



DETERMINATION REPORT CEP CARBON EMISSIONS PARTNERS S.A.

DETERMINATION OF THE
**Reduction of CO₂ emissions by systematic
utilization of No-till technology in agriculture at
LLC“Ahrodar LTD”**

REPORT NO. UKRAINE-DET/0720/2012

REVISION NO. 02

BUREAU VERITAS CERTIFICATION



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Date of first issue 19/10/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: CEP Carbon Emissions Partners S.A.	Client ref.: Fabian Knodel

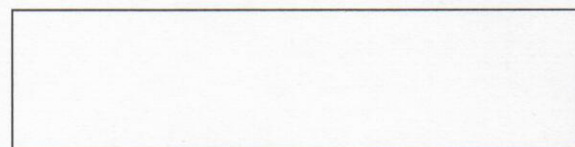
Summary:
 Bureau Veritas Certification has made the determination of the "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD" project of CEP CARBON EMISSIONS PARTNERS S.A., located in Oleksandriiyskiy and Onufriivskiy districts of Kirovohrad region, Ukraine, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

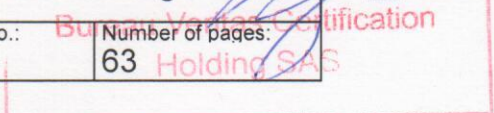
The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

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

Report No.: UKRAINE-DET/0720/2012	Subject Group: JI
Project title: Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD"	
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Work approved by: Ivan Sokolov – Operational Manager	
Date of this revision: 22/10/2012	Rev. No.: 02
Number of pages: 63	



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1 INTRODUCTION

CEP CARBON EMISSIONS PARTNERS S.A. has commissioned Bureau Veritas Certification to determine its JI project “Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC“Ahrodar LTD”” (hereafter called “the project”) located in Oleksandriyskiy and Onufriivskiy districts of Kirovohrad region, 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 to 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 and obligatory to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions units (ERUs).

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

1.2 Scope

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

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

1.3 Determination team

The determination team consists of the following personnel:

Oleh Skoblyk

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier



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Kateryna Zinevych
Bureau Veritas Certification Team Member, Climate Change Lead Verifier

Denys Pishchalov
Bureau Veritas Certification Team Member, Financial Specialist

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

2 METHODOLOGY

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

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

The determination protocol serves the following purposes:

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

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

2.1 Review of Documents

The Project Design Document (PDD) was submitted by CEP CARBON EMISSIONS PARTNERS S.A. together with such additional documents related to the project design and baseline as: host country Law, Guidelines for users of the joint implementation project design document form and Guidance on criteria for baseline setting and monitoring, the Kyoto Protocol, Clarifications on Determination Requirements to be checked by an Accredited Independent Entity.

To address Bureau Veritas Certification corrective action, forward action and clarification requests, CEP CARBON EMISSIONS PARTNERS S.A. revised



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the PDD version 01 of 10/09/2012 and resubmitted it on 19/10/2012 as version 02.

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

2.2 Follow-up Interviews

On 19/10/2012 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 “Ahrodar LTD” LLC and CEP Carbon Emissions Partners S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview Topics

Interviewed organization	Interview topics
“Ahrodar LTD” LLC	<ul style="list-style-type: none"> ➤ Project history ➤ Project approach ➤ Project boundary ➤ Implementation schedule ➤ Organizational Structure ➤ Responsibilities and obligations ➤ Personnel training ➤ Quality control procedures and technologies ➤ Modernization / installation of equipment (records) ➤ Control over metering equipment ➤ System of measurements record-keeping, database ➤ Technical documentation ➤ Monitoring Plan and procedures ➤ Permits and licenses ➤ Environmental Impact Assessment ➤ Stakeholders’ response
CEP Carbon Emissions Partners S.A.	<ul style="list-style-type: none"> ➤ Baseline methodology ➤ Monitoring plan ➤ Additionality proofs ➤ Calculations of emission reductions ➤ Project design ➤ Legal issues relating to the project ➤ Environmental impacts ➤ Approval by the host party

2.3 Resolution of Clarification and Corrective Action Requests

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



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Corrective Action Request (CAR) is issued, where:

- (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- (b) The JI requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

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

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

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

3 PROJECT DESCRIPTION

The purpose of the Joint Implementation (JI) Project is to reduce anthropogenic greenhouse gas (GHG) emissions resulting from agricultural activities by changing the agricultural land management system, namely replacement of traditional soil tillage in agriculture with No-till technology (also referred to as direct sowing technology). Emissions are reduced due to lower carbon dioxide emissions from farmland by lower (almost zero) topsoil disturbance by tillage in the course of crops growing.

“Ahrodar LTD” LLC, established in 2000, is engaged in agricultural activity in the eastern part of Ukraine. The company’s primary activity is growing, processing, storage and sale of agricultural products. The company is also involved in milk farming activities and also provides services on grain and grain legumes harvesting.

Prior to the project, “Ahrodar LTD” LLC used traditional land cultivation system. This system involves tillage that provides for turning over of topsoil to create homogeneous and mellow seedbed. The basic operation causing CO₂ emissions is ploughing during which crop residues are buried in the soil and weeds are removed.



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In 2006, the Farm started to grow crops applying No-till technology. This technology differs from the traditional technology with fewer technological procedures, which prevents the topsoil from a major disturbance, as well as with the way to utilize plant residues. The number of technological procedures of plant growing and harvesting is almost the same in the two technologies, the main difference being that the traditional technology separates fertilizer application, land ploughing, cultivation, furrowing and seeding (multiple passage of the machinery across the field) in contrast to direct sowing with simultaneous fertilizer application (single passage of the machinery).

In 2005, the Farm started purchases of necessary agricultural equipment for direct sowing farming as part of the Joint Implementation Project. The equipment package included:

- seed drills for direct seeding;
- special tractors;
- herbicide sprayers;
- seed and fertilizer drill systems;
- harvesters, etc.

No-till technology provides for the ground surface covered with a layer of mulch, i.e. residues of purposely shredded plants. The topsoil is not disturbed creating a protective layer along with the plant residues, which prevents water and wind erosion of soil and ensures much better water retention; in addition, direct sowing nullifies GHG emissions into the atmosphere.

Additional benefits of the project (apart from those indicated in the purpose of the project):

- a) lower consumption of chemical fertilizers;
- b) lower impact of weather conditions on yields;
- c) lower wind and water soil erosion, better soil fertility.

Historical details of the project

29/08/2005 - Purchase of equipment for No-till farming.

28/08/2012 – preparation and submission of the project idea note to support anthropogenic GHG emission reductions to the State Environmental Investment Agency of Ukraine.

18/10/2012 - the State Environmental Investment Agency of Ukraine issued the Letter of Endorsement No.3086/23/7 for the JI project "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD".



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The determination protocol of the project contains CARs and CLs for PDD versions 01 and 02.

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 32 Corrective Action Requests and 5 Clarification Requests.

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

4.1 Project approval by Parties involved (19-20)

The project "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD" has already obtained endorsement from the government of Ukraine, namely a Letter of Endorsement No.1969/23/7 issued by the State Environmental Investment Agency of Ukraine dated 25/07/2012.

Bureau Veritas Certification received this letter from the project participants and does not doubt its authenticity.

Upon completion of the Determination Report the project design document will be submitted to the State Environmental Investment Agency of Ukraine for receiving a Letter of Approval.

As the project has no approval by the Host Party, CAR 15 remains pending and will be closed after report finalizing (see Appendix A).

The identified areas of concern as to the project approval, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 15).

4.2 Authorization of project participants by Parties involved (21)

The participation for each of the legal entities listed as project participants in the PDD will be authorized by the Parties involved, through the written Letters of Approval (from the government of Ukraine as the



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host party and from the other party involved – country-participant). See CAR 15.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with Appendix B of the JI Guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline (in accordance with paragraph 11 of the Guidance on criteria for baseline setting and monitoring (Version 03)).

A JI-specific approach was used for baseline setting, because for this project activity there is no approved methodology for baseline setting and monitoring at the moment.

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 the current situation, without the JI project implementation.
 - b. Proposed project activity without the use of the JI mechanism.
 - c. Partial project activities (some of the project activities are implemented) without the use of the Joint Implementation Mechanism.

- (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. Agriculture is one of the leading industries in Ukraine; agriculture in general and agro-industrial complex (AIC) in particular are a political factor of sovereignty. Ukraine is deemed to be one of the most agrarian states of the world; its foreign trade turnover of agricultural products amounted to USD 19.8 billion in 2011. On January 12, 2012, National Scientific Centre "Institute of Agricultural Policy" under the direction of the National Academy of Agricultural Sciences of Ukraine developed "Strategic guidelines for the development of agriculture of Ukraine till 2020". According to this strategy further development of the industry

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requires major transformation, one of which is the implementation of No-till technologies. These technologies are capable of ensuring the competitiveness of agricultural production and food security through the decrease of production costs by introducing environment-friendly, energy- and resource-saving technologies.

- b. In the framework of the existing market model for the growing of AIC products, the effective competition among the producers can't be achieved; this market model can't also provide for the competitive pricing, which would stimulate the producers to improve efficiency and increase investment in the sector. Existing market mechanisms and targeted administrative measures don't provide for the necessary modernization and upgrading of the existing AIC product growing systems. The situation becomes particularly critical given the growth of the need for food products both at the national level and worldwide; the lack of these products represents a threat to safe development of global economy and a human being.
- c. Existing prices for AIC product growing are regulated by the state and do not include depreciation and investment needs of producers. This causes permanent shortage of funding and impossibility to conduct timely overhauls, ensure stable operation of equipment and invest into modernization and development of infrastructure.
- d. The current Ukrainian system of formation of prices for AIC products does not include an investment component for the development of agriculture. According to the Law "On Agriculture" "Ahroodar LTD" LLC is neither obliged nor unmotivated to carry out modernization of its own production facilities. Meanwhile, state investment programs in most cases are targeted at administrative and organizational implementations.
- e. State support in the agricultural sector is provided in amounts of funds provided by the law of Ukraine on State Budget of Ukraine for the relevant year.
- f. The project scenario requires attracting significant additional funds. Such investment is characterized by a significant payback period and high investment risks, that is why it is not attractive for investors.
- g. Ukraine has no experience in implementing similar JI projects in agricultural sector. The project implementation by means of selling emission reduction units will give Ukraine an opportunity to gain useful experience of application of No-till technology.

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



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The methods of calculation used to determine the ex-ante and ex-post baseline emissions, are sufficiently described in Sections E and D of the PDD, respectively.

The identified areas of concern as to the baseline, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 16 - CAR 22).

4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used in accordance with the JI specific approach, defined pursuant to paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

The PDD provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above.

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

Additionality proofs are provided.

Three plausible and realistic alternative scenarios of the project were identified:

- Alternative 1.1: Continuation of the current situation, without the JI project implementation.
- Alternative 1.2: Proposed project activity without the use of the JI mechanism.
- Alternative 1.3: Partial implementation of the project (only some of project activities implemented) without the use of the JI mechanism.

and the mandatory compliance of the scenarios with the legislation and legal acts was demonstrated.

According to the "Tool for the demonstration and assessment of additionality" (Version 06.0.0) simple cost analysis and common practice analysis were used in the PDD to justify additionality of the project.

Thus, the overall conclusion is that the project activity meets the criteria of additionality, is not a baseline scenario and is additional.

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

The identified areas of concern as to the additionality, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 23 – CAR 27; CL 04).



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4.5 Project boundary (32-33)

The project boundary, which is defined in the PDD and in accordance with the specific approach, delineated by the physical, geographical location of farmlands with the total area of 7 543.5163 ha where “Ahrodar LTD” LLC grows crop products, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs), which are:

- (i) Under the control of the project participants, such as:
 - CO₂ emissions due to mechanical treatment that involves tillage in the process of crop growing.
- (ii) Reasonably attributable to the project, such as:
 - CO₂ emissions due to mechanical soil treatment (No-till technology) in the process of crop growing. Such emissions are absent;
- (iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO₂ equivalent, whichever is lower.

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

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which “Ahrodar LTD” LLC started purchasing No-till farming equipment, which is 29/08/2006, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 20 years or 240 months – from January 01, 2006 to December 31, 2025.

The PDD states the length of the crediting period in years and months, which is 20 years or 240 months, and its starting date of the crediting period is 01/01/2006, which is the date the first emission reductions are expected to be generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2006 and does not extend beyond the operational lifetime of the project.



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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 Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 28).

4.7 Monitoring plan (35-39)

The PDD in the section relating to the monitoring plan clearly states that a specific JI approach was chosen.

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, such as reporting forms, operational structure and management structure of the enterprise that will be applied when implementing the monitoring plan.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as: humus content in the soil of field cultivated using traditional tillage; soil density at field cultivated using traditional tillage; depth of soil layer disturbance at field when conventional tillage is applied; area of field cultivated using No-till technology; humus content in the soil of field cultivated using No-till technology.

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC, as appropriate, among which: baseline emissions (BE_y), project emissions (PE_y).

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

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

$k_{b,i,y}$	humus content in the soil of field i cultivated using traditional tillage in period y , %
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$\rho_{i,y}$	soil density in field i , cultivated using traditional tillage in period y , t/m ³ ;
$h_{b,i}$	depth of soil layer disturbance at field i when conventional tillage is applied, m

b) Data and parameters that are not controlled during the crediting period but are identified only once (and thus remain fixed for the crediting period) and are not available at the PDD development stage:none.

c) Data and parameters controlled during the whole crediting period:

$S_{p,i}$	area of field i cultivated using No-till technology, ha;
$k_{p,i,y}$	humus content in the soil of field i cultivated using No-till technology in period y , %

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as data archiving in hard copy and electronic form.

The most objective and cumulative factor that provides a clear picture of whether the emission reductions took place is the fact of GHG emission reductions by reducing carbon dioxide emissions by tilled soil due to reduction (almost to zero) of topsoil disturbance in the process of technological procedures of soil cultivation for crop growing. It can be defined as the difference between baseline emissions and GHG emissions after the project implementation.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions, such as:

Formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO₂ equivalent):

$$PE_y = 0 \quad , \quad (1)$$

where:

PE_y – project GHG emissions in period y , t CO₂eq;

[y] - index for monitoring period.

Formulae used to estimate baseline emissions (for each gas, source, etc.; emissions in units of CO₂ equivalent):

Baseline emissions in period y are calculated according to the following formula:

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$$BE_y = BE_{A,y} \quad (2)$$

where:

BE_y – baseline GHG emissions in period y , t CO₂eq;

$BE_{A,y}$ – baseline GHG emissions due to baseline land cultivation technology, in period y , t CO₂eq;

[y] - index for monitoring period;

[A] – index for baseline land cultivation technology.

Baseline emissions due to application of baseline land cultivation technology can be calculated as follows:

$$BE_{A,y} = \sum BE_{A,i,y} \quad (3)$$

where:

$BE_{A,y}$ – baseline GHG emissions due to baseline land cultivation technology, in period y , t CO₂eq;

$BE_{A,i,y}$ – baseline GHG emissions due to baseline land cultivation technology, in period y , t CO₂eq;

[y] - index for monitoring period;

[A] – index for baseline land cultivation technology;

[i] - index for number of fields.

Baseline GHG emissions due to baseline land cultivation technology, which involves tillage, for field i are calculated using the formula, according to the “Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities” (Version 01.1.0):

$$BE_{A,i,y} = 0,9 \times S_{p,i} \times (SOC_{p,y,i} - SOC_{b,y,i}) \times \frac{44}{12} \quad (4)$$

where:

$BE_{A,i,y}$ – baseline GHG emissions due to baseline land cultivation technology, in period y , t CO₂eq;

$S_{p,i}$ – area of field i cultivated using No-till technology, ha;

$SOC_{p,y,i}$ – soil organic carbon content in the soil of field i cultivated using No-till technology in period y , t C/ha;

$SOC_{b,y,i}$ – soil organic carbon content in the soil of field i cultivated using traditional tillage technology in period y , t C/ha;

44/12 – CO₂ to C molecular masses ratio;

0.9 – factor that takes account of 10% of emissions from the project activity, which includes creation of anti-fire furrows and minimal topsoil disturbance when No-till technology is implemented;

[y] - index for monitoring period;

[b] - index for baseline technology;

[p] - index for project technology;

[A] – index for baseline land cultivation technology;

[i] - index for number of fields.

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Soil organic carbon content in soil of field i cultivated using No-till technology is calculated by the following formula:

$$SOC_{p,y,i} = h_{b,i} \times \rho_i \times k_{p,i,y} \div 1.724 \times 10000 \div 100\% \quad (5)$$

where:

$SOC_{p,y,i}$ – soil organic carbon content in the soil of field i cultivated using No-till technology in period y , t C/ha;

$h_{b,i}$ – depth of soil disturbance in field i cultivated using traditional tillage, m;

ρ_i – pre-project soil density in field i , cultivated using traditional tillage in period y , t/m³;

$k_{p,i,y}$ – humus content in the soil of field i cultivated using No-till technology in period y , %;

1,724 – organic carbon to humus conversion coefficient (according to GOST 23740)

10000 – m² to ha conversion coefficient;

[y] - index for monitoring period;

[b] - index for baseline technology;

[p] - index for project technology;

[i] - index for number of fields.

Soil organic carbon content in soil of field i cultivated using traditional tillage is calculated by the following formula:

$$SOC_{b,y,i} = h_{b,i} \times \rho_i \times k_{b,i,y} \div 1.724 \times 10000 \div 100\% \quad (6)$$

where:

$SOC_{b,y,i}$ – soil organic carbon content in the soil of field i cultivated using traditional tillage technology in period y , t C/ha;

$h_{b,i}$ – depth of soil disturbance in field i cultivated using traditional tillage, m;

ρ_i – soil density in field i , cultivated using traditional tillage in period y , t/m³;

$k_{b,i,y}$ – humus content in the soil of field i cultivated using traditional tillage in period y , %;

1,724 – organic carbon to humus conversion coefficient (according to GOST 23740)

10000 – m² to ha conversion coefficient;

[b] - index for baseline technology;

[y] - index for monitoring period;

[i] - index for number of fields.

The content of humus in the soil in the baseline scenario is calculated using historical data over a four-year period. Linear dependence proved to be the most reliable (100%) of them all. It provides for the extrapolation of humus content to years of the project life. As a result of linear approximation, the dependence is as follows (extrapolation is performed for each field individually):

$$k_{b,i,y} = a \cdot y + b \quad (7)$$

coefficients a , b (see Supporting Document 1) are determined using Microsoft Excel features by building a trend line on the basis of historical data over the 5 years prior to the project. The linear dependence has the lowest function error.

where:

$k_{b,i,y}$ – humus content in the soil of field i cultivated using traditional tillage in period y , %;

a – coefficient of linear dependence;



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b - coefficient of linear dependence;
 y – monitoring period;
 [b] - index for baseline technology;
 [i] - index for number of fields;
 [y] - index for monitoring period.

Formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions/emission reductions in units of CO₂ equivalent):

Emission reductions in the project scenario are calculated under the formula that follows:

$$ER_y = BE_y - PE_y,$$

where:

(8)

ER_y – emission reduction due to project activity in period y, t CO₂eq;
 BE_y – baseline GHG emissions in period y, t CO₂eq;
 PE_y – project GHG emissions in period y, t CO₂eq;
 [y] - index for monitoring period.

Supporting Document 1 contains a calculation of baseline emissions and project emissions as well as emission reductions for each year of the reporting period.

The monitoring plan represents quality control procedures and quality assurance for the monitoring process, which are sufficiently described in tabular form in PDD Sections D.1.1.1., D.1.1.3. and D.2. This includes, where appropriate, provision and submission on request of information about calibration, as well as information about how data are recorded and / or how the applicability of the method and accuracy of data are assured.

The monitoring plan clearly establishes responsibility and authority in respect of monitoring actions. To implement the project an operational structure has been created; it includes “Ahrodar LTD” LLC agrotechnicians (responsible for accounting of area treated with No-till technology), a research laboratory (responsible for provision of agrochemical data for project monitoring), “Ahrodar LTD” LLC chief agrotechnician (recording and reporting data in the table), and “Ahrodar LTD” LLC manager (data processing and archiving). Data will be archived in paper and electronic format.

Management structure includes the Director of “Ahrodar LTD” LLC and developers of the project (EVO CARBON TRADING SERVICES LTD).

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that



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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 Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 29 - CAR 31).

4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains which sources of leakage are to be calculated, and which can be neglected.

According to the selected specific approach used in this JI project, there are no potential sources of leakage from the project activity.

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 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 0 tons of CO₂eq for 2006-2007, 0 tons of CO₂eq for 2008-2012, 0 tons of CO₂eq for 2013-2025;
- (b) Leakage is not expected in the project boundary;
- (c) Emissions or net removals for the baseline scenario (within the project boundary), which are 61 267 tons of CO₂eq for 2006-2007, 509 008 tons of CO₂eq for 2008-2012, 1 894 412 tons of CO₂eq for 2013-2025;
- (d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 61 267 tons of CO₂eq in 2006-2007, 509 008 tons of CO₂eq in 2008-2012, 1 894 412 tons of CO₂eq in 2013-2025.

The estimates referred to above are given:



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- (a) on an annual basis;
- (b) from 01/01/2006 to 31/12/2025, covering the entire crediting period;
- (c) based on primary sources and sources;
- (d) for each GHG, which is CO₂;
- (e) in tonnes of CO₂ 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 formulae used for calculating the estimates referred above are given in Section 4.7. All formulae are consistent throughout the PDD.

For calculating the estimates referred to above, such key factors as the Ukrainian environmental legislation and other national legislation, as well as key relevant factors such as availability of funds for implementation of measures envisaged by the project, prices that are set by the state, modern technology and the ability to implement know-how in the agricultural sector, 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, such as documents and archival data of the enterprise, standards and statistical forms, results of periodic verifications are clearly identified, reliable and transparent.

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 or enhancements of net removals 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.

Detailed algorithms of calculations and their results are described in sections D, E and Supporting Documents to the PDD.

The identified areas of concern as to the evaluation of emission reductions, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 32).



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4.10 Environmental impacts (48)

Sections F.1. and F.2. of the PDD provide information about documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party.

The PDD states that according to the law of Ukraine "On Environmental Protection" and DBN A.2.2-1-2003 "Composition and content of the materials of environment impact assessment (EIA) for design and construction of plants, buildings and structures", "Ahrodar LTD" LLC is not obliged to carry out EIA development for this type of project.

In general, the project will have positive impact on the environment because the replacement of conventional tillage with No-till technology will result in lower GHG emissions into the atmosphere and lower diesel fuel consumption for LLC "Vishva Ananda" farmland cultivation.

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.

The PDD provides opinions and references to supporting documents on environmental impact assessment, which is carried out in accordance with the procedures set by the host Party.

The problem issues revealed as to environmental impacts, comments of project participants and the opinion of Bureau Veritas Certification are described in Annex A of the Determination Report (refer to CL 05).

4.11 Stakeholder consultation (49)

"Ahrodar LTD" LLC informed the community through mass media. All comments relating to the project implementation were positive. No negative comments were received.

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.



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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 project "Reduction of CO₂ emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD". 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 participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides investment analysis and common practice analysis to determine that the project activity 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 by the host Party (Ukraine). If the written approval by the host Country is provided, it is our opinion that the project as described in the Project Design Document, version 02 dated 19/10/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Country criteria as well as expectations of the stakeholders.

The review of the project design documentation (version 02 dated 19/10/2012) 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.

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

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7 REFERENCES**Category 1 Documents:**

Documents provided by CEP CARBON EMISSIONS PARTNERS S.A. that relate directly to the GHG components of the project.

/1/	PDD "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD", version 01 dated 10/09/2012
/2/	PDD "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD", version 02 dated 19/10/2012
/3/	Supporting Document 1. "Calculation of GHG emission reductions under the "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD" project
/4/	Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities (Version 01.1.0).
/5/	Letter of Endorsement No. 3086/23/7 issued by the State Environmental Investment Agency of Ukraine dated 18/10/2012.
/6/	Guidelines for users of the JI PDD form. Version 04, JISC.
/7/	Tool for the demonstration and assessment of additionality, Version 06.0.0.
/8/	Kyoto Protocol
/9/	Marrakech Accords, JI Methods
/10/	National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2010
/11/	Ukraine's Third National Communication on Climate Change under the Kyoto Protocol
/12/	Ukraine's Fourth National Communication on Climate Change under the Kyoto Protocol
/13/	Ukraine's Fifth National Communication on Climate Change under the Kyoto Protocol
/14/	Law of Ukraine "On the basic principles of the governmental agrarian policy for the period until 2015"
/15/	Law of Ukraine "On environmental protection"
/16/	Strategic guidelines for the development of agriculture of Ukraine till 2020



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/17/	JI Guidelines. Appendix to decision 9/CDM.1
/18/	JI Guidance for determination and verification, version 01
/19/	Guidance on criteria for baseline setting and monitoring, JISC. Version 03

Category 2 Documents:

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

/1/	Goods delivery note #Б-0619 (Belarus-1025 tractor) dated 29/08/2005
/2/	Goods delivery note #68 (NX 8rgs Trailer drill - 2 un.) dated 31/03/2011
/3/	Goods delivery note #81 (John Deere 1890 air seed drill, John Deere 1910 commodity air cart 3 tanks, 250 bushels) dated 23/05/2012
/4/	Goods delivery note #149 (John Deere W650 WTS harvester) dated 01/06/2011
/5/	Goods delivery note #54863 (Great Plains 200-3407 seed drill) dated 21/03/2011
/6/	Goods delivery note #44 (John Deere 8335R wheel tractor) dated 06/04/2012
/7/	Goods delivery note #AT-0000016 (KINZE seed drill) dated 20/02/2008
/8/	Goods delivery note #ПЛ-0001100 (Case MX310#Z8RZ04403 tractor) dated 18/09/2008
/9/	Goods delivery note #ПЛ-0001152 (MAP II 3250 self-propelled sprayer) dated 25/09/2008
/10/	Goods delivery note #BH-10023-00294 (RS-XL 3200 fertilizer spreader) dated 27/03/2008
/11/	Goods delivery note #АЦ-0001101 (Kuhn RM610 mulcher) dated 01/11/2011
/12/	Goods delivery note #BH/015/T205 (John Deere 1890 Air Seed Drill) dated 20/09/2007
/13/	Sale-purchase agreement #430/к (KNIZE seed drill) dated 11/02/2010
/14/	Goods delivery note #90 (MAP II 3250 Self-propelled sprayer) dated 26/04/2011
/15/	Goods delivery note #234 (John Deere 8320#RW8320RABP017469 tractor) dated 31/08/2011
/16/	Goods delivery note AT-0000136 (KNIZE seed drill, 16-row) dated 14/04/2010
/17/	Goods delivery note #BH/015/T151 (John Deere RW8430 tractor) dated 03/08/2007
/18/	Goods delivery note #55 (John Deere 8310R tractor) dated 24/04/2012
/19/	Goods delivery note #BH/015/T151 (John Deere 625R reapers (2 un.), W650i (2 un.)) dated 20/06/2012
/20/	Goods delivery note #TexK000052 (Belarus-1025 tractor) dated 05/03/2007
/21/	Certificate of delivery and acceptance (Belarus-82,1 tractor) dated 21/10/2011



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/22/	Goods delivery note #TexK000091 (Belarus-82,1 tractor) dated 20/04/2012
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Persons interviewed:

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

	Name	Organisation	Title
/1/	Volodymyr Miroshnichenko	"Ahrodar LTD" LLC	Director, Working Team member
/2/	Oksana Naidenko	"Ahrodar LTD" LLC	Chief Accountant
/3/	Mykola Shashlo	"Ahrodar LTD" LLC	Deputy Director
/4/	Leonid Barannyk	"Ahrodar LTD" LLC	Import equipment maintenance engineer
/7/	Iryna Naumenko	"CEP" LLC	CEP CARBON EMISSIONS PARTNERS S.A. Consultant



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APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

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

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
Guidelines for Users of the JI PDD form				
Section A General description of the project				
A.1. Title of the project				
A.1	Is the title of the project presented?	The project title is presented: "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD"	OK	OK
A.1	Is the sectoral scope to which the project pertains presented?	CAR 01. Please indicate the sectoral scope in Section A.1.	CAR 01	OK
A.1	Is the current version number of the document presented?	The current version of the document: PDD, Version 02 dated 19/10/2012. See Section A.1.	OK	OK
A.1	Is the date when the document was created presented?	The date when the document was created: 19/10/2012.	OK	OK
A.2. Description of the project				
A.2	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	The purpose of the Joint Implementation (JI) Project is to reduce anthropogenic greenhouse gas (GHG) emissions resulting from agricultural activities by changing the agricultural land management system,	CAR 02 CAR 03	OK OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	<p>date of the project b) Baseline scenario and c) Project scenario (expected outcome, including a technical description)?</p>	<p>namely replacement of traditional soil tillage in agriculture with No-till technology (also referred to as direct sowing technology. Emissions are reduced due to lower carbon dioxide emissions from farmland by lower (almost zero) topsoil disturbance by tillage in the course of crops growing. In 2006, the Farm started to grow crops applying No-till technology. This technology differs from the traditional technology with fewer technological procedures, which prevents the topsoil from a major disturbance, as well as with the way to utilize plant residues. The number of technological operations on cropping and harvesting is almost the same in both technologies. The number of technological procedures of plant growing and harvesting is almost the same in the two technologies, the main difference being that the traditional technology separates fertilizer application, land ploughing, cultivation, furrowing and seeding (multiple passage of the machinery across the field) in contrast to direct sowing with simultaneous fertilizer application (single passage of the machinery). The lower number of technological procedures in No-till provides for up to 60% lower fuel consumption in internal combustion engines of tractors and other agricultural machinery. Detailed information on the baseline and project</p>		



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		scenarios with technical description is provided in Sections A.2 and A.4.2. of the PDD. CAR 02. Please include information on soil cultivation system applied prior to the project in Section A.2. CAR 03. PDD Section A.2. indicates that the Farm started to purchase agricultural machinery in 2006, whereas the start of the project is dated 2005, which is confirmed by the purchase of new agricultural equipment.		
A.2	Is the history of the project (incl. its JI component) briefly summarized?	CAR 04. The document mentioned in PDD Table 2 to confirm the project starting date has an incorrect title.	CAR 04	OK
A.3. Project participants				
A.3	Are project participants and Party(ies) involved in the project listed?	CAR 05. In PDD Section A.3 please provide information on the type of commercial activity of "Ahrodar LTD" LLC.	CAR 05	OK
A.3	Is the data of the project participants presented in tabular format?	The data of the project participants is presented in tabular format.	OK	OK
A.3	Is contact information provided in Annex 1 of the PDD?	Annex 1 to the PDD provides contact information of "Ahrodar LTD" LLC, EVO CARBON TRADING SERVICES LTD, CEP Carbon Emissions Partners S.A., LHCarbon OÜ.	CAR 06	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		CAR 06. Please provide direct e-mail of Natalia Egorova in Annex 1.		
A.3	Is it indicated, if it is the case, that the Party involved is a host Party?	Ukraine is the Host Party.	OK	OK
A.4 Technical description of the project				
Location of the project				
A.4.1.1	Host Party(ies)	Ukraine is the Host Party.	OK	OK
A.4.1.2	Region/State/Province etc.	Oleksandriiskiy and Onufriivskiy districts of Kirovohrad region, Ukraine	OK	OK
A.4.1.3	City/Town/Community etc.	Villages of Oleksandriiskiy and Onufriivskiy districts.	OK	OK
A.4.1.4	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page).	Information about location is given in Section A.4.1.4 of the PDD.	OK	OK
A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project				
A.4.2	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?	<p>PDD Section A.4.2 provides the description of the main stages of the project implementation, the annual project activities schedule, some relevant technical data relating to key equipment to be installed as well as project activities.</p> <p>Project engineering represents the current cutting-edge practice.</p> <p>CAR 07. Section A.4.2. states that the systematic implementation of No-till technology at all farmlands</p>	CAR 07 CAR 08 CAR 09 CAR 10 CAR 11 CAR 12 CL 01 CL 02 CL 03	OK OK OK OK OK OK OK OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		<p>was carried out using sowing complexes of foreign manufacture by Case and John Deere, whereas the document confirming the starting date of project activity mentions a purchase of machinery manufactured by "Belarus" company. Please provide information on this company.</p> <p>CAR 08. Sub-section 6 of Section A.4.2. mentions machinery which has no confirmation documents. Please provide information in accordance with documents provided.</p> <p>CAR 09. Please provide the correct reference to the web-site of Case 8940 tractor manufacturer.</p> <p>CAR 10. Please include the information on seeding speed to specifications of John Deere 1890 Seed Drill.</p> <p>CAR 11. Please provide legend to Figure 1 of Annex 4 to the PDD.</p> <p>CAR 12. Please provide the project schedule in tabular form with indication of start dates and end dates for each activity and stage.</p> <p>CL 01. Please provide information on possible replacements of project equipment.</p> <p>CL 02. Please provide information on necessary training of "Ahrodar LTD" LLC personnel.</p>		



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		CL 03. Clarify whether the project equipment is in line with the global practice.		
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				
A.4.3	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	<p>Emissions are reduced due to lower (almost zero) topsoil disturbance by tillage and, as a result, higher carbon sequestration (storage) in the soil by plants that take carbon from the atmosphere and transfer it into the soil (with further fixation therein) in the course of their biological activity.</p> <p>The project is unlikely to be implemented without the JI mechanism, which is a strong additional incentive. This is caused by the following:</p> <ul style="list-style-type: none"> – In Ukraine there are no legal requirements associated with the introduction of direct sowing technology instead of conventional mechanical tillage systems. Implementation of this project could only be an initiative of an enterprise itself. No significant changes in the legislation that could force enterprises to give up the existing tillage practice, involving ploughing, are expected. – GHG emission restrictions are absent and not expected to be implemented in Ukraine; – Implementation of the project requires considerable investment in agricultural equipment and is 	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		associated with financial risks and risks relating to the operation of new technology, such as issues of productivity and use of new machinery. The project is not attractive enough in terms of investment without the income from sales of emission reduction units (ERUs).		
A.4.3	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided in Section A.4.3.1. of the PDD. CAR 13. Table 9 of the PDD contains incorrect length of the crediting period.	CAR 13	OK
A.4.3	Is it provided the estimated annual reduction for the chosen credit period in tCO ₂ e?	Estimated annual reduction for the chosen credit period is presented in tCO ₂ e.	OK	OK
A.4.3	Are the data from questions above presented in tabular format?	CAR 14. Table 7 in PDD Section A.4.3.1 does not comply with the Guidelines for Users of the JI PDD form. Information for the credit period and after the credit period is presented in tabular format. See PDD (Version 02) Tables 7, 8 and 9, Section A.4.3.1.	CAR 14	OK
A.4.3.1. Estimated amount of emission reductions over the crediting period				
A.4.3.1	Is the length of the crediting period Indicated?	The length of the crediting period is indicated in the PDD Section A.4.3.1. and Section C.	OK	OK
A.4.3.1	Are estimates of total as well as annual and average annual emission reductions in	Total as well as annual and average annual emission reductions in tonnes of CO ₂ equivalent are provided in	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	tonnes of CO ₂ equivalent provided?	accordance with the calculated values in the tables of Section A of PDD and the Supporting documents.		
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	<p>CAR 15. The project has no approval of the Host Party and the investing country.</p> <p>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.</p> <p>A Letter of Approval by the Government of another party involved from the country-participant has not been obtained at the current stage of the Project either.</p> <p>CAR 15 will be closed after the Letter of Approval is issued by the Party involved.</p>	CAR 15	Pending decision.
19	Does the PDD identify at least the host Party as a "Party involved"?	The Host Party involved is Ukraine.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Reference to CAR 15.	CAR 15	Pending decision.
20	Are all the written project approvals by Parties involved unconditional?	Reference to CAR 15.	CAR 15	Pending decision.
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	Party involved 1: Ukraine (the Host Party), legal entity is "Ahrodar LTD" LLC.	CAR 15	Pending decision.



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	PDD, through: <ul style="list-style-type: none"> - A written project approval by a Party involved, explicitly indicating the name of the legal entity? - Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity? 	Party involved 2: Estonia, legal entity is LHCarbon OÜ The project participants will be authorized in accordance with the relevant project approvals. Pending CAR 15 .		
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? <ul style="list-style-type: none"> - JI specific approach - Approved CDM methodology approach 	The baseline chosen is described in Section B.1 of the PDD. A specific JI approach is used for setting the baseline.	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The choice of the applicable baseline for the project is justified; theoretical description is provided in Section B.1 of PDD version 02. CAR 16. PDD Section B.1 states that the result of the benchmark analysis done according to the "Tool for the demonstration and assessment of additionality" (Version 06.0.0) in Section B.2 indicate the project scenario is additional, whereas Section B.2. applies the simple cost analysis.	CAR 16	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible	The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline was established:	CAR 17	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	<p>future scenarios on the basis of conservative assumptions and selecting the most plausible one?</p> <p>(b) Taking into account relevant national and/or sectoral policies and circumstance? – Are key factors that affect a baseline taken into account?</p> <p>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?</p> <p>(d) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?</p> <p>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?</p> <p>(f) By drawing on the list of standard variables contained in appendix B to “Guidance on criteria for baseline setting and monitoring”, as appropriate?</p>	<p>a) by listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:</p> <ul style="list-style-type: none"> - Alternative 1.1: Continuation of the current situation, without the JI project implementation. - Alternative 1.2: Proposed project activity without the use of the JI mechanism. - Alternative 1.3: Partial implementation of the project (only some of project activities implemented) without the use of the JI mechanism. <p>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:</p> <ul style="list-style-type: none"> - Agriculture is one of the leading industries in Ukraine; agriculture in general and agro-industrial complex (AIC) in particular are a political factor of sovereignty. - In the framework of the existing market model for the growing of AIC products, the effective competition among the producers can't be achieved; this market model can't also provide for the competitive pricing, 		



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		<p>which would stimulate the producers to improve efficiency and increase investment in the sector.</p> <ul style="list-style-type: none"> - Existing prices for AIC product growing are regulated by the state. - The current Ukrainian system of formation of prices for AIC products does not include an investment component for the development of agriculture. - State support in the agricultural sector is provided in amounts of funds provided by the law of Ukraine on State Budget of Ukraine for the relevant year. <p>(c) In a transparent manner with regard to the choice of JI approach and assumptions, parameters, data sources and key factors for identifying initial conditions listed in tabular format in Section B.1.</p> <p>(d) Taking into account of uncertainties and using conservative assumptions</p> <p>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure</p> <p>(f) By drawing on the list of standard variables. The baseline is identified, the description is given in Section B of the PDD.</p> <p>CAR 17. Please provide respective conclusions after the description of possible baseline scenarios.</p>		
24	If selected elements or combinations of	The baseline assumptions of the developed JI specific	CAR 18	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	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?	<p>approach are clearly described in full in Section B.1 of the PDD version 02.</p> <p>CAR 18. Description of index D for the system of diesel fuel consumption in the 3rd formula is excessive since this index is not used in it.</p> <p>CAR 19. Please provide data units for the parameter $SOC_{p,y,i}$ in formula 4.</p> <p>CAR 20. Description of parameter $kb_{i,y}$ is incorrect.</p> <p>CAR 21. Please provide information on parameter $K_{p,i,y}$ in Section B.1. of the PDD.</p> <p>CAR 22. Please indicate the time of determination/monitoring for parameter ρ_i.</p>	<p>CAR 19</p> <p>CAR 20</p> <p>CAR 21</p> <p>CAR 22</p>	<p>OK</p> <p>OK</p> <p>OK</p> <p>OK</p>
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	The PDD applies the multi-project emission factor to calculate GHG emission reductions.	OK	OK
CDM methodology approach only				
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	The PDD indicates that the project scenario is not a part of the established baseline scenario. It is also stated that the project will lead to emission reductions. Additionality of the project activity is demonstrated and assessed in Section B.2. of the PDD using the "Tool for the demonstration and assessment of additionality" (Version 06.0.0).	<p>CL 06</p> <p>CAR 23</p> <p>CAR 24</p> <p>CAR 25</p> <p>CAR 26</p> <p>CAR 27</p>	<p>OK</p> <p>OK</p> <p>OK</p> <p>OK</p> <p>OK</p> <p>OK</p>



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	not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	CL 04. Please provide a reference to the "Tool for the demonstration and assessment of additionality". CAR 23. Description of Alternative 1.1. mentions incorrect project location. CAR 24. The total investment indicated in Section B.2. of the PDD is incorrect. CAR 25. Please provide the outcome of Sub-step 2b. CAR 26. Art. 22 of Law of Ukraine "On the basic principles of the governmental agrarian policy for the period until 2015" does not contain the information mentioned in the PDD. Please verify the information and provide the correct reference. CAR 27. Numbering of steps is somewhat inconsistent with the "Tool for the demonstration and assessment of additionality".		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Detailed analysis described in Section A.4.3, B.1 and B.2, shows that emissions of the baseline scenario are likely to exceed emissions of the project scenario due to the implementation of project activities.	OK	OK
29 (b)	Are additionality proofs provided?	Yes. Refer to section B.2. of the PDD.	OK	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	The fact that the project activity itself is not the baseline scenario is clearly demonstrated in sections A.2, B.1, B.2 of the PDD.	OK	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses	All explanations, descriptions and analyses are made in accordance with the newest version of the "Tools for	OK	OK



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	made in accordance with the selected tool or method?	the demonstration and assessment of additionality" (Version 06.0.0)		
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_ Not applicable				
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants, such as: - CO ₂ emissions due to mechanical treatment that involves tillage in the process of crop growing. (ii) Reasonably attributable to the project, such as: - CO ₂ emissions due to mechanical soil treatment (No-till technology) in the process of crop growing. Such emissions are absent; (iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an		



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		amount of 2,000 tonnes of CO ₂ equivalent, whichever is lower.		
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart if it is possible?	The project boundary is presented in a tabular form and are understandable enough so that there is no need of graphic presentation.	OK	OK
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?	All gases and sources included are explicitly stated. See Section B of the PDD.	OK	OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The starting date of the project was identified using the "Glossary of Joint Implementation Terms" version 03 and is 29/08/2005, when "Ahrodar LTD" LLC started to purchase the machinery for Ni-till farming. The project's starting date is identified and specified in Section C. 1 of the PDD.	OK	OK
34 (a)	Is the starting date after 2000?	The starting date is after 2000.	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The expected operational lifetime of the project in years and months is 20 years / . CAR 28. Please provide the starting date and the end date of the project lifetime.	CAR 28	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of the crediting period in years and months is stated in Section C.3.	OK	OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	The starting date of the crediting period is the date when the first emission reductions are expected to be generated, namely January 01, 2008.	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?	ERU generation belongs to the first commitment period of 5 years (January 1, 2008 – December 31, 2012).	OK	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?	The PDD states that the prolongation of the crediting period beyond 2012 is subject to approval of the host party and estimation of emission reductions is presented separately for those until 2012 and those after 2012 in the relevant sections of the PDD. If after the first commitment period the Kyoto Protocol is prolonged, the crediting period under the project will be extended by 13 years/180 months until December 31, 2025.	OK	OK
Monitoring plan				



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
35	Does the PDD clearly indicate which of the following approaches is used? - JI specific approach - Approved CDM methodology approach.	The proposed project uses a JI-specific approach in accordance with paragraph 9 (a) of the JI "Guidance on criteria for baseline setting and monitoring", Version 03.	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?	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.	OK	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?	The monitoring plan specifies indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancement of net removals to be monitored. Data to be monitored are presented in PDD Section D. CAR 29. Please verify the units for monitoring data and parameters in Sections D.1.1.1 and D.1.1.3 of the PDD in accordance with the formulae stated in the PDD. CAR 30. Please provide information on data source for the parameter ρ_i in Section D.1.1.3 of the PDD.	CAR 29 CAR 30	OK OK
36 (b)	If default values are used: - Are accuracy and reasonableness carefully balanced in their selection? - Do the default values originate from	Default values are provided in the table of Annex 3 to the PDD. They originate from recognized sources and are presented in a transparent manner.	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	<p>recognized sources?</p> <ul style="list-style-type: none"> - Are the default values supported by statistical analyses providing reasonable confidence levels? - Are the default values presented in a transparent manner? 			
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	The monitoring plan clearly indicates how the values are to be selected and justified.	OK	OK
36 (b) (ii)	<p>For other values,</p> <ul style="list-style-type: none"> - Does the monitoring plan clearly indicate the precise references from which these values are taken? - Is the conservativeness of the values provided justified? 	CAR 31. Please number all the formulae in Section D of the PDD.	CAR 31	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Refer to section D of the PDD.	OK	OK
36 (b) (iv)	Are International System Unit (SI units) used?	The International System Units are used for some parameters.	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	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases within the project boundary is presented in table D.1.1.3. of the PDD.	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	through monitoring?			
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients and variables 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 identified on the basis of the Guidance on criteria for baseline setting and monitoring, Version 03.	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?	Monitoring plan explicitly distinguishes between all these three types of data and parameters. Refer to Section D.1. of the PDD. (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.	OK	OK
36 (e)	Does the monitoring plan describe the	In tables of parameters provided in section D.1.1.1. of	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	methods employed for data monitoring (including its frequency) and recording?	the PDD the time of monitoring (frequency) and the source of data to be used, as well as recording method are indicated for all the monitored parameters and data.		
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained in the PDD. The description of formulae is given in Section D of the PDD.	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Refer to section 36 (f) of this table.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	See CAR 31 .	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes. Refer to section D of the PDD.	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes, algorithms/procedures comply with state norms and are conservative.	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty in parameters used is low taking into account the algorithms of data monitoring.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net	There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the monitoring plan and in tables.	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	removals of the baseline ensured?			
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The formulae used in the PDD are sufficiently described.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Monitoring under the project does not require changes in existing record-keeping and data collection system existing at "Ahrodar LTD" LLC.	OK	OK
36 (f) (vii)	Are references provided as necessary?	Yes, all references are provided.	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All 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?	N/A	OK	OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	For the sake of conservativeness of parameters, metering equipment is subject to regular calibration and the latest versions of regulations and specifications are used. If the latest versions are unavailable, the previous versions are used.	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	The monitoring plan identifies that constant routine calibration of measuring equipment is carried out and the latest editions of the regulatory and technical documentation is used.	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	description of the standard can be found?			
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Yes.	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	Verification (calibration) of measurement devices is carried out in accordance with manufacturer's manuals, approved methodologies on metering devices verification/calibration, as well as with the state standards of Ukraine.	OK	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Detailed operational structure and management structure is provided in the Annex 3 of the PDD.	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?	Monitoring under the project does not require changes in existing accounting system and data collection.	OK	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	Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions.	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	measured or sampled and data that are collected from other sources but not including data that are calculated with equations?			
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Data to be monitored and required for determination will be kept for two years after the last transfer of ERUs for the project.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	Yes, selected elements of "Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities" (Version 01.1.0) are used for setting the baseline scenario. The selected elements and combinations with additional elements that were additionally developed by the project participants are in line with requirements of paragraph 36 above.	OK	OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently?	No periods to overlap during the crediting period are expected.	OK	OK



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	<p>(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)?</p> <p>(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?</p> <p>(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?</p>			
<p>Leakage JI specific approach only</p>				
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?	According to the JI specific approach, there aren't any potential sources of leakage due to the project activities.	OK	OK



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40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	The PDD states that there isn't any leakage.	OK	OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	In the PDD the approach of estimation of emissions in the baseline scenario and in the project scenario is indicated. CAR 32. Please verify table numbering in Section E. of the PDD and make the necessary corrections.	CAR 32	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?	PDD provides estimates of: (a) Emissions in the project scenario (Section E.1) (b) Leakage (Section E.2) (c) Emissions in the baseline scenario (Section E.4) (d) Emission reductions adjusted by leakage (Section E.6).	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the	N/A	N/A	N/A



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	<p>project scenario (within the project boundary)?</p> <p>(b) Leakage, as applicable?</p> <p>(d) Emission reductions or enhancements of net removals adjusted by leakage?</p>			
45	<p>For both approaches in 42</p> <p>(a) Are the estimates in 43 or 44 given:</p> <p>(i) On a periodic basis?</p> <p>(ii) At least from the beginning until the end of the crediting period?</p> <p>(iii) On a source-by-source/sink-by-sink basis?</p> <p>(iv) For each GHG?</p> <p>(v) In tonnes of CO₂ equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?</p> <p>(b) Are the formulae used for calculating the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity</p>	<p>(a) Estimates in 43 are given on the periodic basis, in tonnes of CO₂ equivalent, on a source-by-source basis, before, during and after the crediting period.</p> <p>(b) The formulae used in PDD are consistent.</p> <p>(c) Key factors influencing baseline emissions and activity level of the project and risks associated with the project are taken into account, as appropriate.</p> <p>(d) Data sources used to calculate the estimates are clearly identified, reliable and transparent.</p> <p>(e) Emission factors were taken from the defined sources.</p> <p>(f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner.</p> <p>(g) Estimates in 43 are consistent throughout the PDD.</p> <p>(h) The annual average of estimated emission reductions are calculated correctly (by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve).</p>	OK	OK



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Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	<p>level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate?</p> <p>(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?</p> <p>(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?</p> <p>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?</p> <p>(g) Are the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(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?</p>			
46	If the calculation of the baseline emissions	Baseline emission level is calculated using the specific	OK	OK



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	or net removals is to be performed de facto, does the PDD include an illustrative forecasted emissions or net removals calculation?	approach employing elements of “Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities” (Version 01.1.0). Forecasted emissions calculation is clearly provided in the PDD.		
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_ Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	The environmental impacts of the project have been sufficiently described	OK	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to Supporting Documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	CL 05. Please, provide a reference to the “Convention on long-range transboundary pollution” in Section F.1.	CL 05	OK
Stakeholder consultations				
49	If stakeholder consultation was undertaken in accordance with the	“Ahrodar LTD” LLC informed the community through mass media. All comments relating to the	OK	OK



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	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?	project implementation were positive. No negative comments were received.		
Determination regarding small-scale projects (additional elements for assessment)				
Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)				
Determination regarding programmes of activities (additional/alternative elements for assessment)				



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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 participants' responses	Determination team conclusion
CAR 01. Please indicate the sectoral scope in Section A.1.	A.1	Sectoral scope: Sector 15 - Agriculture.	The relevant information is provided, the issue is closed.
CAR 02. Please include information on soil cultivation system applied prior to the project in Section A.2.	A.2	Prior to the project, "Ahrodar LTD" LLC used traditional land cultivation system. This system involves tillage that provides for turning over of topsoil to create homogeneous and mellow seedbed.	The information is provided, the issue is closed.
CAR 03. PDD Section A.2. indicates that the Farm started to purchase agricultural machinery in 2006, whereas the start of the project is dated 2005, which is confirmed by the purchase of new agricultural equipment.	A.2	In 2005, the Farm started purchases of necessary agricultural equipment for direct sowing farming as part of the Joint Implementation Project.	Corrections are made, the issue is closed.
CAR 04. The document mentioned in PDD Table 2 to confirm the project starting date has an incorrect title.	A.3	Goods delivery note #Б-0619.	The corrections are made, the issue is closed.
CAR 05. In PDD Section A.3 please provide information on the type of commercial activity of "Ahrodar LTD" LLC.	A.3	The type of economic activity according to the standard industrial classification of economic activities: 01.11.0 - Growing of grain and technical crops.	The information is provided, the issue is closed.
CAR 06. Please provide direct e-mail of Natalia Egorova in Annex 1.	A.3	The direct e-mail of Natalia Egorova in Annex 1 is provided.	The relevant information is provided. The issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
<p>CAR 07. Section A.4.2. states that the systematic implementation of No-till technology at all farmlands was carried out using sowing complexes of foreign manufacture by Case and John Deere, whereas the document confirming the starting date of project activity mentions a purchase of machinery manufactured by “Belarus” company. Please provide information about this company.</p>	A.4.2	<p>The systematic implementation of No-till technology at all farmlands was carried out using sowing complexes of foreign manufacture by John Deere, Case and Belarus.</p>	<p>The information was provided in Section A.4.2. The issue is closed.</p>
<p>CAR 08. Sub-section 6 of Section A.4.2. mentions machinery which has no confirmation documents. Please provide information in accordance with documents provided.</p>	A.4.2	<p>The project provides for the implementation of agricultural machinery, namely:</p> <ul style="list-style-type: none"> - John Deere 1890 Seed Drill - KINZE 3600 Precision Seed Drill - KINZE 3700 Precision Seed Drill - MAP II 3250 Self-propelled Sprayer - AXIS 30.1K Fertilizer Sprayer - RC-25 Mulcher - Case MX 310 Tractor - John Deere W 650 Harvester - Case 8940 Tractor - John Deere 8335 R Tractor - John Deere 8430 Tractor 	<p>The information is provided, the issue is closed.</p>
<p>CAR 09. Please provide the correct reference to the web-site of Case 8940 tractor manufacturer.</p>	A.4.2	<p>The reference to the web-site of Case 8940 tractor manufacturer is provided in Annex 4 of the PDD</p>	<p>The information is provided in the corresponding section. The issue is closed.</p>



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		version 02.	
CAR 10. Please include the information on seeding speed to specifications of John Deere 1890 Seed Drill.	A.4.2	The seeding speed of John Deere 1890 Seed Drill is 14 ha/h.	The relevant information is provided, the issue is closed.
CAR 11. Please provide legend to Figure 1 of Annex 4 to the PDD.	A.4.2	Figure 1 of Annex 4 to the PDD presents John Deere 1890 direct seed drill.	The information is provided, the issue is closed.
CAR 12. Please provide the project schedule in tabular form with indication of start dates and end dates for each activity and stage.	A.4.2	The project schedule with indication of project stages and timeframes is provided in Table 6 of the PDD version 02.	The issue is closed, the information is verified.
CAR 13. Table 9 of the PDD contains incorrect length of the crediting period.	A.4.3	The length of the crediting period after the first commitment period is 13 years.	Corrections are made, the issue is closed.
CAR 14. Table 7 in PDD Section A.4.3.1 does not comply with the Guidelines for Users of the JI PDD form.	A.4.3	Relevant corrections have been made to the PDD version 02.	The issue is closed as corresponding changes are made.
CAR 15. The project has no approval of the Host Party and the investing country.	19	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.	CAR 15 will be closed after the Letter of Approval is issued by the Party involved.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		A Letter of Approval by the Government of another party involved from the country-participant has not been obtained at the current stage of the Project either.	
CAR 16. PDD Section B.1 states that the results of the benchmark analysis done according to the “Tool for the demonstration and assessment of additionality” (Version 06.0.0) in Section B.2 indicate the project scenario is additional, whereas Section B.2. applies the simple cost analysis.	23	The results of the simple cost analysis done according to the “Tool for the demonstration and assessment of additionality” (Version 06.0.0) in Section B.2 indicate that the project scenario is additional.	Relevant corrections are made, the issue is closed.
CAR 17. Please provide respective conclusions after the description of possible baseline scenarios.	23	The analysis of the above alternatives shows that Alternative 1.1 is the most plausible one.	Relevant outcomes are provided, the issue is closed.
CAR 18. Description of index D for the system of diesel fuel consumption in the 3rd formula is excessive since this index is not used in it.	24	Irrelevant information was deleted.	The issue is closed as irrelevant information has been deleted.
CAR 19. Please provide data units for the parameter $SOC_{p,y,i}$ in formula 4.	24	$SOC_{p,y,i}$ – soil organic carbon content in the soil of field i cultivated using No-till technology in period y , t C/ha;	The issue is closed as necessary information is provided.
CAR 20. Description of parameter $kb_{i,y}$ is incorrect.	24	$kb_{i,y}$ – humus content in the soil of field i cultivated using traditional tillage in period y , %	Corrections are made, the issue is closed.
CAR 21. Please provide information on	24	The information on parameter $\kappa_{p,i,y}$ is	The issue is closed as relevant



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
parameter $k_{p,i,y}$ in Section B.1. of the PDD.		provided in Section B.1. of the latest PDD version.	information is provided.
CAR 22. Please indicate the time of determination/monitoring for parameter ρ_i .	24	CAR 21. Time of determination/monitoring for parameter ρ_i has been determined for each field i prior to the project.	The issue is closed as relevant information is provided.
CAR 23. Description of Alternative 1.1. mentions incorrect project location.	28	Continuation of the current situation in the agricultural sector of Kirovohrad region is the most realistic and plausible alternative to the Project implementation because it entails minimum expenses for "Ahrodar LTD" LLC.	The corresponding changes are made, the issue is closed.
CAR 24. The total investment indicated in Section B.2. of the PDD is incorrect.	28	Costs of implementation of the project "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD" exceed UAH 42 291 thousand.	Corrections are made, the issue is closed.
CAR 25. Please provide the outcome of Sub-step 2b.	28	Outcome of Sub-Step 2b. Implementation of the project "Reduction of CO2 emissions by systematic utilization of No-till technology in agriculture at LLC "Ahrodar LTD" requires considerable investments, which makes it unattractive from the	The relevant information is provided, the issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		financial standpoint.	
<p>CAR 26. Art. 22 of Law of Ukraine “On the basic principles of the governmental agrarian policy for the period until 2015” does not contain the information mentioned in the PDD. Please verify the information and provide the correct reference.</p>	28	<p>According to Article 2 of the Law of Ukraine “On the basic principles of the governmental agrarian policy for the period until 2015” the agrarian policy of the Government is aimed at achievement of the following goals:</p> <ul style="list-style-type: none"> - guaranteeing the food security of the state; - turning the agrarian sector into sector of the state economy that is highly effective and competitive in both domestic and foreign markets; - preservation of peasants as mediums of Ukrainian national identity, culture and spirit; - complex development of rural territories and solving social problems in rural communities. 	Corrections are made, the issue is closed.
<p>CAR 27. Numbering of steps is somewhat inconsistent with the “Tool for the demonstration and assessment of additionality”.</p>	28	Relevant corrections have been made to Section B.2. of the PDD.	Corrections are made, the issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 28. Please provide the starting date and the end date of the project lifetime.	34(b)	The project lifetime is deemed 20 years, or 240 months (01/01/2006-30/12/2025).	The relevant information is provided, the issue is closed.
CAR 29. Please verify the units for monitoring data and parameters in Sections D.1.1.1 and D.1.1.3 of the PDD in accordance with the formulae stated in the PDD.	36(b)	The units for monitoring data and parameters have been verified, the corrections are made to Sections D.1.1.1 and D.1.1.3. of the PDD.	The corrections are accepted, the issue is closed.
CAR 30. Please provide information on data source for the parameter ρ_i in Section D.1.1.3 of the PDD.	36(b)	Information on the source of parameter ρ_i is provided in Section D.1.1.3 of the latest PDD version.	The information is provided, the issue is closed.
CAR 31. Please number all the formulae in Section D of the PDD.	36 (b) (ii)	All the formulae given in Section D of the PDD version 02 were numbered.	The issue is closed as corresponding changes are made.
CAR 32. Please verify table numbering in Section E. of the PDD and make the necessary corrections.	42	The table numbering in Section E has verified. The corrections have been made.	Corrections are made, the issue is closed.
CL 01. Please provide information on possible replacements of project equipment.	A.4.2	If the equipment introduced under the project is serviced properly, it is not expected to need replacement during the project life. For more details, see Section A.4.2 of the PDD version 02.	The information is provided, the issue is closed.
CL 02. Please provide information on necessary training of "Ahrodar LTD" LLC personnel.	A.4.2	Workers and specialists of "Ahrodar LTD" LLC will be trained the same way they used to before the project was launched. If needed, which	The information is provided, the issue is closed.



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Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		means if their skill level is not high enough to work with the equipment introduced under the project, equipment producers will give instructions and training, which is mentioned in the contracts for equipment purchase.	
CL 03. Clarify whether the project equipment is in line with the global practice.	A.4.2	The technologies implemented are in line with the global farming practice.	The issue is closed as necessary explanations are provided.
CL 04. Please provide a reference to the “Tool for the demonstration and assessment of additionality”.	28	The reference to the “Tool for the demonstration and assessment of additionality” is provided in the latest PDD version.	The issue is closed as relevant reference is provided.
CL 05. Please, provide a reference to the “Convention on long-range transboundary pollution” in Section F.1.	48(b)	The reference has been provided in the newest PDD version.	The issue is closed as relevant reference is provided.