by the period x and hit the ground"		
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	Yes, the use of parameters, coefficients, variables, etc. Is consistent between the baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan is developed in accordance with the "Guidance on criteria for baseline setting and monitoring".	OK	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	Yes, all the relevant parameters are described (refer to the Section D.1 of the PDD).	OK	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The Table in the Section D.1.1 of the PDD defines the frequency of monitoring and data sources for all parameters and data to be monitored.	OK	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of	The PDD describes all algorithms and formulae used for the calculation of baseline and project emissions.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	emission reductions from the project, leakage, as appropriate?			
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Yes, the underlying rationale for the algorithms/formulae is explained.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Yes, consistent variables, equation formats, subscripts etc. are used. Corrective Action Request 20 Please indicate data sources for the parameters used in calculations per the provided formulas.	CAR 20	OK
36 (f) (iii)	Are all equations numbered?	Yes. Corrective Action Request 21 Please make amendments in the numbering of formulas, making it consistent.	CAR 21	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes.	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes, the documents analysis justifies the conservativeness of the algorithms/procedures .	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	The level of data uncertainty is provided in the quality control and assurance table (refer to the section D.2 of the PDD). Taking into account that almost all data and parameters are based on the statistical data and calibrated measuring equipment recordings of a certain class of accuracy and tested by the official energy resources supplier and state bodies, their level of uncertainty is considered as low.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	Yes.	OK	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	No, all the algorithms and formulae are explicitly explained.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	**Clarification Request 07:** Please provide information about what used calculation procedure parameter «P_x - sugar production waste (pulp) that have not been realized and hit the ground" is consistent with standard technical procedures used in the production of sugar	CL 07	OK
36 (f) (vii)	Are references provided as necessary?	Please refer to CAR 17.	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Yes, implicit and explicit key assumptions are explained in a transparent manner.	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	Used assumptions and procedures do not have any significant uncertainty associated with them.	OK	OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	Level of uncertainty is indicated as low.	OK	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	All the monitoring plans used in the proposed monitoring plan are the common practice for Ukraine on power metering.	OK	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Refer to CAR 10.	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate,	The quality assurance and control procedures for the monitoring process are described in the Section D.2 of the PDD.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?			
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Yes, the monitoring plan in the Section D.3 of the PDD clearly identifies the responsibilities and authorities regarding the monitoring activities.	OK	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Corrective Action Request 22: The Section D.1.5 of the PDD requires from the project participants to indicate the information on data collection and archivation concerning the environmental impact and to provide references on the relevant Host Party regulations. Please make the relevant corrections.	CAR 22	OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Yes, all the parameters are provided in Sections D.1.1.1 and D.1.1.3 of the PDD.	OK	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Refer to CAR 12.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	No elements or combinations of approved CDM methodologies or methodological tools are used in the monitoring plan.	OK	OK
Approved CDM methodology approach only – Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?	No overlapping of monitoring periods is envisaged during the crediting period.	OK	OK
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	No leakages are envisaged by the proposed project activity.	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	No leakages are envisaged by the proposed project activity.	OK	OK
Approved CDM methodology approach only – Not applicable				
Estimation of emission reductions or enhancements of net removals				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Baseline and project scenario emissions were assessed.	OK	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	The PDD provides ex ante estimates of the project and baseline scenarios, and also emissions reduction. The estimated results are provided in the Section E of the PDD, and also in the Excel spreadsheets.	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	Not applicable	N/A	N/A
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision	Emission reductions calculation provided in the PDD of the proposed project complies with all the requirements envisaged by the DVM section 45.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Yes, the PDD includes an illustrative ex ante emissions calculation.	OK	OK
Approved CDM methodology approach only – Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	Corrective Action Request 23: The information on transboundary impacts of the project provided in the PDD has to be transparent and justified.	CAR 23	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	All activities under the project do not envisage any negative impacts on the environment; therefore no EIA was specifically developed for this project.	OK	OK
Environmental impacts				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	The procedures of Ukraine don't require any stakeholder consultation concerning the proposed project.	OK	OK
Determination regarding small-scale projects (additional elements for assessment) – Not applicable				
Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment) – Not applicable				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
JI specific approach only– Not applicable				
Approved CDM methodology approach only – Not applicable				
Determination regarding programmes of activities (additional/alternative elements for assessment) Not applicable				

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
Corrective Action Request 01 Please add brief description of the baseline scenario.	-	The brief description of the baseline scenario is provided in the Section A.2. of the PDD version 2.0.	The issue is closed.
Corrective Action Request 02 Please add technical summery of the project scenario.	-	The technical summery of the project scenario is provided in the Section A.2. of the PDD version 2.0.	The issue is closed.
Corrective Action Request 03 Please use in the PDD the font prescribed by the JI PDD Form, version 01.	-	The right font size (11) is used in the PDD version 2.0.	The issue is closed.

Corrective Action Request 04 Please specify the starting date of the project and provide the justifying document to the AIE.	-	12/03/2005 is the starting date of the project. This is the issuance date of the Order on Creation of the Working Group on Technical Modernization and Advancement of Waste Utilization Practices at «Podilski sugar mills" Ltd" This document was provided to AIE during correspondence. Similar information was added in the PDD version 2.0. See section C.1 the PDD.	The issue is closed.
Corrective Action Request 05 The Table A.3 of the PDD has to comply with the format envisaged by the Guidelines for Users of the JI PDD Form, version 04.	-	The table A.3 of the PDD version 2.0 was provided in the relevant format.	The issue is closed.
Corrective Action Request 06 Old information concerning KVED types of economic activities is presented in Annex 1. Please update the information as per valid certificate.	-	The require information was corrected in the PDD version 2.0.	The issue is closed.
Corrective Action Request 07 The Section A.4.1 has to comply with the format envisaged by the Guidelines for Users of the JI PDD Form, version 04.	-	The Section A.4.1 was correspondingly amended in the PDD version 2.0.	The issue is closed.
Corrective Action Request 08 Please provide the reference on the relevant Excel spreadsheet with calculations.	-	The reference on Excel spreadsheet with calculations was added to the Section A.4.3.1 and the Section E. Please refer to the updated PDD version 2.0	The issue is closed.

Corrective Action Request 09 Please provide in the Section A.4.3.1 the total amount of emission reductions estimated for the crediting period.	-	The PDD version 2.0 was amended correspondingly.	The issue is closed.
Corrective Action Request 10 The names of the DFP (of the Parties involved) authorizing the project have to be indicated in the Section A.5.	19	The information will be provided later.	Pending
Corrective Action Request 11 There are no Letters of Approval from the Parties involved.	19	As per the procedures of the Parties involved the relevant Letters of Approval will be provided after issuance of the positive determination report.	Pending
Corrective Action Request 12 The PDD doesn't explicitly state the approach chosen for setting the baseline. Please correct.	22	Project participants chose an approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI specific approach). The relevant information was added to the Section B.1 of the PDD version 2.0.	The issue is closed.

Corrective Action Request 13: The PDD doesn't indicate how registration of the project as JI activity will aid to overcoming the barriers.	29 (c)	As demonstrated in the Section B.1, the main barrier that prevents the project implementation is financial. As a result of selling greenhouse gas emission reductions expected revenues of about 1.9 million Euros or 19 million UAH, representing about 45% required for the project funds that are weighty argument when making decision on the project. Thus, participation in joint implementation mechanism eliminates barriers for the project. Such information was indicated in the Section B.2 of the PDD version 2.0.	The issue is closed.
Corrective Action Request 14 Please provide the reference on Guidance mentioned in the Section B.3	32 (a)	The reference on Guidance mentioned in the Section B.3 was provided in the PDD version 2.0	The issue is closed.
Clarification Request 01 Please specify the expected operational lifetime of the project.	34 (b)	The information was provided in the PDD version 2.0, Section C.3.	The issue is closed.
Corrective Action Request 15 Please indicate the total length of the crediting period.	34 (c)	The total length of the crediting period is 19 years or 228 months (01/01/2008-31/12/2026). The relevant information was provided in the Section C.3 of the PDD version 2.0.	The issue is closed.
Clarification Request 02 Please clarify the date of "the end of the crediting period" in the Section C.3.	34 (c)	The date of the end of crediting period is meant here. The relevant information was provided in the Section C.3 of the PDD version 2.0.	The issue is closed.

Clarification Request 03 Please clarify the date (3 years or 36 months (01/08/2005-31/12/2007) indicated in the phrase "the Length of the period before the first crediting period" in Section C.3	34 (c)	The information was provided mistakenly. The PDD version 2.0 now contains appropriate information.	The issue is closed.
Clarification Request 04 Please specify 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.	34 (d)	The relevant information was provided in the Section C.3 of the PDD version 2.0.	The issue is closed.
Clarification Request 05 Please specify that if the crediting period extends beyond 2012, such extension is subject to the host Party approval.	34 (d)	Status of emission reductions or enhancements of removals generated by JI project after the first commitment period under the Kyoto Protocol (extension of the crediting period after 2012) may be determined in accordance with relevant arrangements and procedures under the UNFCCC and host Party. The relevant information was provided in the Section C.3 of the PDD version 2.0.	The issue is closed.
Corrective Action Request 16 Please provide the information on key characteristics and their monitoring during the project activity in tabular format.	36 (a)	The information on key characteristics and their monitoring during the project activity was provided in tabular format in the PDD version 2.0.	The issue is closed.

Corrective Action Request 17 There is no reference on source and page for some parameters (e. g. f - share of methane being captured and utilized at the disposal site) used for the ERUs calculation. Please correct.	36 (b)	In this case, the source for this parameter is the data provided by the project owner. No technologies or units for landfill gas (which contains methane) capture were used at the landfill for pulp utilization Reference on project owner data was added to the PDD version 2.0.	The issue is closed.
Corrective Action Request 18: Please indicate why the data from IPCC 2006 instead of National Inventory are used.	36 (b) (ii)	Indeed, at the moment of the PDD design, the National Inventory Report contained the values of some variables used for calculations in this project (DOC and MCF parameters). The reasons of using the data from IPCC instead of National Inventory are the following: 1. Data indicated in the National Inventory is the average data for all solid waste landfills assessed based on the average morphological content of solid wastes located at the disposal site. IPCC data is used for the project, because they fully match the type of the project wastes – pulp. 2. IPCC data is reliable and conservative data source. Their usage doesn't lead to overestimation of the project ER calculation results which is justified by the huge amount of registered JI projects.	The issue is closed.

Corrective Action Request 19 Please indicate in the PDD the procedure to be followed if expected data are unavailable.	36 (b) (iii)	Project implementation is under the control of special appointed team which is responsible for collection, archivation and storage of documentation relevant to the project. All information is stored on hard and electronic copies. Thus it makes the possibility of any data from any sources absence very low.	The issue is closed.
Clarification request 06 Please provide the information on identifying the *amount of sugar production organic waste, that was not sold and was transported to the disposal site*.	36 (b) (v)	The Section D.2 of the PDD version 2.0 was appropriately modified.	The issue is closed.
Corrective Action Request 20 Please indicate data sources for the parameters used in calculations per the provided formulas.	36 (f) (ii)	Data sources were indicated and specified in the PDD version 2.0.	The issue is closed.
Corrective Action Request 21 Please make amendments in the numbering of formulas, making it consistent.	36 (f) (iii)	The numbering of formulas was corrected in the PDD version 2.0.	The issue is closed.
Clarification request 07 Please provide the information that the calculation procedure of *Px - the amount of sugar production organic waste, that was not sold and was transported to the disposal site* complies with the standard technical procedures used in the sugar production industry.	36 (f) (vii)	The Section D.2 of the PDD version 2.0 was appropriately modified. Yes, the calculation procedure of *Px - the amount of sugar production organic waste, that was not sold and was transported to the disposal site* complies with the standard technical procedures used in the sugar production industry.	The issue is closed.

Corrective Action Request 22 The Section D.1.5 of the PDD requires from the project participants to indicate the information on data collection and archivation concerning the environmental impact and to provide references on the relevant Host Party regulations. Please make the relevant corrections.	36 (k)	There is no negative environmental impact as the result of project implementation. It is not applicable as per the regulations of the host Party. The relevant information was added to the PDD version 2.0.	The issue is closed.
Corrective Action Request 23 The information on transboundary impacts of the project provided in the PDD has to be transparent and justified.	48 (a)	Since the project does not lead to negative impacts on the environment, transboundary impacts that occur in any other country, and are caused by implementation of this project, which is physically located entirely within Ukraine, are absent. The relevant information was added to the PDD version 2.0.	The issue is closed.