JI DETERMINATION REPORT

"Nedra Luhanshchyny" Limited Liability Company

DETERMINATION OF THE PROJECT:

Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City

REFERENCE NUMBER: 2010/0064/JI/01

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DETERMINATION REPORT

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PP:

"Nedra Luhanshchyny" Limited Liability Company.

Summary:

*The Spanish Association for Standardization and Certification (AENOR) has carried out the Determination of the project "**Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City**" located in Oleksandrivsk Town, in the Luhansk Region (Ukraine), on the basis of UNFCCC criteria for the JI, as well as relevant decisions of the JISC.*

The objectives of the Determination are to confirm that the project follows the above criteria and the existing CDM methodology for baseline determination and that the PDD presented by "Nedra Luhanshchyny" Limited Liability Company will lead to a realistic determination of the emissions reductions of the project. The scope of the Determination covers the additionality assessment, the environmental impact study and the stakeholder consultation. In addition it covers the baseline methodology, the calculation of the emission factor and the monitoring methodology to quantify the emissions reductions during the operational life of the project.

The Determination carried out by AENOR, involved a desk study of the PDD, associated documentation and the approved methodology. The next step was the visit of the Determination team to Kiev where personnel of the Ukrainian Academy of Sciences were interviewed in order to analyze the electricity situation of the country. Furthermore, Oleksandrivsk and Luhansk City Councils were visited as well, where not only key personnel involved in the project, but also representatives of the Public Community of Oleksandrivsk Town and Luhansk were interviewed. The audit team also visited the National Environmental Investment Agency of Ukraine (Ukrainian DFP), in order to know the process to obtain the letter of approval, and the situation of the JI Mechanism in Ukraine. Conformance with legal and environmental regulations was also confirmed during the same.

Clarifications and corrective actions on a number of issues were requested by AENOR according to desk review and on-site visit conclusions; these were amended satisfactorily by the project developer and resulted in a new version of the original PDD (version 02.2). In the opinion of AENOR the project meets all relevant UNFCCC requirements for JI and all relevant host country criteria, therefore the project shall be recommended for registration.

Report No.:	
2010/0064/JI/02	

Report title:

DETERMINATION REPORT ***"Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City"***

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Indexing terms

Landfill, CH_4, CO_2, climate change, JI project, Ukrainian National Grid, GHG emissions, LFG, flaring.

Abbreviations

ACM0001	Consolidated baseline and monitoring methodology for landfill gas project activities *(version 11)*
CAR	Corrective Action Requested
CL	Clarification
CDM	Clean Development Mechanism
DECISION 3/CMP.5	Guidance on the implementation of Article 6 of the Kyoto Protocol
DFP	Designated Focal Point
DVM	Joint Implementation Determination and Verification Manual
EIA	Environmental Impact Assessment
EMP	Environmental Management Plant
ERU	Emission Reduction Unit
Flaring Tool	Tool to determine project emissions from flaring gases containing methane
GHG	Greenhouse Gasses
$GWhB_{eB}$	Electrical Giga Watt hour
$GWhB_{tB}$	Thermal Giga Watt hour
GSC	Global Stakeholder Consultation process
IPCC	Intergovernmental Panel on Climate Change
JI-PDD	Joint Implementation-Project Design Document
JISC	Joint Implementation Supervisory Committee
LFG	Landfill Gas
MP	Monitoring Plan
MWh	Mega Watt hour
PP	Project Participant
tC	Carbon tonnes
TJ	Tera Joules
Additionality tool	Tool for the demonstration and assessment of the additionality
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

This Determination concerns a project implemented by "Nedra Luhanshchyny" Limited Liability Company *(*hereinafter Nedra Luhanshchyny*)*, in Ukraine to reduce emissions of CO_2 by collection and utilization of methane from solid domestic waste ground in Luhansk City. The objectives of the Determination exercise are to confirm that the project meets the necessary JI criteria, that the project follows the existing CDM methodology for baseline determination *(*as the Project participant has decided to chose*)*, and that the proposals presented by Nedra Luhanshchyny in the PDD will lead to a realistic determination of the emissions reductions.

UNFCCC criteria applicable to this determination process refer to Article 6 of the Kyoto Protocol, the Guidelines for the implementation of Article 6 of the Kyoto Protocol, in particular*:*

- The Kyoto Protocol, in particular Article 6.
- Decisions 3/CMP.3, Decision 2/CMP.2 and Decision 3/CMP.2, Decision 9/CMP.1 and 10/CMP.1
- Furthermore relevant aspects of Decision 12/CMP.1 and Decision 13/CMP.1
- Decisions by the JISC published under **http://ji.unfccc.int**
- Specific guidance by the JISC published under **http://ji.unfccc.int**

Determination Team

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1.1 Objective

Nedra Luhanshchyny has commissioned AENOR to audit the project "**Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City**". The purpose of a Determination is to have 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 analyzed in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria.

Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

1.2 Scope

The scope of the Determination is to assess all aspects of GHG reduction involved in the project, including the project design, the baseline, the determination of the emission factor of the grid and the procedures proposed for monitoring the emissions reductions in the future, against UNFCCC requirements for JI projects.

The following documents were reviewed as part of the scope of the activity:

- PDD /1/, including baseline study and monitoring plan.
- CDM methodology for baseline determination: ACM0001 "Consolidated baseline and monitoring methodology for landfill gas project activities", version 11 /2/.
- Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site (version 05.1) /3/
- Tool to determine project emissions from flaring gases containing methane (version 01) /4/
- Tool to calculate baseline, project and/or leakage emissions from electricity consumption (version 01). /5/
- Tool for the demonstration and assessment of additionality (version 05.2) /6/
- Decision 3/CMP.5, Decision 10/CMP.1 and relevant decisions and guidelines from the JISC.
- Joint Implementation Determination and Verification Manual (Version 01) /7/.
- Attached documentation (environmental requirements, investment analysis, etc.)

The Determination scope is defined as an independent and objective review of the JI project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on its internal quality procedures for JI activities and the Joint Implementation Determination and Verification Manual, has used a risk-based approach in the Determination, focusing on the identification of significant risks for project implementation and the generation of ERUs.

The Determination is not meant to provide any consultancy services to the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PDD.

2 METHODOLOGY

The Determination of the project started in January 2010 and concluded in June 2010. The JI project was used by AENOR as witnessing activity; the process started in June 2011 and concluded in June 2011, with the accreditation of AENOR. The Determination was performed in the manner of an audit, where a desk review of the PDD was first undertaken against the CDM approved methodology chosen by the project participant

and JI and other relevant criteria. The desk review was followed by a site visit to Ukranie and key stakeholders in Luhansk.

All the documents have been updated to request the registration.

In order to ensure transparency, a Determination Checklist was completed for the project, according to the DVM. The Checklist shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The Determination protocol serves the following purposes:

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

The Determination Protocol consists of three tables:

- Table 1. Check list for publication of project design document.
- Table 2. Check list for determination.
- Table 3. Check list for preparation of determination report.

The different columns in these tables are described in following figure. The completed Determination protocol is enclosed in Appendix A to this report.

DVM paragraph	**Check item**	**Initial finding**	**Action requested to project participants**	**Review of project participants action**	**Conclusion**
Paragraph of the JI Manual to be met.	The requirements the project must meet.	Explains how conformance with the checklist question is investigated and first conclusions obtained.	This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Determination report.	The project participant answer is included in this section.	Final conclusion of the Determination team regarding the accomplishment of the requirement.

Figure 1 Determination Checklist tables

2.1 Review of Documents

The Project Design Document submitted by "Nedra Luhanshchyny" Limited Liability Company was reviewed against the approved methodology and against JI and other relevant criteria. Additional background documents related to the project design and baseline were also made available before and during the on-site visit in Ukraine. These documents were also reviewed.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, "Nedra Luhanshchyny" Limited Liability Company revised several times the project design document submitted and developed a final version *(*version 02.2*)* submitted to the audit team on June 30, 2011.

The final Determination findings are presented in this report related to the project as described in the project design document version 02.2.

The reviewed documents used during all the Determination process are detailed in the Chapter 6 of this report.

2.2 Follow-up Interviews

AENOR conducted interviews with project developers in Ukraine to confirm selected information and to resolve issues identified in the document review.

On 23-24th February 2010, representatives of "Luhanshchyny" Limited Liability Company and main stakeholders were interviewed*:* general manager of the company, representatives of the National Environmental Investment Agency of Ukraine, representatives of Ukrainian Academy of Sciences *(*Electricity market expert*)*, and other representatives of Public Community of Oleksandrivsk Town and Luhansk.

The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization Person/Position	Interview topics
"LUHANSHCHYNY" LIMITED LIABILITY COMPANY- UKRAINE ✓ Yuriy Kononov – president ✓ Leonid Malashkin – director ✓ Vadim Kostuchenko – manager ✓ Aleksandr Shilo - manager **UNDP** ✓ John O´Brien ✓ Sergei S. Volkov ✓ Alexander Severin	✓ Project design. ✓ Additionality assessment *(*investment and barrier analysis*)*. ✓ Baseline determination*:* OM & BM *(*power plants, electricity production, start of operation, fuels, efficiencies, most recent data*…)*. ✓ Environmental approval and related conditions. ✓ Monitoring of environmental impacts.
Public Community of Luhansk Town ✓ Sergey Kravchenko ✓ Zaza Zuhbaya	✓ Opinion about the project. ✓ Knowledge of the environmental impacts. ✓ Benefits for the community. ✓ Consultation with municipality's authorities, and other stakeholders.
Public Community of Oleksandrivsk Town ✓ Snegko Aleksandr	✓ Opinion about the project. ✓ Knowledge of the environmental impacts. ✓ Benefits for the community. ✓ Consultation with municipality's authorities, and other stakeholders.
DFP – National Environmental Agency of Ukraine ✓ Mykhailo Chyzhenko	✓ Project's sustainable development contribution. ✓ Consultation with municipality's authorities, and other stakeholders. ✓ DFP´s opinion. ✓ Environmental approval and related conditions. ✓ National regulations applicable landfill gas projects ✓ State of the permits of the project.

Interviewed organization Person/Position	Interview topics
Academy of Sciences of Ukraine. ✓ Boris Kostynkosvky	✓ Baseline determination: OM & BM (power plants, electricity production, start of operation, fuels, efficiencies, most recent data…). ✓ National Electricity market operation.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this Determination phase was to resolve the requests for corrective actions and clarifications and any other outstanding issues that needed to be clarified for AENOR's positive conclusion on the project design. The corrective action requests (CARs) and clarification requests (CLs) raised by AENOR were resolved during communications with project participants. To guarantee the transparency of the Determination process, the concerns raised and responses given are summarized in chapter 3 below and documented in more detail in the Determination Protocol in Appendix A.

Since modifications to the Project design were necessary to resolve AENOR's concerns, the Client decided to revise several times the documentation and finally resubmitted the project design documentation (version 02.2) in June 2011. After reviewing the revised and resubmitted project documentation, AENOR issued this final Determination report and opinion.

2.4 Quality Control

AENOR has performed an internal quality control of the present Determination report by a reviewer independent from the Determination team.

3 DETERMINATION FINDINGS

The main findings of the Determination are stated in the following sections. The findings for each subject are presented according to the requirements of the DVM.

1) The findings from the desk review of the original project design documents and the findings from interviews during the on-site visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.

2) Where AENOR had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action

Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. During the Determination process, ten Corrective Actions were requested.

3) Where Clarification or Corrective Action Requests have been issued, the exchanges between project participants and AENOR to resolve these Clarification or Corrective Action Requests are summarized.

4) The conclusions for each requirement are presented in the check list.

The final Determination findings are related to the project design as documented and described in the revised and resubmitted project design documentation (PDD version 02.2.)

3.1 Participation Requirements

The project participant is "Nedra Luhanshchyny" Limited Liability Company. The host Party Ukraine meets all relevant participation requirements following detailed:

- Ukraine has confirmed that is a Party of the Kyoto Protocol (2004, 12nd April).
- Ukraine has confirmed its voluntary participation and the contribution of the project to the sustainable development through the National Approval of the project granted by the Designated Focal Point (DFP). LoA was issued in September 2010 /8/.

The Ukainian Letter of Endorsement was submitted to the determination team, but the title of the project was different from what appears in the Letter. Hence, CAR 2 was requested in order to modify the Letter of Endorsement and to obtain the National Approval of the project. The Letter of Approval of Ukraine was issued in September 2010 and it was provided to the determination team, thus CAR 2 is closed.

On the other hand, the Ukrainian Letter of Approval /8/ explicitly indicates the name of the legal entity: "Nedra Luhanshchyny", which participates voluntarily in the JI project Activity.

The first version of the PDD published for global stakeholders consultation process (GSC) included Fortis Bank NV/SA as Annex I Party participant (Belgium). Nevertheless, during the determination activities, the participation of Fortis Bank has finalized, so, this party has been removed from the PDD. An official letter /9/ of voluntary withdrawal from Fortis Bank NV/SA has been prepared and submitted to the auditing team. This document will be also submitted to the JISC with the present Determination Report.

The list of the project participants included in the PDD is in the correct form, and the contact details are included in Annex 1 of the PDD in a consistent manner.

The contribution of the project to the sustainable development of Ukraine was confirmed by the DFP of the Host Country during the on site visit.

The Determination did not reveal any information that indicates that the project can receive public funding as a diversion of ODA funding towards Ukraine.

3.2 Project Design

The PDD of **"Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City"** has been prepared in accordance with latest template *(*version 01*)* JI-PDD published by the UNFCCC.

The PDD is considered to cover all aspects necessary to describe the project and to assess its conformity with the underlying regulations. The JI PDD form for description of JI-Project has been used for the registration of the project under "Track 2". The application is necessary for the approval of the JI Project by the JI Supervisory Committee *(*JISC*)*.

It is proposed to cover the landfill and install a system for LFG collection and flaring in an enclosed flare, thus chemically transforming methane into carbon dioxide and avoiding release of methane into the atmosphere. The enclosed flare guarantees high levels of methane decomposition, which may reach 99.5% in case of extremely efficient equipment.

As part of the Project, LFG will be collected through 30 vertical collectors located at holes 10 – 25 m deep, connected to a central system for collection and utilization of methane. The LFG collection system is planned to cover 80 % of Site 1 of the landfill and will have a collection efficiency of 75 %. Site 2 will not be covered by the Project.

The foreseen technology does reflect current good practice burning landfill gas. The project uses technology that goes beyond the state of the art in the host country. Moreover it is unlikely that the foreseen project technology will be substituted during the crediting period by a still more efficient technology.

It has been crosschecked against the National Construction Standard DBN V.2.4-2-2005 General Construction Guidelines for Landfills *[*Nedra Luhanshchyny*]* /10/ and Environmental Impact Assessment Study /11/.

In conformance with paragraph 6 *(c)* of decision 3/CMP.1 on the modalities and procedures for the CDM, "Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City Project" falls into **sectoral scope 13*:* Waste Management**.

During the on site visit, the project was visited by the Determination team. The coordinates detailed in the PDD are in accordance with those checked in situ and several maps included in the Environmental Impact Assessment Study.

During the on site visit, the determination team had the chance to check all aspects related to the physical location of the landfill. The landfill is located within the municipality of Oleksandrivsk, although this landfill belongs administratively to Luhansk. During the visit the determination team could verify that the law demonstrated ownership of the landfill by Luhansk, also during the interview with responsible for the City of Oleksandrivsk,, it was confirmed that since the project is very positive for the people area, since represents a improvement in the landfill operation, a hypothetical future change in ownership would not affect the development of the project activity.

The last version of the PDD *(*version 02.2*)* finally details the design of the project in precise manner, in accordance with the accuracy and completeness principles required for the JI process.

3.3 Baseline Setting

The baseline of the Project is established as a project specific approach using an approved CDM methodology **ACM0001 "Consolidated baseline and monitoring methodology for landfill gas project activities" *(*version 11*)* - CDM methodology approach**.

The PDD clearly indicates the title, reference number and version of the approved CDM methodology and version 11 is the most recent version currently and at the moment of the publication of the PDD in the UNFCCC JI website.

Approved baseline methodology ACM0001 is applicable to landfill gas capture projects, where the baseline scenario is total atmospheric release of LFG, and the project involves utilization of LFG for flaring, as it is clearly justified in the PDD. The applicability conditions of the methodology are correctly justified in the PDD in accordance with applicability conditions of the methodology and relevant tools referenced in the methodology.

The description of the project boundaries stated in the JI-PDD is in compliance with the methodology, which reads: The project boundary is the site of the project activity where the gas is captured and destroyed/used, but also in the Luhansk landfill shall include all the power generation sources connected to the grid to which the project activity is connected".

The spatial extent of the project boundaries described in the JI-PDD was clearly observed during the site visit. All sources and gases listed in the JI-PDD comply with the requirements of the methodology ACM0001 version 11.

Related to the baseline scenario, it was confirmed, with the National Environmental Investment Agency information, regarding the usual business practice of landfill sites in Ukraine, as the partial or total release of the gas to the atmosphere is the most credible and realistic baseline scenario identified in the JI-PDD.

Furthermore, during the on-site visit, this information was also cross-checked with Municipalities and other stakeholders involved in waste management in Ukraine. Hence, in the considered opinion of the AENOR team, the baseline scenario is credible and realistic.

On the other hand, all the alternatives scenarios to the project activity identified in the methodology have been detailed in the JI-PDD in compliance with the applicable methodology and the elimination of alternatives justified suitability.

Section B.4 of the JI-PDD indicates that the application of the baseline study was completed on September 19-12-2009, and finaly updated on June 28 2011.The methodology ACM0001 version 11 is applied exactly as prescribed and inputs used for the emission reduction projection as well as default values available in the methodology applied were verified to be correct. The JI-PDD clearly states which equations were used in calculating baseline emission, as detailed below.

$BE_y = (MD_{Project,y} - MD_{BL,y}) * GWP_{CH4} + EL_{LFG,y} * CEF_{elec,BL,y} + ET_{LFG,y} * CEF_{ther,BL,y}$

As stated in the JI-PDD, as the proposed project activity does not include a thermal and energy and electricity component, all following equations will exclude these component for simplification:

$BE_y = (MD_{Project,y} - MD_{BL,y}) * GWP_{CH4}$

To calculate $\mathbf{MD_{Project,y}}$, the following formula is applied according to the methodology:

$MD_{Project,y} = BE_{CH4,SWDS,y} / GWP_{CH4}$

According to the methodology ACM0001 Version 11 and the latest version of the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" /3/, the ex-ante estimation of the amount that would have been destroyed/combusted during the year, in tones of methane $MD_{Project,y}$ is based on the methane generation from the landfill in the absence of the project activity at year y ($BE_{CH4,SWDS,y}$), which is calculated with a multi-phase model. The model calculates the methane generation based on the actual waste streams Wj,x disposed in each year x, starting with the first year after the start of the project activity until the end of the year y, for which baseline emissions are calculated (years x with x = 1 to x = y).

The methodology clarifies that the year "x" refers to the year since the landfill started receiving waste [x runs from the first year of landfill operation (x=1) to the year for which

emissions are calculated *(x=y)]*. The JI-PDD states that the landfill started operation in 1979 and closed in 2007.

The landfill waste disposal history, along with the waste composition data were verified during the on site visit**.** The sources of information have been provided to the validation team.

Regarding the former, the official statistics and average data from former USSR /12/ provided by the Municipality of Luhansk and by the PP has been used in the calculation. This document checked by the AENOR validation team shows that the calculated waste amounts are in line with the amounts indicated in the document, hence, they are deemed by the AENOR team as credible and realistic.

Table 1- waste characterization

Type	Wj
Wood and wood products	3,00%
Pulp, paper and cardboard	30,00%
Food, food waste, beverages and tobacco	30,00%
Textiles	5,00%
Garden, yard and park waste	0,00%
Glass, plastic, metal, other inert waste	32,00%

The amount of methane that would have been destroyed/combusted during the year, in tonnes of methane in project scenario, Equation 13 of ACM0001 v.11 *(*$MD_{Project,y}$ = $BE_{CH4,SWDS,y}$/ GWP_{CH4}*)* is estimated ex-ante by using the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" in order to calculate $BE_{CH4,SWDS,y}$.

The basis for calculating the $BE_{CH4,SWDS,y}$ is the "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site", and a multi-phased first order methane emissions model/. The IPCC model provides a method for calculating $BE_{CH4,SWDS,y}$ using each of the parameters in Equation below except for the model correction factor *(φ)* and the baseline collection efficiency *(f)*. As described in According to the JI-PDD, the baseline collection efficiency is zero *(*all generated methane is emitted under baseline conditions*)*, and the model correction factor is assigned a value of 0.9 per the "Tool to determine methane emissions avoided from disposal waste at a solid waste disposal site"..

$$BE_{CH4,SWDS,y}=\varphi \times(1-f)\times GWP_{CH4}\cdot(1-OX)\cdot\frac{16}{12}\times F\cdot DOC_f\cdot MCF\cdot\sum_{X=1}^{Y}\sum_{j}W_{j,x}\cdot DOC_j\cdot e^{-kj\cdot(y-x)}\cdot(1-e^{-kj})$$

The following assumptions needed validation during the site visit: "The value for the Oxidation factor (reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste) was chosen as 0 because the landfill is not covered with oxidizing material soil cover or compost. The methane correction factor (MCF) was chosen to be 0.8 instead of 1, due to the fact that the Luhansk Landfill was unmanaged for many years.

These statements were confirmed through visual inspection during the site visit.

The applicable methodology ACM0001 (v. 11) also states that "the efficiency of the degassing system which will be installed in the project activity should be taken into account while estimating the ex-ante estimation". On this matter, an efficiency of 60% has been taken for this project activity which is considered suitable by AENOR team, considering that it is based on site conditions and the proposed system design..

To calculate **$MD_{BL,y}$** ($MD_{BL,y}$, is the amount of methane that would have been destroyed/combusted in the absence of the Project due to regulatory and/or contractual requirements), where $MD_{BL,y}$ = $MD_{Project,y}$ * AF, as no capture or reduction of landfill methane emissions occurs under baseline conditions AF=0, hence, $MD_{BL,y}$= 0.

According to ACM0001, the baseline is established as per the stepwise procedure included in the methodology. The baseline emissions are calculated as the methane emissions from the LFG that would have been released in the atmosphere in the absence of the project. There are no regulations in Ukraine for methane capture as it was confirmed by the auditing team during the interview with representatives of the National Environmental Agency of Ukraine.

Project emissions from flaring are calculated according to the "*Tool to determine project emissions from flaring gases containing methane*" version 01 (hereinafter flaring tool). The project will use an enclosed flare, and all the assumptions have been crosschecked by the audit team against IPCC (2006) Volume 5, Chapter 3: Solid Waste Disposal, page 19 /13/ and other CDM project activities, and other reports such as US EPA: a "Landfill Gas to Energy Development Project Handbook" /14 /. As per the flaring tool, two options are applicable for enclosed flares in order to determine the flare efficiency. Option a.) has been chosen. The steps of the Flaring tool have been clearly followed in the PDD, and the default values chosen for the calculations have been crosschecked by the audit team against the tool and IPCC (2006) Volume 5, Chapter 3: Solid Waste Disposal.

The project activity estimates a consumption of 175.2 MWh of electricity per year due to the operation of the blower/flare station and other equipment. The justification of this consumption was explained as response CAR3. It will be monitored according to the monitoring plan. Finally The grid emission factors are determined ex-ante as, for

electricity from project electricity consumption is 1.3 tCO2/MWh as a conservative value according Option A2 of the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption", version 1

Project emissions due to electricity consumption to meet the project's requirements are calculated on the basis of this ex-ante estimation of electricity consumption times the grid emission factor and considering a 13.5% of average technical transmission and distribution losses according to the applicable tool "Tool to calculate baseline, project and/or leakage emissions from electricity consumption

In the initial versions of the PDD, there was a description of the calculation of emission factor of the grid, which did not comply strictly with the provisions of the "Tool to calculate the emission factor for an electricity system" v02. The Determination team asked the PP, clarification on the conservativeness of the assumptions taken in relation to the calculation of emission factor of the system. PP opted in version 02.2 by considering the default value according to the option A.2 Scenario A of the "Tool to calculate baseline, project and / or Emissions from Electricity consumption" v01. The determination team considered that this decision is in accordance with the requirements of the mentioned tool.

A spreadsheet /15/ has been prepared and submitted to the determination team. All the formulae used in this spreadsheet are listed in the PDD, the references of the default values are detailed and the values are considered reasonable in the context of the proposed project taking into account the general characteristics of a landfill. These characteristics were crosschecked against the technical documents provided to the audit team.

During the determination activities, CAR 3 was raised to the PP in order to clarify the suing of the CDM approved methodology and the explanations included in the PDD. On the other hand, there were detected several inconsistencies between several years in the spreadsheets. The PP modified the PDD and the spreadsheets including all the issues of the CAR 3, hence, CAR 3 was closed.

The last version of the spreadsheets details all the algorithms for the calculation of the project and baseline emissions, and all of them are in conformance with the methodologies and tool. The spreadsheets are organized in four sheets. The audit team has replicated the calculations of the spreadsheets, and the results are in conformance with the relevant methodology and tools.

Relevant key factors are described and their impact on the baseline. The project's spatial boundaries are clearly defined. The used approach is transparent, reproducible and conservative.

For all these reason, the audit team considers the application of the baseline methodology transparently detailed in the PDD. The no consideration of the leakages and

the calculations are in accordance with the provisions of the relevant methodology and tools.

3.4 Additionality

Approved consolidated baseline methodology "ACM0001 – Consolidated baseline methodology for landfill gas project activities" / Version 11 and the latest version of the "Tool for the demonstration and assessment of additionality" Version 05.2, EB 39 were applied in the elaboration of the present JI-PDD as indicated in the methodology.

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

All alternatives considered are in compliance with all national laws and regulations.

The project proponent has identified three plausible baseline scenarios*:*

- LFG1*:* LFG is captured and flared without JI assistance
- LFG2*:* Free release of LFG in the atmosphere *(*continuation of the current situation*)*
- LFG3*:* Partial capture and flaring of LFGAs.

There is neither legally binding mechanisms nor incentives encouraging the development of this particular project out of JI context, LFG1 option is not plausible.

According to the PP all the alternatives are in line with the mandatory regulations in Ukraine

Step 2, is not applicable to the project activity

Step 3 *Investment analysis:*

Sub-step a: Determine appropriate analysis method.

The project proponent has applied a simple cost analysis since the project activity does not generate any financial or economic benefits other than CDM related income. AENOR considered this option correct.

Sub-Step b: Apply simple cost analysis

During the determination activities CAR4 was raised in order to clarify the use of information used to back up the financial analysis and to clarify the barrier analysis, and to solve some inconsistencies between the information provided in the PDD and the provided in the spreadsheet. The PP successfully replied to request and CAR4 was closed.

The estimated investment on the gas collection system and on the gas flaring system was USD 592,332. The investment analysis has been assessed by the validation team and it

can be concluded that the figures included are conservative. The financial calculation /17/ has been reproduced and considered correct, and the main data for the financial calculation, such as financial and technical specification, cost of electricity and engineering plan /18/ /19/ /20/, have been assessed and considered acceptable by the determination team.

A. Initial Costs	UAH	USD
Construction Costs	1.647.666	207.886
Installation costs	171.810	21.677
Equipment costs	2.494.269	314.702
Contingencies	380.963	48.066
Total	***4.694.708***	***592.332***

B. O&M Costs	USD/ operation year
Project operation	30.300
Electricity Consumption	10.721
Total O&M Costs	***41.021***

In comparison with the assessed alternative LFG1 and LFG3, the alternative LFG2 involves no capital investment. It also has been confirmed from the site visit that currently passive venting of LFG has being been practiced at the project site.

Considering that there are no other sources of revenue expected than the sale of CERs, and the additional costs necessary for the LFG capture system, without having any revenues, it can be concluded that the project is not a likely baseline scenario, and therefore it is demonstrated that there is at least one alternative which is less costly than the project activity.

Determination team considered that Simple Cost analysis is enough to demonstrate the additionality of the JI project Activity.

In summary, it is AENOR's opinion that the additionality of the project is sufficiently demonstrated based on the investment analysis and thus it is sufficiently demonstrated that the project is not a likely baseline scenario and those emission reductions are therefore additional.

During on site assessement AENOR could prove that there is only one project where a LFG collection and flaring system is installed, "Landfill methane capture and flaring at Yalta and Alushta Landfills, Ukraine", but that project is implemented under the JI framework. There are no LFG utilization projects in Ukraine that have been developed without the JI mechanism.

3.5 Project Boundary

The project boundaries are clearly defined in the PDD, and are stated in accordance with CDM approved methodology ACM0001 (version 11), since the spatial extent of the project boundary is the landfill site, as well as all power plants connected to the Ukrainian grid.

CAR 5 was raised to the PP since the graph included in the first version of the PDD was not in accordance with the explanation of the boundaries. Since the graph has been modified in the last version of the PDD, the CAR 5 has been accordingly closed.

Regarding the sources and gases considered in the project activity, a table considering the CH_4 emitted in the baseline scenario and CO_2 emissions from on site electricity use in the project scenario has been included in the PDD, Section B.3. This table is considered by the audit team in accordance with the characteristics of the project, and in accordance with provisions stated in the approved CDM methodology.

3.6 Crediting Period

The starting date of a JI Project is the date on which the implementation or construction or real action of the project will begin or began. The start date included in the PDD is considered as the date when the Investment Contract Nº 420/09.001 /21/ was signed between the Luhansk City Council and Nedra Luhanshchyny LLC for implementation of the project, on 19/06/2009. The audit team was provided for the document and it is considered in accordance with definitions stated in the JI Glossary of Terms (version 02) /22/.

The first version of the PDD detailed a wrong starting date not matching with the definition of the Glossary of Terms, so CAR 6 was raised. Since the date was corrected in the PDD, the evidence submitted to the audit team, and both were considered in accordance with the official requirement, CAR 6 was accordingly closed.

Regarding the operational lifetime of the project, it has been clearly stated in the PDD as 20 years and 0 months. It has been considered in accordance with the chronogram /23/ prepared by the PP and in line with other LFG projects. The first version of the PDD included a wrong format of the lifetime, so, CAR 7 was raised. The new version of the PDD was corrected, and it is considered in accordance with JI requirements, so CAR 7 was accordingly closed.

On the other hand, the crediting period has been stated in the last version of the PDD as 9 years and 3 months starting on 01-10-2010. During the on site visit, the audit team confirmed that the starting date of the crediting period matched with commissioning date scheduled by the PP. The crediting period has not been extended beyond the operational lifetime of the project, so it is in accordance with the JI requirements. Nevertheless, if the crediting period extends beyond 2012, it will be subject to a new agreement replacing the Kyoto Protocol and a decision by Ukrainian government, as it is clearly described in the PDD. Furthermore, the estimate of the emission reductions are included in the PDD in two separated tables, one for those until 2012, and the other for those after 2010.

3.7 Monitoring Plan

The project uses the approved monitoring methodology ACM0001 "*Consolidated baseline and monitoring methodology for landfill gas project activities*" (version 11), thus **Approved CDM Methodology Approach**.

As it has been above detailed, the step 1 of section D.1 of the PDD clearly indicates the title, reference number and version of the approved CDM methodology. Version 11 is the most recent version currently and at the moment of the publication of the PDD in the UNFCCC JI website, as it has been checked by the audit team.

According to the applicability conditions of the approved baseline methodology ACM0001, it is applicable to landfill gas capture projects, where the baseline scenario is total atmospheric release of LFG, and the project involves utilization of LFG for flaring, as in the case of the project activity. The applicability conditions of the methodology are correctly justified in the PDD in accordance with applicability conditions of the methodology and relevant tools referenced in the methodology.

The first version of the PDD included a Monitoring Plan not completely according with the approved methodology since several parameters were not clearly defined, and reference to open flare were included. For this reason, CAR 8 was raised in order to improve the transparency of the monitoring methodology use. The expected technical parameters of the monitoring equipment were crosschecked against the Technical specifications document [24] submitted to the audit team. The last version of the PDD was corrected addressing all the issues included in the Determination Check list, so CAR 8 was accordingly closed.

Thus, AENOR can conclude that the application of the monitoring methodology has been developed according to the UNFCCC guidelines, and its application is transparent. The monitoring plan detailed in the PDD is based on direct measurement of the amount of landfill gas captured and destroyed through flaring. The monitoring plan provides for continuous measurement of the quantity and quality of LFG flared. The monitoring plan also measures the grid electricity consumed by the Project.

A continuous monitoring system for methane fraction of the landfill gas and LFG flow will be installed to continuously acquire data from the process in order to manage it and deliver the required information as an average value in a time interval not greater than one hour. These provisions are stated in accordance with guidelines provided by the approved methodology.

On the other hand, for the determination of the project emissions due to the electricity consumption in the project is calculated in accordance with the "*Tool to calculate baseline, project and|or leakage emissions from electricity consumption*" (version 01). A default value of 1.3 tCO_2/MWh for the emission factor of the national grid is applied, thus in accordance with the referenced tool since the project will consume electricity from the grid.

The list of parameters to be monitored has been checked against the list provided by the methodology and it is considered complete, and all of them are described in accordance with the guidelines proposed in the approved methodology.

Regarding the implementation of the Monitoring Plan, a quality control procedure for the calibration of the equipment used for the monitoring of the parameters involved in the emission reductions will be implemented as per Ukrainian National Standards. The operational and management structure of the project operator involved in the monitoring plan is transparently included in the PDD, and it was checked during the on site visit through interviews of the audit team with the personnel involved.

AENOR has checked that the provisions included in the monitoring plan satisfy the purpose of guaranteeing that the Project is correctly organized since the beginning. The audit team interviewed the person in charge of the supervision of the monitoring activities, and visited the electricity market operator in order to know the functioning of the electricity system of the country.

In the Monitoring works, personnel in charge of it should receive training about monitoring and calibration. There are provisions identified for training of monitoring personnel in the Monitoring Plan. The monitoring Plan includes quality and inspection procedures to ensure monitoring accuracy.

On the other hand, regarding the overlapping of monitoring periods, the monitoring plan of the PDD does not indicate overlapping monitoring periods since the project activity does not identify different components. So, it is in accordance with JI guidelines.

For all these above reasons, AENOR considers that the monitoring Plan provides the relevant data necessary to determine and monitor the emissions reductions made by the Project in accordance with the methodology ACM0001, the "*Tool to calculate baseline, project and|or leakage emissions from electricity consumption*" and the "*Tool to determine project emissions from flaring gases containing methane*". The Monitoring Plan provides information about frequency and responsibility for controlling and reporting during the crediting period in a transparent and consistent way, complying with the requirements stated in the

methodology, tool and in the Determination and Verification Manual and being feasible within the project design.

Finally, AENOR considers that the Project Participant is able to implement the monitoring plan stated in the PDD version 02.2 taking into account all the reasons explained above.

3.8 Leakage

This section is not applicable since according to ACM0001, the Project results in no leakage.

3.9 Estimation of emission reductions

The methodology for calculating emission reductions is transparently documented and it complies with existing good practice. The calculation methods applied to the determination of emission reduction are explained in detail in the PDD and they follow the procedures laid down in the approved methodology ACM0001 *(*Version 11*)* and the corresponding tools as it has been explained below sections of this Determination Report.

The emissions reductions as result of the Project are equal to the baseline emissions less project emissions in accordance with following formulae:

$$ER_y = BE_y - PE_y$$

Formulas and factors used to calculate them were properly described in the PDD in SectionD.1.2.2 and were considered transparent and in accordance with the methodology and tools.

- **Baseline Emissions *(BEy)***. For the ex-ante calculation it is made using the formulae provided in the "*Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site*". The sheet prepared for this calculation has been transparently organized including the formulae of the yearly methane generation potential of the solid waste composted as described in the tool. For the calculation during the crediting period of the project they have been calculated as the quantity of methane destroyed by flaring. It is also considered in the sheet prepared for the monitoring of the emission reductions.
- **Project emissions *(PEy)***: the project emissions for the project are the sum of two kind of project emissions, project emissions from flaring gases containing methane, calculated in accordance with the "*Tool to determine project emissions from flaring gases containing methane*", and project emissions from the net import of

electricity from the grid, calculated in accordance with "*Tool to calculate baseline, project and|or leakage emissions from electricity consumption*".

In the validation team opinion the emissions reductions are estimated using the same formulae than in the relevant tools and methodologies. The default values comes from the 2006 IPCC, as it is recommended in the methodologies, and the veracity of the values used has been evidenced with the technical documents of the project.

The ex-ante estimation of emissions reductions is following detailed:

Years	***Annual estimation of emission reductions in tonnes of CO_2e***
2010	5,537
2011	21,177
2012	20,248
Total estimated reductions (tonnes of CO2e)	46,962
Total number of crediting years	3
Annual average over the Crediting period of estimated reductions (tonnes of CO_2e)	**20,872**

Years	*Annual estimation of emission reductions in tonnes of CO_2e*
2013	19,362
2014	18,516
2015	17,709
2016	16,938
2017	16,202
2018	15,499
2019	14,827
Total estimated reductions (tonnes of CO2e)	119,053
Total number of crediting years	7
Annual average over the Crediting period of estimated reductions (tonnes of CO_2e)	**17,008**

These estimates have been made on an annual basis, from the beginning until the end of the crediting period, and separated in two different tables because the second period is subject to a new agreement replacing the Kyoto Protocol as it has been previously detailed. The emissions reductions have been calculated in tCO_2e, using the global warming potential of CH4 of 21 as it has been defined in the methodology ACM0001 and Decision 2/CP.3, and the formulae used and the estimates made are consistent throughout the PDD and in accordance with the methodology and tools. And the annual average has been calculated by dividing the total estimated emission reductions (46,962 tCO_2e during the first period and 119,053 tCO_2e during the second one) by the total months of the crediting period (27 months during the first period and 84 months during the second one), and multiplying by twelve.

In order to validate the data and results included in the PDD, information regarding to the electrical system of Ukraine was checked by AENOR through the interview with Energorynok, and the technical specifications of the flare. On the other hand, calculations have been reproduced using the parameters values provided in the PDD version 02.2, by the audit team and the same results have been obtained, achieving the transparency, accuracy and consistency principles required for the JI projects. The formulae has been correctly applied and in accordance with the Methodology and relevant tools. The data and formulae used for the ex-ante estimation are real, the sources of information have been correctly referenced, and the options chosen are in accordance with the real situation of the project and in accordance with the methodology and tool.

In conclusion, AENOR is able to confirm that:

1. All the assumptions and data used by the project participant are listed in the PDD, including their references and sources.
2. All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD.
3. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable.
4. Relevant national and national circumstances are considered and listed in the PDD.
5. The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario, and the identified baseline scenario reasonably represents what would occur in the absence of the proposed JI Project.

3.10 Environmental Impacts

According to State Construction Standards DBN A.2.2-1-2003 [25], the project has completed all necessary procedures for the assessment and analysis of its environmental impact. This issue was crosschecked by the audit team during a meeting with the DFP personnel in Kiev, during the on site visit, and it is detailed in the PDD.

An Environmental Impact Assessment study has been developed and approved by the National Environmental Agency of Ukraine. The impacts have been analyzed and no transboundary impacts have been detected. The implementation of the Project will deliver a number of positive environmental effects. The collection of LFG prevents the accumulation of biogas inside the landfill, which can cause explosions or spontaneous fires. The flaring of landfill will also reduce the emissions of odorous gases, as well as methane, which is a highly potent greenhouse gas.

The PDD provides conclusion of the environmental impact assessment, and the main impacts detected, all of them considered as positive impacts.

3.11 Comments by Local Stakeholders

Stakeholder consultations on the Project were held in Luhansk Oblast in cities close to the landfill in the Oleksandrivsk Town on December 10, 2009 and in Luhansk City on December 11, 2009. During the determination activities it was detected that the complete list of the stakeholders attended to the meeting were not correctly included in the PDD, thus, CAR 9 was raised to the PP. The Annex 4 of the PDD was improved and the complete list was included, thus, CAR 9 was closed. On the other hand, the list of stakeholders was crosschecked by the audit team during the on site visit through interviews with the representatives of the community.

The consultations were publicized in the evening newspaper "*Luhansk Evening City*" and on the local television, as the audit team could check during the on site visit. No negative feedback was received. The minutes of all the meetings developed have been provided to the audit team /26/, and all of them are consistent with the PDD.

A summary of the stakeholders' comments was not included in a complete way in the first version of the PDD, thus, CAR 10 was raised. This section was considerably improved and the summary of the main comments received by the PP was included in section G.1 of the PDD. It is in consistent with the opinions received during the on site visit by the representatives of the communities.

Due the reasons explained above, AENOR considers that the local consultation process was adequate to the characteristics of the Project.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to JI Guidelines, the audit team shall make publicly available the PDD and receive, within 30 days, comments on the Determination requirements from parties, stakeholders and UNFCCC accredited NGOs and make them publicly available.

AENOR published the project documents on JI website (http://unfccc.ji.int) on 15th of January of 2010 and invited comments by Parties, stakeholders and non-governmental organizations. No comments were received during this period.

5 DETERMINATION OPINION

AENOR has performed a Determination under "Track 2" of "**Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City**" in Ukraine. The Determination was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation, the on-site visit and the subsequent follow-up interviews have provided AENOR with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the JI and all relevant host country criteria. The Letter of Approval from the DFP of Ukraine is a confirmation of a Project assists in achieving sustainable development of Ukraine.

Once the Letter of Approval has been accordingly obtained, the project is recommended by AENOR for registration with the UNFCCC.

An analysis as provided by the applied project specific methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final version of the PDD.

The Determination is based on the information made available to us and the engagement conditions detailed in this report. The Determination has been performed using a risk based approach, as described above.

The only purpose of this report is its use during the registration process as part of JI project cycle. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the Determination opinion, which goes beyond the purpose.

Madrid, 20 July 2011

2011-07-20	2011-07-20
Luis Robles Olmos	María Carmen González Galán
Climate Change Unit Manager	Chief Determiner

6 REFERENCES

Category 1 documents: Documents provided by the project proponents that relate directly to the GHG components of the project. These have been used as direct sources of evidence for the determination conclusions.

Category 2 documents: Background documents related to the design and/or methodologies employed in the design or other reference documents. Where applicable, Category 2 documents have been used to check project assumptions and confirm the validity of information given in the category 1 documents.

Category	Ref	Document Name	Date	Author/Competent Authority
1	1	Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City PDD (Version 01, version 02 and version 02.2)	19-12-2009 22-03-2010 30-06 2011	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
2	2	ACM0001 "Consolidated baseline and monitoring methodology for landfill gas project activities", version 11	May 2009	JISC - UNFCCC
2	3	Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site (version 05.1) /3/	--	JISC - UNFCCC
2	4	Tool to determine project emissions from flaring gases containing methane (version 01) /4/	--	JISC - UNFCCC
2	5	Tool to calculate baseline, project and/or leakage emissions from electricity consumption (version 01). /5/	--	JISC - UNFCCC
2	6	Tool for the demonstration and assessment of additionality (version 05.2)	--	JISC - UNFCCC
2	7	Joint Implementation Determination and Verification Manual (version 01)	December 2009	JISC-UNFCCC
1	8	Letter of Approval of Ukraine – 1344/23/7	08-09-2010	NATIONAL ENVIRONMENT INVESTMENT AGENCY
1	9	Letter of voluntary withdrawal from Fortis Bank	08-04-2010	FORTIS BANK NV/SA
1	10	National Construction Standard DBN V.2.4-2-2005 General Construction Guidelines for Landfills [Nedra Luhanshchyny]	2005	UKRAINE STATE BUILDING. STATE UKRAINIAN STANDARDS

Category	Ref	Document Name	Date	Author/Competent Authority
1	11	Environmental Impact Assessment Study	2009	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	12	Technical studies of wastes composition 1979-2007	2009	LUHANSK MUNICIPALITY
2	13	IPCC (2006) Volume 5, Chapter 3: Solid Waste Disposal, page 19	2006	IPCC
2	14	Us EPA: a Landfill gas to energy development project handbook	1996	US EPA
1	15	Emission reductions calculation spreadsheet	--	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	16	Evidence on the average temperature and potential evapotranspiration in Lugansk.	-	National Environment Investment Agency.
1	17	Financial calculations spreadsheet	2009	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	18	Scheme of Luhansk Landfill gas recovery engineering project and Technical specification equipment	-	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY / HOFSTETTER
1	19	Investment and Construction Cost Plan and OM cost estimation	2009	Mital Service / "NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	20	Cost of electricity comsumption	2010	National Electricity Regulatory Commission UKRAINE
1	21	Investment Contract Nº 420/09.001 signed between the Luhansk City Council and Nedra Luhanshchyny LLC	19/06/2009	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
2	22	JI Glossary of Terms (version 02)	23-10-2009	JISC - UNFCCC
1	23	Project chronogram	February 2010	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	24	Technical characteristics of the measurement and control equipment for the Collection and Utilization of Methane from Solid Domestic Waste Ground in Luhansk City Project	-	NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	25	State Construction Standards DBN A.2.2-1-2003	2003	State Construction Standards
1	26	Minutes of all the meetings	2009	NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	27	Ukrainian GHG Inventory	2009	National Environment Investment Agency
1	28	Technical Distribution Losses of the Ukrainian grid	2008	UKRAINIAN ACADEMY OF SICENCES
1	29	Evidence of the expected electricity consumption by the project equipment	2009	"NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	30	Report "Definition of qualitative and quantive methane composition in Luhansk landfill based on experimental wells and collectors.	2009	ZEFIR / "NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	31	Pictures from Public discussion of Luhansk landfill gas recovery		NEDRA LUHANSHCHYNY" LIMITED LIABILITY COMPANY
1	32	Invitation to visit Public Consultation of Luhansk Landfill gas recovery project	2009	UNDP
1	33	Positive Conclussion of Correspondence of Luhansk Gas recovery project to normative acts	2009	Regional Inspection for Energy Systems

Category	Ref	Document Name	Date	Author/Competent Authority
1	34	Ecological Expertise of Luhansk Landfill Gas recovery project	2009	State Agency for Environmental protection in Luhansk Region
1	35	Set of legislation that assign Luhansk Authorities to be the regulators and owners of Luhansk Landfill	1976/2008/2009	Luhansk City Council
1	35	Conclusion of Expertise regarding Industrial safety and labour Protection during execution of landfill Luhansk Gas recovery	2009	Luhansk technical Centre of Scientific research for Industrial safety and labour protection.
1	36	Overview of Electricity Market in Ukraine	2007	CASE Ukraine

7 ANNEX 1

DETERMINATION CHECK LIST
Lugansk Landfill Gas Recovery Project in Ukraine

REFERENCE NUMBER OF PROJECT: 2010/064/JI/001
VERSION: 03

Determination team:	
Luis Robles José Antonio Gesto Mercedes García Mª Carmen González	
Address: Genova 6. 28004 Madrid. Spain	**Date:** 2011-07-10

CONTENT:

Table 1 Check list for publication of Project design document

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
11	Are the PDD and any supporting information available in PDF format?	Yes, the PDD and the information provided is in PDF format. A project documentation consisting further information such as a baseline study, a monitoring plan, information Concerning environmental impacts of the project, concerning stakeholder consultations and concerning the financial background of the project has been submitted			ok
12	*If the PDD or any supporting documentation contains confidential|proprietary information*, are the two versions (marked-up version and version containing all information) available?	There is no confidential information in the PDD.			ok
13 (a)	Is the correct PDD form developed by the JISC in terms of project scale and type and form version used?	Yes the PDD form used is in accordance with the JISC form version and type.			ok
13 (a) (i)	Is the PDD form developed by	No, some sections of the PDD	**CAR 1: Section D**	Section D is revised in line of	CAR1

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	the JISC not altered?	form have disappeared and the information regarding the monitoring plan is not presented according to the form.	**of the PDD has to be in line with the approved form.**	the PDD form. Please note that the comment on p. 18 of the "Guidelines fro Users of the JI PDD Form" allows to use the tables used in the current PDD instead of the tables provided originally in the PDD form.	CLOSED
13 (a) (ii)	Is the PDD form the most recent version developed by the JISC? If not, is the PDD form still within the grace period (was the PDD form revised to a newer version in the past six months)?	Yes, the PDD form is the most recent version.			ok
13 (b)	Are all documents for submission correctly referenced?	Yes			ok
13 (c)	Are all documents and annexes listed in the table of contents of the PDD available for submission?	Yes, all the documents listed in the table of contents are included in the PDD.			ok
13 (d)	Are all documents for submission in English? *If official documents are in other languages*, is an official translation provided?	Yes			ok
13 (e)	Is all the information marked	There is no confidential			ok

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	as confidential or proprietary ready for submission? Is the information used for the following not considered as proprietary or confidential? – To demonstrate additionality; – To describe the baseline methodology and its application; – To support an environmental impact assessment.	information in the PDD.			
14	*If the AIE received comments on the PDD and any supporting information from Parties, stakeholders and UNFCCC accredited observers within the* 30-*day period*, did the AIE promptly acknowledge the receipts of the comments?	Period of comments for Lugansk project was from 16th January 2010 to 14th February 2010. No comments have been received.			ok

Table 2. Checklist for determination

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
Project approvals by Parties involved					
19	Have the DFPs of all Parties listed as Parties involved in the PDD provided written project approvals?	The Ukainian Letter of Endorsement has been submitted to the determination team, but the title of the project is different from which appears in the PDD.	**CAR 2: The title of the project has to be clarified. An official English translation of the Letter of endorsement has to be provided to the determination team. The definitive project approval, including the authorization of the PP, from Belgium and Ukraine has to be submitted to de determination team**.	The title of the project is revised in line with the title in the official English translation of the LoE. According to Ukrainian regulations, a LoA can be provided only after the determination is completed. LoA from Ukraine has been provided to the validation team	OK.
19	Does the PDD identify at least the host Party as a Party involved?	Yes, two Parties involved are included in the initial PDD: -Ukraine as host Party - Belgium		A project participant, FORTIS has withdrawn its participation in the project, thus, Belgium is not involved in the project according to the final PDD version 02.2. A letter from FORTIS regarding this issue has been provided to the determination team.	OK
19	Has the DFP of the host Party issued a written project	To be assessed according to CAR 2	**CAR 2**	LoA from Ukraine has been provided to the validation team	OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	approval?				
20	Are all the written project approvals by Parties involved unconditional?	To be assessed according to CAR 2	**CAR 2**	LoA from Ukraine has been provided to the validation team and it is unconditional	OK
Authorization of project participants by Parties involved					
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: – A written project approval by a Party involved, explicitly indicating the name of the legal entity? Or – Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	The Ukrainian letter of endorsement explicitly indicates the name of the legal entity: "Nedra Luhanshchyny". To be assessed according CAR 2.	**CAR 2**	LoA from Ukraine has been provided to the validation team and it includes the name of the legal entity. *NOTE: It is worth mentioning that the translation from ukranian into English can follow small methodological variations, but the determination team has assessed and confirmed with the involved agents that the mentioned entity is the right entity.*	OK
Baseline setting					
22	Does the PDD explicitly indicate which of the following	Yes, the PDD clearly indicates that the approach used is: -Approved CDM methodology approach			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	approaches is used for identifying the baseline? – JI specific approach – Approved CDM methodology approach				
	JI specific approach only: *Paragraphs* 23-25	N/A			
	Approved CDM methodology approach only				
26 *(a)*	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	Yes, the methodology used is ACM0001, version 11.			OK
26 *(a)*	Is the approved CDM methodology the most recent valid version when the PDD is submitted for	Yes, the version of the methodology used is the most recent version ACM0001 *(11)*			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?				
26 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	Yes, the PDD stated the reasons why the Methodology is applicable to the project, and these reasons are consistent with the methodology's criteria of applicability.			OK
26 (c)	Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?	No. Some of the assumptions and analyses are not in line with the tools and the methodology, and some of the assumptions and analyses are not properly backed up by evidences.	**CAR 3:** **-Acronyms and definitions have to be identical to the tools and methodology, e.g $MD_{reg,y}$, on page 13 of the PDD.** **-Steps 5-6-7 of the "*Tool to determine project emissions from flaring gases containing methane*" have to be described properly in accordance with the tool.** **-The determination of the emission factor for**	Acronyms and definitions were corrected in line with the methodology. Steps 5-6-7 of the "Tool to determine project emissions from flaring gases containing methane" are now described in accordance with the Tool. The emission factor is determined conservatively in accordance with Option A2 of the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption."	CAR3 CLOSED

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
			electricity generation has been calculated according option A1 of the "*Tool to calculate baseline, project and/or leakage emissions from electricity consumption*". The PP shall clarify the conservativeness of this decision. - **The step 6 of the "Methodological tool to determine project emissions from flaring gases containing methane" was partially applied. In the PDD, two items are mentioned: temperature and manufacturer specifications. The third one, period in hour h linked with the manufacturer specifications and the temperature of 500°C was not mentioned and this differs from the Methodological "Tool to determine project**	A justification of the LFG collection efficiency has been provided to the determination team. Third party references regarding the efficiency of LFG collection systems have been provided to the determination team, as well as evidence for the justification of the amount of electricity imported. Changes in the PDD, Section B and Section D, are made to fully apply step 6 of the "Tool to determine project emissions from flaring gases containing methane The inconsistencies regarding years 2009-2010 have been corrected in the PDD version 02.2. .	

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
			emissions from flaring gases containing methane" - **- Values such as the parameter *"LFG collection efficiency"* and the value for ex ante calculations of the parameter *"total amount of electricity imported to meet project requirement"*, among others, have to be properly backed up by evidences.** **- There are inconsistencies regarding the years 2009-2010 and the length of the crediting period in the spreadsheet and the PDD. These inconsistencies have to be solved and clarified.**		
26 *(d)*	Is the baseline identified appropriately as a result?	To be assessed according CAR 3	**CAR 3**		CAR3 CLOSED According to information and changes resulting from the response to the CAR ·3, it is possible to confirm that the baseline

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
					has been correctly calculated
Additionality					
	JI specific approach only Paragraphs 28-30	N/A			
	Approved CDM methodology approach only				
31 *(a)*	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	Yes, The methodology used is ACM 0001 "Consolidated baseline and monitoring methodology for landfill gas project activities" version 11.			OK
31 *(b)*	Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project?	Yes, the PDD stated the reasons of why the Methodology is applicable to the project, and these reasons were considered clearly detailed according to the criteria of applicability of the methodology			OK
31 *(c)*	Are all explanations, descriptions and analyses with regard	Yes, the explanations, descriptions and analyses with regard to additionality have been			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	to additionality made in accordance with the selected methodology?	made in accordance with the selected methodology and the tool for the demonstration and assessment of additionality. The option "simple cost analysis" has been selected since the project does not generate financial or economic benefits other than JI revenues. This argument is considered in accordance with the additionality tool.			
31 (d)	Are additionality proofs provided?	No, there is no enough information to assess the additionality of the project.	**CAR 4: The description of the *sub-step 2b: Apply simple cost analysis* has to be improved, with more accurate information, because there is some inconsistencies between the financial data in the PDD and in the spreadsheet (e.g. *"flaring equipment cost"*. Further information regarding the additionality analysis has to be submitted to the determination team, documented evidences of all the values involved in the analysis of the**	The simple costs analysis is revised and properly reflected in the PDD. Investment costs are based on the costs estimates prepared by the engineering consulting company Mital Service. O&M costs estimates are based on the information provided by the project developer to the determination team. Costs of electricity consumption are incorporated in the O&M Costs. Price of electricity is based on an Order by National Electricity	CAR4 CLOSED

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
			additionality shall be provided e.g.: -Evidences of the Investment cost, -O&M costs, etc. "Investment barriers, other than the economic/financial barriers, has to be clarified or removed from the PDD	Regulatory Committee of Ukraine (No. 278/24/03/2010). The evidences provided are considered valid and appropriate by the determination team. The PDD is amended and step 3 is removed. To reflect this, changes are also made in Sections A and B of the PDD.	
31 (e)	Is the additionality demonstrated appropriately as a result?	**To be assessed according CAR 4**	**CAR 4**		CAR 4 CLOSED Yes, additionality has been correctly demonstrated and baked up with evidences
Project boundary (applicable except for JI LULUCF projects)					
	JI specific approach only Paragraph 32	N/A			
	Approved CDM methodology approach only				

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
33	Is the project boundary defined in accordance with the approved CDM methodology?	The text defining the project boundaries is in accordance with the Methodology ACM 0001 (v11) but the graph on page 27 is not consistent.	**CAR 5: The graph (page 27 of the PDD) in relation to the project boundaries has to be improved to clarify the boundaries of the project.**	The graph on page 27 is revised and it is consistent with the text in the PDD version 02.2.	CAR5 CLOSED
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?	No, the starting date does not match with the definition: "*implementation or construction or real action of the project begins*." Page 57 of the initial PDD states that the date in which gas collection project starts is 01-07-2010.	**CAR 6: The starting date of the project shall be specified and backed up in accordance with JI guidelines and glossary.**	The PDD has been revised by the PP and version 02.2 has been issued. In line with the definitions of the JI glossary, the starting date of the project is specified as the date of signing the investment contract with the Lugansk City Council, as this is the date when real action (investment on the project) commenced (19/06/2009). A scanned copy of the contract has been provided to the determination team.	CAR6 CLOSED
34 (a)	Is the starting date after the beginning of 2000?	Yes. The PDD states that the starting date of the project is 01/07/2010 To be assessed according to **CAR 6**	**CAR6**		CAR6 CLOSED

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	No, the PDD states that the operational lifetime is 20 years.	**CAR 7: The operational lifetime has to be specified properly defining years and months**	The operational lifetime is specified in years and months in PDD v02.1.	CAR7 CLOSED
34 (c)	Does the PDD state the length of the crediting period in years and months?	Yes, the crediting period is between 01/10/2010-31/12/2019 (9 years and 3 months).			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	Yes. During the on site assessment was confirmed that the starting date of the crediting period matches with the commissioning date scheduled. To be assessed according to **CAR6**	**CAR 6**	The starting date of the crediting period in the final version of the JI-PDD is 1-10-2010	CAR6 CLOSED
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?	Yes, the starting date of the first versions of the JI-PDD the crediting period is 01/07/2010, and the length of the crediting period is less than the operational life.		The starting date of the final version JI-PDD V.02.1 of the JI-PDD the crediting period is 01/10/2010, and the length of the crediting period is less than the operational life	OK
34 (d)	*If the crediting period extends beyond* 2012, does the PDD state	The PDD states that the extension of the crediting period beyond 2012 is subjected to the			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	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	approval of the Ukrainian government. The estimates of ERUs are presented in two tables, one for those until 2012 and other for those after 2012			
	Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? – JI specific approach – Approved CDM methodology approach?	The Monitoring Plan has been prepared in accordance with ACM 0001 v 11, thus the Approved CDM methodology approach has been used.			OK
	JI specific approach only Paragraphs 36-37	N/A			
	Approved CDM methodology approach only				
38 *(a)*	Does the PDD	Yes, the methodology used is			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	provide the title, reference number and version of the approved CDM methodology used	ACM 0001 "Consolidated baseline and monitoring methodology for landfill gas project activities" version 11			
38 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	Yes, The ACM 0001 version 11, is the most recent version of the methodology			OK
38 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	Yes, the PDD section B stated the reasons why the Methodology is applicable to the project, and these reasons were considered correct according to the criteria of applicability of the methodology and the information obtained from the on site visit. The project also complies with the applicability conditions of the tools associated to ACM 0001			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
38 (c)	Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?	No, the monitoring plan is not in line with the Monitoring Methodology of the AC0001 v11.	**CAR 8:** **-The Monitoring Plan and the parameters to be monitored have to be defined according to the monitoring methodology ACM0001 v. 11., e.g. $PE_{flare,y}$** **- Documented evidences of the technical characteristics of the measurement and control equipment have to be provided.** **-Reference to an "open flare" in page 40 has to be clarified.** **Section D.1.2.1 a – items not monitored during the crediting period but are determined only once, E.G. the parameter TDLy is stresses to be a fixed parameter. This differs from the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption"**	The monitoring plan and the parameters to be monitored are defined according to ACM0001, in the version V20.1 (final) The expected technical parameters of the monitoring equipment have been provided to the determination team./18/ The reference regarding open flare on page 40 was removed, as this was a typo The monitoring plan is amended and TDLy is specified to be annually monitored in line with version 01 of the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption	CAR8 CLOSED
38 (d)	Is the monitoring plan established	To be assessed according to CAR 8	**CAR 8**		Once CAR 8 has been

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	appropriately as a result?				solved, it can be confirmed that the MP is established appropriately and assures that the emissions reductions can be determined fairly
	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	The monitoring plan does not indicate overlapping monitoring periods. No overlapping monitoring periods can occur since the project activity do not indentify different components.			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component) (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping				

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in *(a)-(c)* are met?				
Leakage					
	JI specific approach only *Paragraph* 40	N/A			
	Approved CDM methodology approach only				
41	Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology	According to ACM0001 v11 leakage from this project does not need to be accounted.			ok
Estimation of emission reductions or enhancements of net removals					
	JI specific approach only *Paragraph* 42-46	N/A			
	Approved CDM methodology				

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	approach only				
47 (a)	Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology?	To be assessed according CAR3	**CAR 3**	CAR 3 has been solved since the PDD has been modified and the new calculation spreadsheets have been provided to the Determination team.	CAR3 CLOSED Yes, emissions reductions calculation are made according to the provisions of the methodology and associated tools. The Determination team has reproduced the calculations and the same result has been obtained.
47 (b)	Is the estimation of emission reductions or enhancements of net removals presented in the PDD:				
	– On a periodic basis	Yes			Ok
	– At least from the beginning until the	Yes			Ok

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	end of the crediting period?				
	– On a source-by-source/sink-by-sink basis?	Yes			Ok
	– For each GHG?	Yes			Ok
	– In tones 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?	Yes			Ok
	-Are the formula used for calculating the estimates consistent throughout the PDD?	To be assessed according CAR 3	**CAR 3**	CAR 3 has been solved since the PDD has been modified. The emissions reductions estimated are mentioned in the PDD version 02.2 consistently	CAR3 CLOSED
	– Are the estimates consistent throughout the PDD?	To be assessed according CAR 3	**CAR 3**		CAR3 CLOSED
	– Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total	To be assessed according CAR 3	**CAR 3**		CAR3 CLOSED

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve				
	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?	Yes. The PDD describes a set of the main environmental impacts of the project. No transboundary impacts have been identified. EIA has been provided and the information included in the PDD is consistent with the PDD /11/			OK
48 (b)	*If the analysis in* 48 *(a) indicates that the environmental impacts are considered significant by the project participants or the host*	The PDD provides conclusion of the environmental impact assessment. No negative significant have been described impacts Collection of LFG has a			OK

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project of project participants' action	Conclusion
	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	significant positive impact of environment.			
	Stakeholder consultations				
49	*If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party*, does the PDD provide:				
	(a) A list of stakeholders from whom comments on the projects have been received, if any	No, the PDD outlines a list of diverse organizations (UNDP, Private Companies involved in the project, and Public administrations) but it does not provide a List of all the stakeholders who attended the meeting. Minutes of the meeting	**CAR 9: A complete list of the stakeholders attended to the meeting has to be incorporated to the PDD, detailing those who have made any comment.**	A complete list of the stakeholders participating in the meeting is provided in Annex 4 of the PDD. The PDD v 02.1 was revised to incorporate the names of those who made comments	CAR9 CLOSED

DVM paragraph	Check item	Initial finding	Action requested to project participants*(*incl. CAR, CL or FAR*)*	Review of project of project participants' action	Conclusion
		"Discussion of Lugansk landfill gas recovery project" have been submitted to the determination team. The minutes contains the names and comments of the stakeholder			
	b*)* The nature of the comments	The PDD states that in general terms the comments from the stakeholders were positive, with two main key questions: the reason of not producing heat or electricity and the technical conditions for capping the landfill.			
	c*)* A description on whether and how the comments have been addressed	The PDD states that along the meeting the project proponent gave the proper answers to the diverse comments but more information is necessary, in section G1.	**CAR 10: Further information about how the comments have been addressed has to be described in the PDD.**	The PDD was revised to reflect how the comments made by the participants in the stakeholders' consultations were addressed *(*final version of the JI-PDD v02.1*)*	CAR10 CLOSED

Table 3 Check List for preparation of determination report

DVM paragraph	Check item	Initial finding	Action requested to project participants(incl. CAR, CL or FAR)	Review of project participants. action	Conclusion
75	Is the determination report available for publication in PDF format?	Yes it is			Ok
75	Does the determination report include: (a) The AIE´s determination pursuant to paragraph 33 of the JI guidelines? (b) An explanation of its reasons for the determination? (c) A summary of comments received pursuant to paragraph 32 of the JI guidelines? (d) A report of how due account was taken of these comments?	LoA has to be provided to the Determination team Yes, The determinitation opinion is based on evidences and it is reasoned No comments were received during GSC No comments were received during GSC			LoA has been provided
77	Is the determination report prepared using F-JI-DRep or F-JI PoA-DRep?	This shall be checked once LoA is provided			Yes determination report prepared

					using F-JI-DRep
77	Is the determination report attached with: *(a)* The JI PDD of the project? *(b)* Written approvals by all Parties involved in an alphabetical order? *(c)* Other relevant documents? e.g.: *(i)* Any determination protocol used in the determination process *(ii)* A list of persons interviewed by the AIE.s determination team during the determination process.	 Yes it is The LoA from Ukraine has to be provided to the determination team. Yes it is Checklist is provided A list of persons interviewed is provided		LoA has been provided	OK
78	Is a report providing comprehensive and detailed information on the determination prepared as one of .Other relevant documents.?	Yes it is A detailed report has been written and attached.			ok
78	Is the report drafted by the team who undertook the detailed assessment of the project?	Yes. The report has been written by team members			ok
78	Is the report independently reviewed by a technical reviewer, who is not a member of the team?	Yes the report has been reviewed by a technical reviewer, who is technical			ok

		expert for landfill gas Projects, and he has not participated in the project´s determination			
78	Does the report include: (a) The determination process (steps) taken (e.g. desk review, project site visit if conducted, interview with project participants, follow-up exchanges)? (c) Details of personnel involved in the determination (e.g. names and roles of determination team members, name of technical reviewer)? (d) Summary of assessment for each JI project requirement including: (i) Project approval by Parties involved? (ii) Baseline setting (including additionality)? (iii) Monitoring plan?	Yes, all the steps have been described in the detailed report. The name and qualifications of the team members and technical reviewer have been provided. Yes, all the requirements have been assessed and reported. LoA has to be provided to the determination team. Baseline and Aditionality have been assessed and reported. Monitoring Plan have been		LoA has been provided	OK

	(iv) Estimation of emission reductions or enhancements of net removals? (v) Environmental impacts? (vi) Comments by stakeholders? (e) Determination opinion (conclusion), including the reasons? (f) References to the documents/information used in the determination? (g) A check list that details its assessment on each JI project requirement, using the form in the annex to the DVM?	assessed and reported Emissions reductions have been assessed and reported Environmental Impacts have been assessed and reported Comments by Stakeholders have been assessed and reported Determination opinion has been included and it is justified. A list with evidences and documents has been attached to the detailed report. The checklist form in the annex to the DVM has been used.			
79(a)	Is the correct version of the PDD form used?	Yes it is			ok
79 (a)(i)	Is the PDD form developed by the JISC not altered?	Yes, the PDD form has not been altered			ok

79(a)(ii)	Is the PDD form the most recent version developed by the JISC? If not, is the PDD form still within the grace period (was the PDD form revised to a newer version in the past six months)?	Yes it is. The PDD form is v01.			ok
79(b)	Is the correct version of the JI determination report form used?	The DR form will be the most recent version		LoA has been provided	OK
79(c)	Are all documents for submission correctly referenced?	Yes it is			ok
79 (d)	Are all documents and annexes listed in the table of contents of the PDD, in the JI determination report form and in the list of documents presented together with the determination report available for submission?	Yes they are. All the documents and annexes are avalaible for submission.			ok
79 (e)	Are all documents for submission in English? If official documents are in other languages, is an official translation provided?	All documents for submission are in English language.			ok
79 (f)	Is all the information marked as confidential or proprietary available for submission?	There is no confidential information in the PDD			ok
79 (f)	Is the information used for the following	There is no confidential			ok

	not considered as proprietary or confidential? - To demonstrate additionality; - -To describe the baseline methodology and its application; - To support an environmental impact assessment. -	information in the PDD			
79 (g)	Are the project approvals by Parties involved unconditional and in writing and clearly identify the project for which the approval is granted? Is an official translation of an approval into English provided, in case the original is not issued in English?	LoA has to be provided to the determination team		LoA has been provided	OK
79 (h	Are project participants identified consistently throughout the whole submission of the determination? Does an authorization of a legal entity to participate in the JI project clearly identify the legal entity listed in the PDD, for which the authorization is granted? Is an official translation of an authorization into English provided, in case the original is not issued in English? Does the modalities of communication clearly identify the project participant(s) nominated as focal point(s) for handling communications with the JISC, provide	This shall be checked once LoA and MOC are provided		LoA has been provided project participants are identified consistently throughout the whole submission of the determination The authorization of a legal entity to participate in the JI project clearly identifies the legal entity listed in the PDD, for which the	OK

	contact information and is signed by all project participants?			authorization is granted. Official translation of an authorization into English provided, in case the original is not issued in English? The modalities of communication clearly identify the project participant*(s)* nominated as focal point*(s)* for handling communications with the JISC, provide contact information and is signed by all project participants?	
80	Do all documents provide consistent information with respect to*:* *(*a*)* Project name and UNFCCC reference number *(*b*)* Project scale and sectoral scope *(c)* Estimated amount of emission reductions or enhancements of removal	Yes Reference Number is 212 Yes Yes			ok