Industrie Service

Choose certainty.
Add value.

Final

Determination Report

CARBON CAPITAL MARKETS LTD.

DETERMINATION OF THE JI-PROJECT:

"Landfill methane capture and flaring at Yalta and Alushta landfills, Ukraine"

REPORT NO. 988479

June 15, 2009

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

Industrie Service

Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
988479	2007-10-22	6	2009-06-15	-

Subject: Determination of a JI Project

Accredited TÜV SÜD Unit:	**TÜV SÜD Contract Partner:**
TÜV SÜD Industrie Service GmbH Certification Body "Climate and Energy" Westendstr. 199 80686 Munich Federal Republic of Germany	TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstrasse 199 80686 Munich Federal Republic of Germany
Client: Carbon Capital Markets Ltd . Level 3, 15 Berkeley Street London, W1J 8DY UK	**Project Sites:** Yalta Landfill Alushta Landfill Autonomous Republic Crimea Ukraine

Project Title: Landfill methane capture and flaring at Yalta and Alushta landfills, Ukraine

Applied Methodology / Version: ACM0001, Version 05 **Scope(s):** **1,** 13

First PDD Version:		**Final PDD version:**	
Date of issuance:	2007-04-17	Date of issuance:	2009-02-17
Version No.:	03	Version No.:	08
Starting Date of GSP	2007-04-21		

Estimated Annual Emission Reduction: 43 889 tons CO_2e

Assessment Team Leader:	**Further Assessment Team Members:**
Thomas Kleiser	Olena Maslova, Abhishek Goyal, Robert Mitterwallner

Summary of the Validation Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the JI. Hence TÜV SÜD will recommend the project for approval by the JI Supervisory Committee in case letters of approval of all Parties involved will be available.

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the JI Supervisory Committee and will inform the project participants and the JI Supervisory Committee on this decision.

Abbreviations

ACM	Approved Consolidated Methodology under CDM
AIE	Accredited Independent Entity (for JI)
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
COP	Conference of the Parties
CR	Clarification Request
DFP	Designated Focal Point
DNA	Designated National Authority
DOE	Designated Operational Entity (for CDM)
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
ERU	Emission Reduction Units
GHG	Greenhouse gas(es)
GSP	Global Stakeholder Process
JI	Joint Implementation
JI-SC	Joint Implementation Supervisory Committee
KP	Kyoto Protocol
MP	Monitoring Plan
MOP	Meeting of the Parties
NAP	National Allocation Plan due the EU Emissions Trading Scheme
NGO	Non Governmental Organisation
NM	New Methodology
PDD	Project Design Document
PP	Project Participant
QA	Quality Assurance
QC	Quality Control
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Industrie Service

Table of Contents

Page

1 INTRODUCTION

1.1 Objective

The determination objective is an independent assessment by a Third Party (Applicant or Accredited Independent Entity = AIE) of a proposed project activity against all defined criteria set for the approval of a Project under the Joint Implementation by JI-Supervisory Committee. Determination is part of the JI project cycle and will finally result in a conclusion by the executing AIE whether a project activity is valid and should be submitted for registration to the JI Supervisory Committee (JI-SC). The ultimate decision on the approval of a proposed project activity rests at the JI Supervisory Committee and the Parties involved.

The project activity covered by this validation report has been submitted under the project title:

Methane capture and flaring at Yalta and Alushta landfills, Ukraine

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of JI project activities the scope is set by:

- The Kyoto Protocol, in particular § 6
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the JI
- Decisions by the JI-Supervisory Committee published under http://ji.unfccc.int
- Specific guidance by the JI Supervisory Committee published under http://ji.unfccc.int
- Guidelines for Completing the Project Design Document (JI-PDD), and the Guidance on baseline setting and monitoring given be the JI Supervisory committee
- The applied approved CDM methodology
- The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- Technical guideline and information on best practice

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

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at TÜV SÜD's webpage as well as on the UNFCCC JI-webpage for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. Information on the first and on the final PDD version is presented at page 1.

The only purpose of a determination is its use during the registration process as part of the JI project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the determination opinion, which will go beyond that purpose.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a determination protocol was customised for the project. TÜV SÜD developed a "cook-book" for methodology-specific checklists and protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The determination protocol serves the following purposes:

- It organises, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The determination protocol consists of three tables. The different columns in these tables are described in the figure below.

The completed determination protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Conformity of Project Activity and PDD				
Checklist Topic / Question	***Reference***	***Comments***	***PDD in GSP***	***Final PDD***
The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further subdivided. The lowest level constitutes a checklist question / criterion.	*Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any **Request** has to be substantiated within this column*	*Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification Request (CR)** is used when the validation team has identified a need for further clarification.*	*Conclusions are presented in the same manner based on the assessment of the final PDD version.*

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	***Ref. to table 1***	***Summary of project owner response***	***Validation team conclusion***
If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".*

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	***Id. of CAR/CR 1***	***Explanation of the Conclusion for Denial***
If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.	*Identifier of the Request.*	*This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.*

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "Climate and Energy". The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Thomas Kleiser	**ATL**	☑	☑	☑
Abhishek Goyal	A(E)	☑	☑	-
Olena Maslova	GHG- A	☑	☑	☑
Robert Mitterwallner	GHG- A	☑	☑	-

Thomas Kleiser is the Assessment Team Leader of the project with a background in physics and meteorology. Till 31th of December 2008 he was head of the division CDM and JI at TÜV SÜD Industrie Service GmbH conducting more than 90 validations and verifications of CDM and JI projects. In this position he was responsible for validation, verification and certifications processes for GHG mitigation projects as well as trainings for internal auditors. Since 1st of January he is head of the "Certification Body" of TÜV SÜD.

Abhishek Goyal is a lead auditor for CDM and JI projects and environment/energy expert at TÜV SÜD Industrie Service GmbH. Before joining the TÜV SÜD Industrie Service GmbH he has worked on development of PDDs and methodologies for several energy efficiency, renewable energy, and waste to energy projects. He has broad extensive experience in CDM.

Olena Maslova is an auditor in the "Carbon Management Service" department of TÜV SÜD Industrie Service GmbH in Munich, Germany. She is chemical engineer and host country expert for projects in Ukraine and Commonwealth of Independent States. Olena Maslova specializes in the assessment of CDM / JI projects in the sector of chemical industries and waste handling and disposal.

Robert Mitterwallner is a GHG auditor with a background as auditor for environmental management systems (according to ISO 14001) and expert in environmental permit procedures. He is located at headquarter of TUV SÜD Industrie Service in Munich. He has received training in the JI determination as well as CDM validation process and applied successfully as GHG Auditor for several scopes.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the determination process. A complete list of all documents and proofs reviewed is attached as Annex 2 to this report.

2.3 Follow-up Interviews

From April 23 until April 25 2007 TÜV SÜD (Thomas Kleiser as ATL) performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in the context of this on-site visit.

Asides this direct visit several questions could be clarified by e-mail conversation or on telephone. To make the process as transparent as possible also all requested information from the telephone and email conversation and client's responses to the requests have been included in the determination protocol Table 2 B.

Name	Organisation
Pukhnyuk, Alexandra	SEC Biomass (project developer; responsible for development of baseline scenario and monitoring plan)
Kukhar, Yaroslav Andreevich	Director, GAFSA company
Kolot, Stanislav Vasilyevich	Deputy Mayor of the City of Alushta
Sorokin, Alexander Ivanovich	Director of Municipal Transportation Company of Alushta
Otchenashenko, Yaroslav Borisovich	Deputy Head of Municipal Services Department of Yalta

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD`s positive conclusion on the project design.

The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the determination process, the concerns raised and responses that have been given are summarised in Chapter 3 below and documented in more detail in the determination protocol in Annex 1.

2.5 Internal Quality Control

As final step of a determination, the determination report and the protocol have to undergo and internal quality control procedure by the Certification Body “Climate and Energy”, i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD’s Certification Body whether a project will be submitted for requesting approval by the JI-Supervisory Committee or not.

3 SUMMARY OF FINDINGS

The following description of the project as per PDD could be verified during the on-site audit:

The proposed project is a landfill gas (LFG) collection and flaring project. The project is located in Yalta and Alushta in Autonomous Republic Crimea, Ukraine.

At the very first stage the project included the option to produce electricity for feeding in electricity in the national Ukrainian electricity grid. After carrying out a feasibility study final decision was met to implement only a flare of LFG as a connection to the public grid is unavailable and there are no plans for it to be connected in the next 10 years. The PDD and supporting documentation were amended according to this final decision.

Currently the proposed project includes capturing of LFG and combusting it in the flare. The sectoral scope 1, which was linked with the option of electricity production, is still indicated on the page 1 of this Determination Report in order to coincide with the one at the stage of PDD publication, however is empty due to final decision described above.

The technologies to be applied are an enclosed flare and a gas engine generator for onsite use only as the LFG collection and flaring system requires a certain quantity of electricity to operate.

The main components of the project activity are presented below:

- Landfill covering system
- Landfill gas collection system
- Gas flaring
- Gas engine generator

The overall GHG emission reductions expected from the project are 201.159 t CO_2e over the period 2008-2012 (first commitment period under the Kyoto Protocol).

The project is an innovative project as there is no comparable LFG collection and flaring or utilization systems implemented in Ukraine. Other LFG capture activities in this direction in Ukraine are being developed as JI project, too. Thus the project will play an important role in improvement of the environmental situation in Ukraine and lead the way to further applications of the suggested technology.

All findings are summarized in Table 2A of the attached determination protocol which was finalized after the on-site inspection. The assessment team expressed 11 Clarification Requests and 5 Corrective Action Requests. It should be noted, that some of comments in the table 2A of the determination checklist have been made in consideration of the possible electricity generation as already described above. Due to the long- lasting process of issuance of the Ukrainian LoA as well as some final decisions on the project design an additional exchange of questions has been conducted with regard to the recent JI- SC guidance (Table 2B).

The project applies an approved CDM methodology, ACM0001 Version 5 which was valid at the time of project development.

The indicated baseline of the proposed project activity is the atmospheric release of the gas with no capture and destruction. In spite of existing national norms and standards in the host country (e.g. normative document "ДБН В.2.4-2-2005 (state building norms): Municipal solid waste landfills. Bases of designing" which includes instructions on installation of biogas collecting system), it is though common practice not to implement above mentioned requirement on already existing landfills due to poor budget financing of responsible municipal companies. This fact has been confirmed by

the Head of Republican Committee of environmental protection of Autonomous Republic Crimea Mr. E.G. Bubnov in a letter to PP "Gasfa" and TÜV SÜD (see IRL 26). Therefore TÜV SÜD assessment team confirms that the baseline has been indicated correctly.

The monitoring plan for this particular project activity has been elaborated according to applied approved CDM methodology ACM0001 v. 05 as well as "Tool to determine project emissions from flaring gases containing methane" v. 01. In line with the methodology applied the monitoring plan is based on direct measurement of methane captures and destroyed in the flare. The main parameters which need to be monitored are the quantity of methane actually captured, quantity of methane flared and the fuel consumed by the start-up diesel power generator. According to the flaring tool applied a continuous monitoring of the residual and exhaust gas will be conducted in order to determine the flaring efficiency. Should this not be possible, the tool's 90% default value will be used provided that compliance with manufacturer's specification of flare. For more detailed information refer to section D and Annex 3 (Monitoring plan) of the final PDD. In the opinion of the AIE, the monitoring plan has been elaborated in complete manner and is correct.

According to Ukrainian EIA requirements a complete project design documentation including Environmental Impact Assessment has been submitted to the Republic Committee of the Environmental Protection of the Autonomous Republic Crimea for environmental expertise. A conclusion was made that no significant negative environmental impacts are related to the project activity.

Additionality of the project has been re- assessed due to the final technical decision to implement only flare of LFG and in accordance with the latest version of additionality tool. In doing so simple cost analysis has been applied as for this project no benefits/ revenues exist other than JI income.

Early consideration of JI has been documented by negotiations and contracts between GAFSA and the consultant Scientific Engineering Centre "BIOMASS" Ltd in 2005.

All required documents (planning, waste analysis, background document for financial calculations and calculations of emission reductions, technical studies, licenses etc.) have been submitted to the AIE. All Corrective Action Requests, Clarification Requests and additional requests were closed.

The project complies with all JI requirements. Letter of Approval (LoA) from investor country UK as well as an official LoA from the host country Ukraine is available. In opinion of the AIE the project can be uploaded for final approval at JISC website.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on the UNFCCC website by installing a link to TÜV SÜD’s own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Ebene1_Projekte.aspx?Ebene1_ID=26&mode=1	
Starting date of the global stakeholder consultation process: 2007-04-21	
Comment submitted by: No comments were received.	**Issues raised:** -
Response by TÜV SÜD: -	

Industrie Service

5 DETERMINATION OPINION

TÜV SÜD has performed a determination of the following proposed JI project activity:

Landfill methane capture and flaring at Yalta and Alushta landfills, Ukraine

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the JI. Hence TÜV SÜD will recommend the project for registration/approval by the JI Supervisory Committee.

An analysis as provided by the applied 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 PDD version.

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 the JI project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the determination opinion, which will go beyond that purpose.

Munich, 2009-06-15

Rachel Zhang

Deputy Head of Certification Body "Climate and Energy" TÜV SÜD Industrie Service GmbH

Munich, 2009-06-15

Thomas Kleiser

Assessment Team Leader

Industrie Service

Annex 1: Determination Protocol

Industrie Service

TABLE 1 MANDATORY REQUIREMENTS FOR JOINT IMPLEMENTATION (JI) PROJECT ACTIVITIES

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
1. The project shall have the approval of the Parties involved	Kyoto Protocol Article 6.1 (a)	☑	The project (PDD version 8) is designed as a bilateral JI project with Ukraine as host country and UK as Investor Country. According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) all Letters of Approval (LoAs) for the project, from all involved countries (Ukraine and UK) have to be presented to the audit team before starting the official registration process for this project at the UNFCCC Joint Implementation Supervisory Committee (JI-SC). The project has already received a formal Letters of Approval (LoA) from Ukraine as host country and from UK as involved investor country.
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur	Kyoto Protocol Article 6.1 (b)	☑	The project is considered to lead to additional GHG emissions reductions - compare also with the information in the determination protocol below.
3. The sponsor Party shall not aquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7	Kyoto Protocol Article 6.1 (c)	☑	Article 5 requires "…Annex I Parties to having in place, no later than 2007, national systems for the estimation of greenhouse gas emissions by sources and removals by sinks."

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Article 7 requires Annex I Parties to submit annual greenhouse gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol". United Kingdom has submitted its Initial Report on 11 December 2006 http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/report_final.pdf. United Kingdom fulfils all obligations as requested in case the project will run as second track JI project.
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3	Kyoto Protocol Article 6.1 (d)	☑	The project is additional to domestic actions in United Kingdom.
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects	Marrakech Accords, JI Modalities, §20	☑	According to the information available on the UNFCCC website both countries have installed their Designated Focal Points (DFPs). Furthermore National guidelines and procedures for approving JI projects have been published (see http://ji.unfccc.int/JI_Parties): **Contact data for DFP in Ukraine:**

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			National Environmental Investment Agency of Ukraine 35, Urytskogo str. 03035 Kiev Ukraine Email: info.neia@gmail.com Mr. Igor Lupaltsov Head National Environmental Investment Agency of Ukraine Phone: +380 44 594 9111 Fax: +380 44 594 9115 Email: lupaltsov@ukr.net On December 29th, 2005 the Ukrainian government adopted national procedures for the consideration and approval of JI projects. These procedures had to be approved finally by the Cabinet of Ministers of Ukraine. On February 22nd, 2006 the Cabinet of Ministers in Ukraine approved the decree #206, that submitted the order of evaluation and implementation of the JI projects in the frames of Kyoto protocol. **Contact data for DFP in United**

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Kingdom: Department for Environment, Food and Rural Affairs (Defra) 3rd Floor, Ashdown House, 123 Victoria Street London SW1E 6DE United Kingdom of Great Britain and Northern Ireland Mr. Chris Dodwell Head of Global Atmosphere Division Phone: +44 20 7082 8640 Fax: +44 20 7082 8143 Email: JIFP@defra.gsi.gov.uk In November 2005 United Kingdom published its JI approval and authorisation guidance (JI guidelines) – see under following link: http://ji.unfccc.int/JI_Parties/Parties/Documents/UK01.pdf.
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24, 21	☑	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	☑	This issue cannot be answered finally as it is out of the influence of the project participants. In the Initial Report submitted by

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) tCO2-e. (compare: http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php)
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4	Marrakech Accords, JI Modalities, §21(d)/24, 10	☑	The National Environmental Investment Agency of Ukraine has the overall responsibility for the Ukrainian Greenhouse Gas Inventory and the Ukrainian National System for climate reporting. The designed system of the national registry has been outlined in the Initial Report (see link above). This issue is out of the influence of the project owner. The National Registry is not a direct requirement for project registration.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination	Marrakech Accords, JI Modalities, §31	☑	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 mid of April 2007.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			During the on-site audits (April 23rg – 25th, 2007) the auditor was allowed to look all relevant documents, to visit the sites and to interview all responsible persons involved in the project. Additional information to the PDD was handed out to the determinator in form of copies and .doc/.pdf documents during the on-site audit and in the following determination process.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments	Marrakech Accords, JI Modalities, §32	☑	The PDD was open for comments from April 21st, 2007 to May 20th, 2007. No comments have been received.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out	Marrakech Accords, JI Modalities, §33(d)	☑	According to the Ukrainian legislation, assessment of environmental impact of the planned activity should follow the procedure of Environmental Impact Assessment (EIA). EIA in Ukraine is not the tool for decision-making on project implementation, but an essential component of the design documentation. This document was prepared in parallel to the project planning and PDD development and is deemed sufficient by the determinator.
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed	Marrakech Accords, JI Modalities,	☑	Table 2, Section B.2

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
project	Appendix B		
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, JI Modalities, Appendix B	☑	Table 2, Section B.2
14. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	☑	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	☑	Table 2, Section D

Industrie Service

TABLE 2 A: DETERMINATION PROTOCOL

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
A. General description of project activity					
A.1. Title of the project activity					
A.1.1.	Does the used project title clearly enable to identify the unique JI activity?	1- 3, 45, 58	Yes, the project title allows a clear identification of the project activity.	☑	☑
A.1.2.	Are there any indication concerning the revision number and the date of the revision?	1-3, 45, 58	The revision number is considered consistent. The PDD (submitted for successful uploading) for the GSP is PDD with version number 3. The previous versions have been internal work versions of the project developer which had to be adjusted before starting the GSP. The numbering was pursued consequently. First negotiations on the project started already in 2005 when GAFSA discussed with the municipalities the question of receiving the rights on the landfill gas considering implementation of gas collection and flaring under a JI project.	☑	☑
A.1.3.	Is this consistent with the time line of the project's history?	1 - 3	A desk review has been carried out and a draft protocol was elaborated on basis of PDD version 03. This final protocol refers to PDD version 05. The project already has received a Letter of Endorsement by the Ukrainian Ministry of Environmental Protection in second half of 2006 (September 12th) based on a draft PDD/PIN for this project.	☑	☑
A.2. Description of the project activity					
A.2.1.	Is the description delivering a transparent overview of the project activities?	1-3, 6, 11-	Yes, the PDD gives a clear and transparent description of the project activities. The description could be confirmed during the on-site visit. But additional information should be submitted to the	**CR 1**	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
	36	determinator to give a full, transparent, re-traceable, reliable and clear overview about the project itself and the measures taken in this project. **<u>Clarification Request No. 1.</u>** The following additional information should be provided to the determinator: - detailed and representative waste analysis for both land-fill sites (will be treated as confidential) - results of pump test and procedures for both landfill sites (will be treated as confidential) - prognosis for the expected amount of waste in the up-coming years - information on the waste delivery system – for both landfill sites - detailed description of future (planned) gas extraction system - information about the envisaged time schedule - GPS coordinates of the two landfill sites - Evidence for data used in the financial analysis - Evidence for values used for the financial analysis (power tariffs, discount rates in Ukraine) - Permits for the landfill (for operation and construction) - Agreement on gas utilisation between Ukrainian company Gafsa-Skhid and both municipalities, Yalta and Alushta.		
A.2.2. What proofs are available demonstrat-ing that the project description is in	1-3, 4-8,	The information given in the PDD during the on-site audit and supplied by the project developer gave sufficient evidence and	**CR 1** of A.2.1	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	compliance with the actual situation or planning?	11-36, 50, 51	confirmed the information given in the PDD – but, see CR 1 above, additional information and substantiated evidence for information given in the PDD should be submitted to the determinator.		
A.2.3.	Is the information provided by these proofs consistent with the information provided by the PDD?	1-3, 6, 11-36	The information is considered consistent under the pre-condition that the information and additional clarification mentioned above are provided to the determinator.	☑	☑
A.2.4.	Is all information presented consistent with details provided by further chapters of the PDD?	1-3, 6, 11-36, 58	Yes, the information provided in other chapters is considered consistent.	☑	☑
A.3. Project participants					
A.3.1.	Is the form required for the indication of project participants correctly applied?	1-3	Yes, project participants are correctly listed in chapter A.3 of the PDD as well as in Annex 1 of the PDD with more detailed information (contact details). In both lists the company names are identical. Project participants are Gafsa-Skhid from Ukraine as host country and Carbon Capital Markets from UK as sponsor country.	☑	☑
A.3.2.	Is the participation of the listed entities or Parties confirmed by each one of them?	1-3	Yes. There is written confirmation available. Furthermore - during the interview and in e-mail exchange - the participation was confirmed by the responsible persons in both participating.	☑	☑
A.3.3.	Is all information on participants / Parties provided in consistency with de-	1-3	The information provided is considered consistent.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
tails provided by further chapters of the PDD (in particular annex 1)?				
A.4. Technical description of the project activity				
A.4.1. Location of the project activity				
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1-3, 12, 15	Yes, the information provided in chapter A.4.1.1 allows a clear identification of the involved sites as both landfills are the only operated landfills in the boundaries of the two municipalities.	☑	☑
A.4.1.2. How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1-3	The owners of the landfills (the municipalities of Yalta and Alushta) have granted the permit to Gafsa-Skhid to utilize the landfills´ gas for flaring and to implement a JI project. Written documentation on this agreement was provided during the on-site visit and has been sent to the determinator.	☑	☑
A.4.2. Category(ies) of project activity				
A.4.2.1. Is the project category (Scope 13 / Waste handling and disposal) correctly identified and indicated? And also scope 1 for electricity generation?	1-3	Yes, both sites are waste handling and disposal sites, thus the project category is correct. Furthermore at both sites it is planned to install (as option) a gas generator for electricity generation.	☑	☑
A.4.3. Technology to be employed by the project activity				
A.4.3.1. Does the technical design of the project activity reflect current good practices?	1-3, 11-23	Yes, an overview on the different technical elements is provided in the PDD. The line up is defined in the Monitoring Plan. Nevertheless – see CR 1 of A.2.1 – additional information on the concept, measures and technical equipment for gas collection, flaring and/or electricity generation should be provided to the determinator - see also questions under CR 1 of A.2.1.	**CR 1** of A.2.1	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A.4.3.2. Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?	1-3, 11-23	The project approach of biogas wells, pipelines and flares (optional of gas engine generators and connection to the nearby grid). The main activities at the sites comprise: • installation of wells and a piping network for LFG collection, • installation of a flaring system including gas booster, flare and monitoring system, and • (optional) connection to the power grid and commissioning of an engine-generator set for power production.	☑	☑
A.4.3.3. Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1-3, 11-23	It remains to be defined finally when the project is implemented. Final decision will be done after feasibility tests. According to the PDD at least the flare system the gas engine and generator set and the monitoring and control system will be imported from EU. But see also CR 1 of A.2.1 - additional information on equipment, technical solutions and suppliers should be provided to the determinator.	**CR 1** of A.2.1	☑
A.4.3.4. Is the technology implemented by the project activity environmentally safe?	1-3, 11-23	The technology is considered environmentally safe and is, in comparable composition and with a comparable concept, already applied in diverse landfill projects worldwide. Well. But see CR 1 of A.2.1 – additional information on the equipment should be provided to the determinator describing the neighbouring equipment and installations and potential risks to them by the installed flare.	**CR 1** of A.2.1	☑
A.4.3.5. Is the information provided in compli-	1-3,	Yes, the information is in line with the actual situation on-site that	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
ance with actual situation or planning?	11-23	could be seen during the on-site visit.		
A.4.3.6. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	1-3, 11-23, 38, 47	The project is considered to use state of the art technology or even more than state of the art technology and is considered to achieve a better performance as the current practice / baseline is represented by unregulated emissions of methane.	☑	☑
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1-3, 11-23	A technology substitution during the crediting period is considered extremely unlikely.	☑	☑
A.4.3.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1-3, 11-23	Information on necessary trainings and responsibilities for trainings is roughly indicated in the PDD. As the project is in a very initial stage this is currently deemed sufficient. During the on-site audit the project participants demonstrated that they are aware of this issue and will take care that all necessary trainings will be conducted and the trainings will be documented. In the phase of project implementation a training program and quality assurance measures probably in the form of a QM-manual are envisaged.	☑	☑
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	1-3, 11-23	In chapter D.3 of the PDD the responsibilities for the identified different needs and forms of trainings are indicated as far as currently possible. See also information given under A.4.3.8. The project participants are aware of the demand and requirements of trainings – this was intensively discussed during the on-site visit – and can – on investor´s side refer to experiences in this field from CDM. Thus the current available information is deemed to be sufficient. In the phase of project implementation management structure, tasks and responsibilities for the operation of the plant(s) should	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		specified in further detail e.g. in a QM-manual (presence of personnel, maintenance activities, checks, reading etc).		
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1-3, 11-23	No detailed project implementation plan is available. **Clarification Request No. 2.** Please include additional information on time schedule for the project implementation in the PDD and submit additional information that this time schedule is realistic.	**CR 2**	☑
A.4.4. Estimated amount of emission reductions over the chosen crediting period				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1-3, 45	Yes, the form on the emission reductions is correctly applied besides the fact that the annual emission reductions are missing. **Clarification Request No. 3.** Please include the annual emission reductions in chapter A4.3 and E.6.	**CR 3**	☑
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1-3	Yes, the values are considered consistent.	☑	☑
A.4.5. Public funding of the project activity				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1-3	During the on-site visit it was re-traceably and consistently confirmed by all interviewed persons that no public funding or assistance by a state program was available for this project and the project participants.	☑	☑
A.4.5.2. Is all information provided consistent with the details given in the PDD?	1-3	Yes.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B. Application of a , 38 and monitoring methodology				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1-3, 4-8	The project correctly applies the current valid version of ACM 0001 "5 "Consolidated baseline methodology for landfill gas and project activities and Consolidated monitoring methodology for landfill gas project activities" at the time of project development. This is version number 5. The PDD mentions that – in addition the project uses – for the electricity generation option – AMS-I.D "Grid connected renewable electricity generation" in the currently valid version number 10. This would be possible under JI as the electricity production falls under the small scale threshold for renewable electricity generation. In reality not AMS-I.D is applied but the values from Annex 2 of the Justification UA baseline - Standardized emission factors for the Ukrainian electricity grid, Version 5 on February 2nd , 2007 by Global Carbon B.V. **Corrective Action Request No.1.** The information that AMS-I.D is used should be eliminated in the revised final PDD as instead of factors calculated using AMS-I.D the standardised factors for Ukraine are used.	**CAR 1**	☑
B.1.1.2. Is the applied version the most recent one and / or is this version still applicable?	1-3, 4-8, 33	Yes.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
B.2. Justification of the choice of the methodology and why it is applicable to the project activity					
B.2.1.	Is the applied methodology considered the most appropriate one?	1-3, 4-8, 33	The applied methodology ACM0001 version 5 is considered the most applicable.	☑	☑
B.2.2.	Criteria 1: Is applicable to landfill gas capture project activities.	1-3, 4-8, 33	Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes	☑	☑
B.2.3.	Criteria 2: applicable where the baseline scenario is the partial or total atmospheric release of the gas.	1-3, 4-8, 33	Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes	☑	☑
B.2.4. a) b) c)	Criteria 3: the gas and the project activities include situations such as: The captured gas is flared; or The captured gas is used to produce energy (e.g. electricity/thermal energy), but no emission reductions are claimed for displacing or avoiding energy from other sources; or The captured gas is used to produce energy (e.g. electricity/thermal energy), and emission reductions are claimed for displacing or avoiding energy generation from other sources. In this case a baseline methodology for electricity	1-3, 4-8, 33, 37, 43	Applicability checklist / Yes / No Criterion discussed in the PDD? Yes Compliance provable? Yes Compliance verified? Yes Is the option correctly presented and confirmed?* Yes **In case that the option C has been selected, please use Validation_Protocol_ACM002 (for CDM).* The project includes two project scenarios: 1.) Flaring or 2.) - After carrying out a feasibility study – the possibility to pro-	**CAR 1** of B.1.1.1.	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
and/or thermal energy displaced shall be provided or an approved one used, including the ACM0002 "Consolidated Methodology for Grid-Connected Power Generation from Renewable". If capacity of electricity generated is less than 15MW, and/or thermal energy displaced is less than 54 TJ (15GWh), small-scale methodologies can be used.		duce electricity and use the electricity for own needs. As the amount of produced electricity falls under small scale the choice to use AMS-I.D to calculate the carbon emission factor of the Ukrainian grid could be accepted under JI. But in reality the project uses the carbon emission factors from a study: "Standardised Emission Factors of the Ukrainian Grid", version 5, February 5th, 2007. This study was sent to the Ukrainian DFP for approval and was, as far as known, accepted by Ukraine for calculating the carbon emission factors of the Ukrainian grid ex-ante for the years under the first commitment period. These factors will be used in future in all Ukrainian JI projects. The acceptance has to be finally confirmed via the Ukrainian Letter of approval. This proceeding is acceptable under JI as in this case the DFPs (designated Focal Points with the related ministry) are responsible for calculation/acceptance of the grid emission factors. Thus please correct and see under CAR 1 of B.1.1.1.		
B.3. Description of the sources and gases included in the project boundary				
B.3.1. Source: Possible CO_2 emissions resulting from combustion of other fuels than the methane recovered fuel combustion, e.g. for transport or for the collection of landfill gas) Description of Source Gas(es): CO_2 Type: Project Emissions	1-3, 4-8, 36, 33, 47	Boundary checklist / Yes / No Source and gas(es) discussed in the PDD? Yes Inclusion / exclusion justified? Yes Explanation / Justification sufficient? Yes Consistency with monitoring plan? Yes This issue is discussed. The only emission that appear in the project boundaries are CO2-emissions from combustion of diesel in a diesel engine to satisfy the plants own electricity needs in case	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		option two – electricity generation – is not realised.		
B.3.2. Source: Where the project activity does not involve electricity generation, project participants should account for CO_2 emissions by multiplying the quantity of electricity required with the CO_2 emissions intensity of the electricity displaced (CE-Felectricity,y). Description of Source Gas(es): CO_2 Type: Project Emissions	1-3, 4-8, 36, 33	Boundary checklist / Yes / No Source and gas(es) discussed in the PDD? N/A Inclusion / exclusion justified? N/A Explanation / Justification sufficient? N/A Consistency with monitoring plan? N/A See comment above under B.3.2	☑	☑
B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1-3, 4-8, 33	Yes, the spatial and technological boundaries are complying. Additional information/maps confirming the situation have been submitted to the determinator during the on-site visit and during the later determination process.	☑	☑
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario				
B.4.1. Is it explained how the most plausible baseline scenario is identified? Is it considered that some of the methane generated by the landfill may be captured and destroyed?	1-3, 4-8, 33, 47	Yes, the baseline has been identified based on a comparison of different scenarios. Compare section B.5 **Clarification Request No. 4.** Evidence/ Confirmation should be provided that both municipalities, Yalta and Alushta, would not have changed the status quo of the sites without the present project.	**CR 4**	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.4.2. Is a transparent and detailed description of the identified baseline scenario included (description of the technology that would be employed and/or the activities that would take place)?	1-3	Yes, the baseline is described as the continuation of the current situation.	☑	☑
B.4.3. Is it clearly indicated that the baseline is the atmospheric release of the LFG?	1-3	.Yes, the baseline is the emission of LFG.	☑	☑
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the project activity (assessment and demonstration of additionality):				
B.5.1. Has the additionality tool been applied?	1-3, 44	Yes, the additionality tool has been applied. .	☑	☑
B.5.2. Have realistic and credible alternatives been identified providing comparable outputs or services? (step 1a)	1-3, 44	The following alternatives have been identified: 1) Continuation of current situation. 2) Landfill owner invests in flaring (as non JI) 3) Landfill owner invests in the project for flaring and electricity production and supply in the public network (without JI) 4) A different use of gas offsite (Heat / fuel production). The continuation of the current situation is the most likely scenario as there is no legal obligation or financial resources in order to carry out flaring without the project. This could be confirmed during the on-site visit and is an experience from assessment of situation at a number of other landfill sites in Ukraine. No indications on the change of current setting towards any other attractive alternative have been found. It is credible that under the current setting of the landfills of Yalta and Alushta municipality any other alternative (such as energy production) with larger investment requirements is not feasible.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
B.5.3.	Is the project activity without carbon finance included in these alternatives? (step 1a)	1-3, 35, 44	Yes, the alternative is included.	☑	☑
B.5.4.	Is a discussion provided for all identified alternatives concerning the compliance with applicable laws and regulations? (step 1b)	1-3, 35, 44	An overview on legal requirements is presented and it is concluded that there is no obligation to carry out any of the identified alternatives. It is considered that none of the alternatives would face legal constraints.	☑	☑
B.5.5.	In case the PDD argues that specific laws are not enforced in the country or region: Is evidence available concerning that statement? (step 1b)	1-3, 35, 44	Yes. It is explained, that, before 2005, national standards on landfills operation did not envisage mandatory LFG control in Ukraine. In 2005, National Construction Standard DBN V.2.4-2-2005 Basics of Sites Design was introduced containing requirements on LFG collection and flaring/utilisation after the landfill closure. However, municipalities and municipal companies operating landfills are in a poor financial state and cannot invest in such projects. Moreover, implementation of LFGTE technologies in Ukraine as commercial projects is not possible due to low electricity tariffs. Other hurdles for introduction of LFG collection technologies are presented by a number of investment and technological barriers. LFG recovery projects have yet to be implemented in Ukraine and are unlikely to be implemented on a wider scale for the coming decade. Comparable activities as envisaged in this project are only realised with JI revenues, too. The Letter of Endorsement for this project demonstrates that the Ukrainian Ministry of Environmental protection sees JI as only option to implement gas collection and flaring (according to the mentioned standard) in the next years (during the crediting period).	☑	☑
B.5.6.	In case of applying step 2 / investment	1-3,	Yes. In step 2 a the benchmark analysis is identified as appropri-	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	35, 44	ate method under the investment analysis.		
B.5.7.	In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1-3, 35, 44	N/A.	-	-
B.5.8.	In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1-3, 25, 31, 44	N/a	-	-
B.5.9.	In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1-3, 25, 31, 44	Yes, IRR and NPV are chosen as the most suitable financial indicators.	☑	☑
B.5.10.	In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1-3, 25, 31, 44	Yes, as far as possible the calculation of financial figures for this indicator is correctly done for all alternatives and the project activity.	☑	☑
B.5.11.	In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1-3, 44	Yes, but additional evidence for the set up of the financial calculations should be provided to the determinator. **Clarification Request No. 5.** Evidence/ Confirmation should be submitted to the determinator for calculated costs, revenues etc.	**CR 5**	☑
B.5.12.	In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that	1-3, 44	Investment and technological barriers have been identified for this project.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	prevent the different alternatives to occur?				
B.5.13.	In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	1-3, 44	Although the description of barriers is quite limited in the PDD the mentioned barriers are plausible and retraceable described and can be confirmed by looking on the general situation in the landfill sector in Ukraine. Both – investment barriers due to very low revenues – as well as – technological barriers due to lack of experience and availability of necessary equipment in Ukraine are described plausible.	☑	☑
B.5.14.	In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1-3, 44	Yes. At least the investment barrier can be overcome with the revenues from selling ERUs, but also the technological barrier can be overcome by buying modern equipment for flaring and electricity generation (as option) in Western European countries.	☑	☑
B.5.15.	Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?	1-3, 44	Yes, this has been done.	☑	☑
B.5.16.	If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the JI component (step 4b)?	1-3, 44	Considering general reporting and media indications, the project is considered to be one of the first of its kind.	☑	☑
B.5.17.	Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 5)?	1-3, 44	It is credibly documented that project approval / the generation of ERUs is a requirement for project implementation.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.6. Emissions reductions				
B.6.1. Explanation of methodological choices				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1-3, 9, 10, 47, 48	Yes, the PDD follows strictly the procedures in the methodology. The steps are correctly indicated. .	☑	☑
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1-3, 47	The methodology indicates that verifiable methods shall be chosen for ex-ante emissions estimates. In this project a calculation of the methane generated by the landfill following the US EPA model is used. As this model – from AIE´s experiences – might slightly overestimate the methane generated at the landfill it is recommended to use the more conservative approach of the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" and to use conservative values for all variable parameters. **Corrective Action Request No.2.** The US EPA model is presented. However the IPCC approach reflected in the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" has generated slightly more conservative values. Therefore it is requested that the IPCC approach is discussed for the baseline calculations. All used input values / defaults shall be clearly referenced.	**CAR 2**	☑
B.6.1.3. Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used	1-3, 47, 48	In section D1.2.2 the formula to calculate the emission reductions is presented. The formulae are correctly presented. The used flare efficiency is 90%. In chapter E estimate of ex-ante emissions reduction is given for reference purpose only, since direct monitor-	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	and / or monitored?		ing of methane destroyed in the Project scenario will be applied according to the ACM0001 methodology version 5.		
B.6.1.4.	At validation stage, have the methane emissions from incomplete capture of LFG been considered adequately? (in comparison to modeling of total baseline emissions)	1-3, 47	The incomplete capture has is reflected in a corresponding factor 0,64 of the LFG expected to be liberated. In comparison with the general design of the project and the intended wells, this is considered reasonable. **Clarification Request No. 6.** It should be checked whether the value 0.64 is realistic under the conditions of methane capture in this project.	**CR 6**	☑
B.6.1.5.	Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored	1-3	The formula of the first order decay model of US EPA is presented. But the calculation is not fully retraceably. **Corrective Action Request No.3.** The details of the calculation currently partly provided as secondary information should be included to the PDD (E.4 or Annex 2). All chosen parameters / defaults should be explained. See also CAR 3 of B.6.1.2.	**CAR 3** and **CAR 2** of B.6.1.2	☑
B.6.1.6.	Are ex ante projections of the future GHG emissions of the landfill based on verifiable methods (compare e.g. IPCC 2006 / EB 26 Annex 14)?	1-3	The model is considered verifiable. But see CAR 3 and CAR 4 above.	**CAR 3** of B.6.1.5 and **CAR 2** of B.6.1.3	☑
B.6.1.7.	Does this baseline estimate description	1-3,	There is no capture and destruction of methane in the baseline.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	consider that some of the methane generated by the landfill may be captured and destroyed?	47			
B.6.1.8.	Are the requirements from the authorities on the capture and destruction/utilization of the gas produced in the landfill clearly defined and sustained (compare MDreg / AF – on methane destroyed under baseline)?	1-3, 47	In previous sections the legal background information indicates that flaring is not requested.	☑	☑
B.6.1.9.	Is leakage discussed in line with the methodology (no consideration necessary)?	1-3	Leakage is not considered in line with methodology implications.	☑	☑
B.6.1.10.	Are the formulae required for the determination of emission reductions correctly presented?	1-3	The formula as presented in section D1.2.2. Only imported electricity ELimp is considered and discounted from MD (under the option that electricity is generated in the project).	☑	☑
B.6.1.11.	Are the project emissions from flaring of the residual gas stream calculated based on the flare efficiency and the mass flow rate of methane?	1-3, 47, 48	Flare efficiency is set with 90 % at validation stage, which is considered adequate for the proposed enclosed flare.	☑	☑
B.6.1.12.	Does the determination of the flare efficiency take into account the actual efficiency of combustion in the flare and the time that the flare is operating?	1-3, 48	No. **Clarification Request No. 7.** Estimated operating hours for flaring system should be indicated in the calculation of emission reductions	**CR 7**	☑
B.6.1.13.	Is the stated type of flare (open, enclosed) traceable due to the definitions mentioned in the tool?	1-3, 48	Enclosed flare is to be installed.	☑	☑
B.6.1.14.	In case of open flare:	1-3,	N/a	-	-

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	Is there a device foreseen to demonstrate the flare is operational and are the default values (50%, 0%) in the calculation adapted?	48			
B.6.1.15.	Have applicable regulatory or legal requirements been identified?	1-3, 46, 48	Yes. In the Ukraine, both an Environmental Impact Assessment (EIA) and a State Environmental Expertise (EE) are used for estimation of environmental impact of the project activity. This is a requirement to get the allowance to implement the project. Further requirements – from side of the municipalities – do not exist.	☑	☑
B.6.2. Data and parameters that are available at validation					
B.6.2.1.	Is the list of parameters presented considered to be complete with regard to the requirements of the applied methodology?	1-3	Partially the parameter are currently titled and named differently than the indications included to the methodology in which these are particularly defined for actual calculation at verification. The latter is deemed acceptable.	☑	☑
B.6.2.2.	Parameter Title: MDproject, y - the (estimate) amount of methane to be destroyed/combusted during the year, in, tonnes of methane (tCH_4)	1-3, 47	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/a</td></tr><tr><td>Data unit correctly expressed?</td><td>N/a</td></tr><tr><td>Appropriate description of parameter?</td><td>N/a</td></tr><tr><td>Source clearly referenced?</td><td>N/a</td></tr><tr><td>Correct value provided?</td><td>N/a</td></tr><tr><td>Has this value been verified?</td><td>N/a</td></tr><tr><td>Choice of data correctly justified?</td><td>N/a</td></tr><tr><td>Measurement method correctly described?</td><td>N/a</td></tr></table>	**CR 8**	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>No parameter with this title is specifically included to the PDD as the estimated amount of MD is calculated via baseline emissions – project emissions. Due to the JI format the PDD deviates in chapter E from the description/nomination of the parameters as they are given in the methodology.
As the ex-ante calculation of emission reductions is only for illustrative purposes, this approach is acceptable although this causes a loss in transparency. Nevertheless the calculations are done correctly.

<u>Clarification Request No. 8.</u>
A more transparent description of the calculation of project emissions, baseline emissions and emission reductions should be included in the revised final PDD.</td><td></td><td></td></tr>
<tr><td>B.6.2.3. Parameter Title:
MDflared, y.(estimate) amount of methane destroyed in flare</td><td>1-3, 47, 48</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/a</td></tr><tr><td>Data unit correctly expressed?</td><td>N/a</td></tr><tr><td>Appropriate description of parameter?</td><td>N/a</td></tr><tr><td>Source clearly referenced?</td><td>N/a</td></tr><tr><td>Correct value provided?</td><td>N/a</td></tr><tr><td>Has this value been verified?</td><td>N/a</td></tr><tr><td>Choice of data correctly justified?</td><td>N/a</td></tr><tr><td>Measurement method correctly described?</td><td>N/a</td></tr></table>Consider:
- GWP: 21
- D_{CH4} - Standard methane density at 0°C and 1,013bar:</td><td>CR 8
Of B.6.2.2</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>0,0007168tCH4 / m3CH4

See also CR 7 of B.6.2.2.</td><td></td><td></td></tr>
<tr><td>B.6.2.4. Parameter Title:
$LFG_{flare,y}$ – (estimate) Amount of LFG to be fed to flare (modelled baseline emissions – non captured emissions)</td><td>1-3, 47, 48</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/a</td></tr><tr><td>Data unit correctly expressed?</td><td>N/a</td></tr><tr><td>Appropriate description of parameter?</td><td>N/a</td></tr><tr><td>Source clearly referenced?</td><td>N/a</td></tr><tr><td>Correct value provided?</td><td>N/a</td></tr><tr><td>Has this value been verified?</td><td>N/a</td></tr><tr><td>Choice of data correctly justified?</td><td>N/a</td></tr><tr><td>Measurement method correctly described?</td><td>N/a</td></tr></table>
Corresponding values are calculated – equals the complete amount of LFG captured
But see also CR 7 of B.6.2.2.</td><td>CR 8
Of
B.6.2.2</td><td>☑</td></tr>
<tr><td>B.6.2.5. Parameter Title:
PEflare, y - Project Emission from flaring of the residual gas stream in line with expected flare efficiency (flaring tool) and technical design of flare (estimate).</td><td>1-3, 47,48</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table></td><td>CR 8
Of
B.6.2.2</td><td>☑</td></tr>
</table>

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="2"></td><td></td><td>Corresponding values are calculated. Flare efficiency of 90 % is used.
But see also CR 7 of B.6.2.2.</td><td></td><td></td></tr>
<tr><td>B.6.2.6.</td><td>Parameter Title:
$W_{CH4, y}$ – (estimate) average methane content in LFG over time</td><td>1-3, 47</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>A value of 50% methane content of LFG used.
But see also CR 7 of B.6.2.2.</td><td>**CR 8** Of B.6.2.2</td><td>☑</td></tr>
<tr><td>B.6.2.7.</td><td>Parameter Title:
MDelectricity, y.(estimate) amount of methane destroyed in generator</td><td>1-3, 47</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/a</td></tr><tr><td>Data unit correctly expressed?</td><td>N/a</td></tr><tr><td>Appropriate description of parameter?</td><td>N/a</td></tr><tr><td>Source clearly referenced?</td><td>N/a</td></tr><tr><td>Correct value provided?</td><td>N/a</td></tr><tr><td>Has this value been verified?</td><td>N/a</td></tr><tr><td>Choice of data correctly justified?</td><td>N/a</td></tr><tr><td>Measurement method correctly described?</td><td>N/a</td></tr></table>See also CR 7 of B.6.2.2.</td><td>**CR 8** Of B.6.2.2</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.6.2.8. Parameter Title: LFGelectricity,y – (estimate) Amount of LFG to be fed to generator	1-3	Data Checklist / Yes / No Title in line with methodology? No Data unit correctly expressed? No Appropriate description of parameter? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No See also CR 7 of B.6.2.2.	**CR 8** Of B.6.2.2	☑
B.6.2.9. Parameter Title: MDthermal, y.(estimate) amount of methane destroyed in boiler	1-3, 47	Data Checklist / Yes / No Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided? N/a Has this value been verified? N/a Choice of data correctly justified? N/a Measurement method correctly described? N/a	-	-
B.6.2.10. Parameter Title: LFGthermal,y – (estimate) Amount of	1-3	Data Checklist / Yes / No	-	-

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
LFG to be fed to boiler		Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided? N/a Has this value been verified? N/a Choice of data correctly justified? N/a Measurement method correctly described? N/a		
B.6.2.11. Parameter Title: MDreg, y - the amount of methane that would have been destroyed/combusted during the year in the absence of the project, in, tonnes of methane (tCH_4)	1-3, 47	Data Checklist / Yes / No Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided? N/a Has this value been verified? N/a Choice of data correctly justified? N/a Measurement method correctly described? N/a	-	-
B.6.2.12. AF – Adjustment factor, in absence of MD reg to reflect on project context	1-3	Data Checklist / Yes / No Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided? N/a	-	-

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Has this value been verified? N/a Choice of data correctly justified? N/a Measurement method correctly described? N/a		
B.6.2.13. EL,y - net quantity of electricity exported during year y, in megawatt hours (MWh) (estimate)	1-3	Data Checklist / Yes / No Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided? N/a Has this value been verified? N/a Choice of data correctly justified? N/a Measurement method correctly described? N/a No electricity export is considered in the project context.	-	-
B.6.2.14. Parameter Title: $CEF_{electricity,y}$ Emission intensity of the electricity and/or other energy (estimate).	1-3	Data Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>Information is available from "Standardised emission factors for the Ukrainian Electricity Grid".</td><td></td><td></td></tr>
<tr><td>B.6.2.15. ET,y - incremental quantity of fossil fuel, defined as difference of fossil fuel used in the baseline and fossil use during project, for energy requirement on site under project activity during the year y, in TJ (estimate).</td><td>1-3</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/a</td></tr><tr><td>Data unit correctly expressed?</td><td>N/a</td></tr><tr><td>Appropriate description of parameter?</td><td>N/a</td></tr><tr><td>Source clearly referenced?</td><td>N/a</td></tr><tr><td>Correct value provided?</td><td>N/a</td></tr><tr><td>Has this value been verified?</td><td>N/a</td></tr><tr><td>Choice of data correctly justified?</td><td>N/a</td></tr><tr><td>Measurement method correctly described?</td><td>N/a</td></tr></table>In baseline scenario no fossil fuels are used. In project scenario Diesel is used in the scenario where no electricity is produced
See also CR 7 of B.6.2.2.</td><td>CR 7 of B.6.2.2 .</td><td>☑</td></tr>
<tr><td>B.6.2.16. Parameter Title:
$CEF_{themal,y}$ - CO_2 emission intensity of the thermal energy (estimate)</td><td>1-3</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr></table></td><td>-</td><td>-</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Choice of data correctly justified? Yes Measurement method correctly described? Yes The carbon emission intensity of 0,0741 kilotonnes CO2/TJ of Diesel is used in this project.		
B.6.2.17. GWP_{CH4} - Global Warming Potential value for methane for the first commitment period is 21 tCO_2e/tCH_4 (estimate)	1-3, 47	Data Checklist: Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes	☑	☑
Parameters / data on baseline emissions can be defined according to FOD model. In the following typical parameters are included in line with EB 26, Annex 14: ***Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site***	1-3	The US EPA Model was used. **CAR 2:** Better would be to use the ***Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site***	**CAR 2** of B.6.1.2	☑
B.6.3. Ex-ante calculation of emission reductions				
B.6.3.1. Is the projection based on the same procedures as used for future monitoring?	1-3	The projections are considered in line with methodology requirements.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
B.6.3.2.	Are the GHG calculations documented in a complete and transparent manner?	1-3	See above	☑	☑
B.6.3.3.	Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1-3	Yes, the data is considered consistent.	☑	☑
B.6.4. Summary of the ex-ante estimation of emission reductions					
B.6.4.1.	Will the project result in fewer GHG emissions than the baseline scenario?	1-3	Yes, the project is considered to result in fewer GHG emissions than the baseline.	☑	☑
B.6.4.2.	Is the form/table required for the indication of projected emission reductions correctly applied?	1-3	Yes, the table of projected emission reductions is correctly applied.	☑	☑
B.6.4.3.	Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1-3	Yes, the projection is in line with the envisioned schedule.	☑	☑
B.6.4.4.	Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1-3	Yes, the data is considered consistent.	☑	☑
B.7. Application of the monitoring methodology and description of the monitoring plan					
B.7.1. Data and parameters monitored					
B.7.1.1.	Is the list of parameters presented considered to be complete with regard to the requirements of the applied methodology?	1-3, 36	The list of parameters is considered complete once the identified Requests are complied with.	☑	☑
B.7.1.2.	Parameter Title:	1-3,		☑	☑

Industrie Service

<table>
<tr><th colspan="2">CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td colspan="2">LFG total,y - Total amount of landfill gas captured</td><td>36</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td></td><td></td></tr>
<tr><td>B.7.1.3.</td><td>Parameter Title:
LFG flare, y - Amount of landfill gas flared</td><td>1-3,36, 48</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.4.</td><td>Parameter Title:</td><td>1-3</td><td></td><td>☑</td><td>☑</td></tr>
</table>

Industrie Service

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td>LFGelectricity, y - Amount of landfill gas combusted in power plant.</td><td></td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>
This parameter is only relevant for the option where electricity is produced.</td><td></td><td></td></tr>
<tr><td>B.7.1.5. Parameter Title:
LFGthermal, y - Amount of methane combusted in power plant.</td><td>1-3</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>N/A</td></tr><tr><td>Data unit correctly expressed?</td><td>N/A</td></tr><tr><td>Appropriate description of parameter?</td><td>N/A</td></tr><tr><td>Source clearly referenced?</td><td>N/A</td></tr><tr><td>Correct value provided for estimation?</td><td>N/A</td></tr><tr><td>Has this value been verified?</td><td>N/A</td></tr><tr><td>Measurement method correctly described?</td><td>N/A</td></tr><tr><td>Correct reference to standards?</td><td>N/A</td></tr><tr><td>Indication of accuracy provided?</td><td>N/A</td></tr><tr><td>QA/QC procedures described?</td><td>N/A</td></tr><tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr></table></td><td>-</td><td>-</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>See Methodology requirements on QA/QC</td><td></td><td></td></tr>
<tr><td>B.7.1.6. Parameter Title:
PEflare, y - Project Emission from flaring of the residual gas stream in year</td><td>1-3, 48</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.7. Parameter Title:
$W_{CH4,y}$ - Methane fraction en the landfill gas</td><td>1-3</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>See Methodology requirements on QA/QC</td><td></td><td></td></tr>
<tr><td>B.7.1.8. Parameter Title:
T- Temperature of the landfill gas</td><td>1-3</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
<tr><td>B.7.1.9. Parameter Title:
p - Pressure of the landfill gas</td><td>1-3</td><td><table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		QA/QC procedures described? Yes QA/QC procedures appropriate? Yes		
B.7.1.10. Parameter Title: $EL_{EX,LFG}$ - Total amount of electricity exported out of the project boundary	1-3	Monitoring Checklist / Yes / No Title in line with methodology? N/A Data unit correctly expressed? N/A Appropriate description of parameter? N/A Source clearly referenced? N/A Correct value provided for estimation? N/A Has this value been verified? N/A Measurement method correctly described? N/A Correct reference to standards? N/A Indication of accuracy provided? N/A QA/QC procedures described? N/A QA/QC procedures appropriate? N/A	-	-
B.7.1.11. Parameter Title: EL_{IMP} - Total amount of electricity imported to meet the project requirement.	1-3	Monitoring Checklist / Yes / No Title in line with methodology? N/A Data unit correctly expressed? N/A Appropriate description of parameter? N/A Source clearly referenced? N/A Correct value provided for estimation? N/A Has this value been verified? N/A Measurement method correctly described? N/A Correct reference to standards? N/A Indication of accuracy provided? N/A	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		QA/QC procedures described? N/A QA/QC procedures appropriate? N/A		
B.7.1.12. Parameter Title: ET y, Thermal energy used in landfill during project.	1-3	Monitoring Checklist / Yes / No Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided for estimation? N/a Has this value been verified? N/a Measurement method correctly described? N/a Correct reference to standards? N/a Indication of accuracy provided? N/a QA/QC procedures described? N/a QA/QC procedures appropriate? N/a	-	-
B.7.1.13. Parameter Title: CEF CO_2 emission intensity of the electricity and / or other energy carriers (in line with 1.D or ACM0002)	1-3, 37, 43	Monitoring Checklist / Yes / No Title in line with methodology? Yes Data unit correctly expressed? Yes Appropriate description of parameter? Yes Source clearly referenced? Yes Correct value provided for estimation? Yes Has this value been verified? Yes Measurement method correctly described? Yes Correct reference to standards? Yes	☑	☑

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Indication of accuracy provided?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>

The standardised carbon emission factor of the Ukrainian grid is used and fixed ex-ante for the electricity scenario.
In the option where no electricity is produced a $CEF_{thermal,y}$=0.0741 kton CO2/TJ for Diesel from IPCC 2006 is used.
</td><td></td><td></td></tr>
<tr><td>B.7.1.14. Parameter Title:
ETy, Thermal Energy used in landfill during project</td><td>1-3, 37, 43</td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>N/a</td></tr>
<tr><td>Data unit correctly expressed?</td><td>N/a</td></tr>
<tr><td>Appropriate description of parameter?</td><td>N/a</td></tr>
<tr><td>Source clearly referenced?</td><td>N/a</td></tr>
<tr><td>Correct value provided for estimation?</td><td>N/a</td></tr>
<tr><td>Has this value been verified?</td><td>N/a</td></tr>
<tr><td>Measurement method correctly described?</td><td>N/a</td></tr>
<tr><td>Correct reference to standards?</td><td>N/a</td></tr>
<tr><td>Indication of accuracy provided?</td><td>N/a</td></tr>
<tr><td>QA/QC procedures described?</td><td>N/a</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>N/a</td></tr>
</table>
</td><td>-</td><td>-</td></tr>
<tr><td>B.7.1.15. Parameter Title:
CEF thermal – CO2 emission intensity of the thermal energy.</td><td>1-3, 37, 43</td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>N/a</td></tr>
<tr><td>Data unit correctly expressed?</td><td>N/a</td></tr>
<tr><td>Appropriate description of parameter?</td><td>N/a</td></tr>
</table>
</td><td>-</td><td>-</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Source clearly referenced? N/a Correct value provided for estimation? N/a Has this value been verified? N/a Measurement method correctly described? N/a Correct reference to standards? N/a Indication of accuracy provided? N/a QA/QC procedures described? N/a QA/QC procedures appropriate? N/a		
B.7.1.16. Regulatory requirements relating to landfill gas projects	1-3	Monitoring Checklist / Yes / No Title in line with methodology? Data unit correctly expressed? Appropriate description of parameter? Source clearly referenced? Correct value provided for estimation? Has this value been verified? Measurement method correctly described? Correct reference to standards? Indication of accuracy provided? QA/QC procedures described? QA/QC procedures appropriate? (only at renewal of crediting period)	-	-
B.7.1.17. Parameter Title: Operation h of the energy plant	1-3	Monitoring Checklist / Yes / No Title in line with methodology? No Data unit correctly expressed? No	**CAR 4**	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
		Appropriate description of parameter? No Source clearly referenced? No Correct value provided for estimation? No Has this value been verified? No Measurement method correctly described? No Correct reference to standards? No Indication of accuracy provided? No QA/QC procedures described? No QA/QC procedures appropriate? No This parameter is missing. **Corrective Action Request No.4.** The parameter Operation h of the energy plant has to be included.		
B.7.1.18. Parameter Title: Operation h of the boiler	1-3	Monitoring Checklist — Yes / No Title in line with methodology? N/a Data unit correctly expressed? N/a Appropriate description of parameter? N/a Source clearly referenced? N/a Correct value provided for estimation? N/a Has this value been verified? N/a Measurement method correctly described? N/a Correct reference to standards? N/a Indication of accuracy provided? N/a QA/QC procedures described? N/a QA/QC procedures appropriate? N/a	-	-

<table>
<tr><th>CHECKLIST TOPIC / QUESTION</th><th>Ref.</th><th>COMMENTS</th><th>PPD in GSP</th><th>Final PDD</th></tr>
<tr><td>B.7.1.19. Is the Global Warming Potential going to be monitored at the end of the first commitment period</td><td>1-3</td><td>Monitoring is only necessary if the crediting period will be renewed. .</td><td>-</td><td>-</td></tr>
<tr><td>B.7.1.20. Flare efficiency</td><td>1-3, 48</td><td>
<table>
<tr><th>Monitoring Checklist</th><th>Yes / No</th></tr>
<tr><td>Title in line with methodology?</td><td>No</td></tr>
<tr><td>Data unit correctly expressed?</td><td>No</td></tr>
<tr><td>Appropriate description of parameter?</td><td>No</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Correct value provided for estimation?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>No</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
<tr><td>Correct reference to standards?</td><td>No</td></tr>
<tr><td>Indication of accuracy provided?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
</table>
A fixed default value of 90 % for the efficiency of the flare is used. According to the methodology for enclosed flares
(a) To use a 90% default value.
Continuous monitoring of compliance with manufacturer's specification of flare (temperature, flow rate of residual gas at the inlet of the flare) must be performed. If in a specific hour any of the parameters are out of the limit of manufacturer's specifications, a 50% default value for the flare efficiency should be used for the calculations for this specific hour.

<u>Corrective Action Request No.5.</u>
The monitoring of the operation time of the flare and the compliance with manufacturer´s specifications has to be monitored.</td><td>CAR 5</td><td>☑</td></tr>
</table>

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
B.7.2. Description of the monitoring plan2				
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1-3	The operational structure is briefly described. Additional capacities are to be contracted after implementation of the project. These capacities are available in Ukraine. .	☑	☑
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1-3	Yes, a rough description of responsibilities is given in chapter D.3 of the PDD. At the current stage of the project this is deemed sufficient.	☑	☑
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1-3	The Monitoring Plan is reflecting good practice if the CARs/CRs mentioned above are solved.	☑	☑
B.7.2.4. If applicable: Does annex 3 provide useful information enabling a better understanding of the envisoned monitoring provisions?	1-3	There is only very limited information available on data storage in the PDD. But at this stage of the project a final solution cannot be presented. During the on-site audit the project participants demonstrated that they are aware of this issue .	☑	☑
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)				
B.8.1.1. Is there any indication of a date when the baseline was determined?	1-3	Yes, see under chapter B.4	☑	☑
B.8.1.2. Is this consistent with the time line of the PDD history?	1-3	Yes.	☑	☑
B.8.1.3. Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring	1-3	Yes, the presented information is consistent.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
	methodology provided consistent with the actual situation?				
B.8.1.4.	Is information provided whether this person / entity is also considered a project participant?	1-3	Yes, the person is no project participant.	☑	☑
C. Duration of the project activity / crediting period					
C.1. Duration of the project activity					
C.1.1.	Are the project's starting date and operational lifetime clearly defined and reasonable?	1-3	Yes, the starting date will be June 1st, 2008. It is defined as start of implementation of the project.	☑	☑
C.2. Choice of the crediting period and related information					
C.2.1.	Is the assumed crediting time clearly defined and reasonable?	1-3	Yes, the crediting period is clearly defined. The crediting period is from 1.06.08 until 31.12.2012. PDD states that within the second commitment period to be established under Kyoto Protocol, and further to recent Ukrainian government recognition, the project will request ERUs for the duration of, but not exceeding the project operational lifetime (15 years as indicated in section C.2 of the PDD).	☑	☑
D. Environmental impacts					
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts					
D.1.1.	Has the analysis of the environmental impacts of the project activity been sufficiently described?	1-3, 41, 42, 46	In the Ukraine, both an Environmental Impact Assessment (EIA) and a State Environmental Expertise (EE) are used for estimation of environmental impact of the project activity. Information about environmental impacts is discussed in the PDD. No negative impacts are expected.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1-3, 41, 42, 46	In the Ukraine, both an Environmental Impact Assessment (EIA) and a State Environmental Expertise (EE) are used for estimation of environmental impact of the project activity. For the proposed Project, the project design documentation (including an EIA) was submitted to the Republic Committee of the Environmental Protection of the Autonomous Republic of Crimea for environmental expertise. In the EIA section of the design documentation the conclusion was made by the project developer that no significant negative environmental impacts are related to the project activity.	☑	☑
D.1.3. Will the project create any adverse environmental effects?	1-3, 41, 42, 46	The project is estimated not to create adverse effects.	☑	☑
D.1.4. Were transboundary environmental impacts identified in the analysis?	1-3, 41, 42, 46	No transboundary impacts have been identified.	☑	☑
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1-3, 41, 42, 46	N/a	-	-
D.2.2. Does the project comply with environmental legislation in the host country?	1-3, 41,	The project is considered to comply with environmental legislation. This will finally be confirmed with the Letter of Approval to be	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
	42, 46	issued by the Ukrainian DFP.		
E. Stakeholders' comments				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant stakeholders been consulted?	1-3	Yes, in the PDD it is clearly indicated that several stakeholder meeting at different levels have been conducted.	☑	☑
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1-3	**Clarification Request No. 9.** A description how the project was presented in the context of the local stakeholder consultation process (meetings) and how the people were invited should be included in the PDD.	**CR 9**	☑
E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1-3	Yes..	☑	☑
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1-3	See above	☑	☑
E.2. Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?	1-3	A short summary – information that all questions were solved and only positive comments remained is included in the PDD. This statement was confirmed by the municipal authorities during the on-site visit.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
E.3. Report on how due account was taken of any comments received					
E.3.1.	Has due account been taken of any stakeholder comments received?	1-3	Comments were referring to technical questions. As far as possible these comments will be considered in the design of the project.	☑	☑
F. Annexes 1 – 4					
F.1. Annex 1: Contact Information					
F.1.1.	Is the information provided consistent with the one given under section A.3?	1-3	Yes.	☑	☑
F.1.2.	Is the information on all private participants and directly involved Parties presented?	1-3	See above	☑	☑
F.2. Annex 2: Information regarding public funding					
F.2.1.	Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1-3	N/a	-	-
F.2.2.	If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?	1-3	N/a	-	-
F.3. Annex 3: Baseline information					
F.3.1.	If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1-3, 38	Yes.	☑	☑

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PPD in GSP	Final PDD
F.3.2.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1-3, 38	Yes. But see CR 1 at A.2.1	☑	☑
F.3.3.	Does the additional information substantiate / support statements given in other sections of the PDD?	1-3, 38	Yes. But see CR 1 at A.2.1	☑	☑
F.4. Annex 4: Monitoring information					
F.4.1.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1-3	The Monitoring Plan briefly summarizes the key elements relevant for upcoming monitoring tasks. **Clarification Request No. 10.** More detailed information on monitoring should be included in the revised PDD.	**CR10**	☑
F.4.2.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1-3	See CR 9 of F.4.1	**CR 9** of F.4.1	☑
F.4.3.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1-3	In section A., a technical overview is presented. In section D the parameters to be monitored are specified. The monitoring plan includes some further indications on metering. The Monitoring Plan currently does not have the character to be used as concrete operational manual. **Clarification Request No. 11.** The Monitoring Plan shall include - an overview of the technical equipment / meters, - accuracies and calibration requirements, - indications on data storage and responsibilities.	**CR11**	☑

Table 2 A Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion

Clarification Request No. 1: The following additional information should be provided to the determinator: - detailed and representative waste analysis for both landfill sites (will be treated as confidential) - results of pump test and procedures for both landfill sites (will be treated as confidential) - prognosis for the expected amount of waste in the upcoming years - information on the waste delivery system - for both landfill sites - detailed description of future (planned) gas extraction system - information about the envisaged time schedule - GPS coordinates of the two landfill sites - Evidence for data used in the financial analysis - Evidence for values used for the financial analysis (power tariffs, discount rates in Ukraine) - Permits for the landfill (for operation and construction) - Agreement on gas utilisation between Ukrainian company Gafsa-Skhid and both municipalities, Yalta and Alushta.	A.2.1	The requested information has been submitted to the determinator.	All requested information is available, see annex 2, Information Reference List. The information is deemed sufficient and very detailed and comprehensive. ☑

Clarification Request No. 2: Please include additional information on time schedule for the project implementation in the PDD and submit additional information that this time schedule is realistic.	A.4.3.10	The requested information has been included in the updated PDD – see page 3 and 4 of the final PDD.	The included additional information is deemed sufficient. ☑
Clarification Request No. 3: Please include the annual emission reductions in chapter A.4.3 and E.6.	A.4.4.1	The requested information has been included in the updated PDD.	The estimated annual average emission reductions have been included in revised PDD. ☑
Corrective Action Request No. 1: The information that AMS-I.D is used should be eliminated in the revised final PDD as instead of factors calculated using AMS-I.D the standardised factors for Ukraine are used.	B.1.1.1	As requested, AMS ID has been deleted in the updated PDD.	The requested changes have been done. ☑
Clarification Request No. 4: Evidence/ Confirmation should be provided that both municipalities, Yalta and Alushta, would not have changed the status quo of the sites without the present project.	B.4.1	The requested information on operation without JI and contracts with GAFSA for implementing a JI project were sent to the determinator.	The included additional information is deemed sufficient. See documents with reference number 20 and 24 of annex 2 Information Reference list. ☑
Clarification Request No. 5: Evidence/ Confirmation should be submitted to the determinator for calculated costs, revenues etc	B.5.11	The requested information on costs, costs estimations, proposals, tariffs etc was sent to the determinator.	The included additional information is deemed sufficient. See documents with reference number 27 and 31 of annex 2 Information Reference list. ☑

Corrective Action Request No. 2: The US EPA model is presented. However the IPCC approach reflected in the "Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site" has generated slightly more conservative values. Therefore it is requested that the IPCC approach is discussed for the baseline calculations. All used input values / defaults shall be clearly referenced.	B.6.1.2	The calculation tool has been changed. More conservative assumptions have been used. As requested, the comment on US EPA model has been deleted in the updated PDD.	The model used for calculations has been changed. ☑
Clarification Request No. 6: It should be checked whether the value 0.64 for percentage of methane captured is realistic under the conditions of methane capture in this project.	B.6.1.3	The value was changed to 0.50.	The value 0.50 is deemed to reflect better the conditions under which methane is captured at Yalta and Alushta landfill. ☑
Corrective Action Request No. 3: The details of the calculation currently partly provided as secondary information should be included to the PDD (E.4 or Annex 2). All chosen parameters / defaults should be explained.	B.6.1.4	Annex 2 has been updated. Chapter E.4 has been extended. Additional information has been included.	The included additional information is deemed sufficient. See documents with reference number 20 and 24 of annex 2 Information Reference list. ☑
Clarification Request No. 7: Estimated operating hours for the flaring system should be indicated in the calculation of emission reductions	B.6.1.12	Because the balance between flaring and the potential power generation has not yet been set, no assumption has been made regarding estimated operating hours of the flare. At this stage it is assumed that the flare works permanently.	The explanations given are deemed to be sufficient. ☑

Clarification Request No. 8: A more transparent description of the calculation of project emissions, baseline emissions and emission reductions should be included in the revised final PDD.	B.6.2.2	Chapter E for calculations has been extended and elaborated more transparently. **Comment by determinator:** It could be helpful (but is not a requirement at this stage) if in chapter E the same names for parameters would be used as in chapter D, where the formula are given for the calculations under the future monitoring plan.	The requested additional information has been added in revised PDD and is sufficient. ☑
Corrective Action Request No. 4: The parameter Operation h of the energy plant has to be included in the monitoring plan.	B.7.1.17	The parameter (has been labeled h) has been included in the monitoring plan as parameter with ID number 11.	The requested parameter has been included in the monitoring plan. ☑
Corrective Action Request No. 5: The monitoring of the operation time of the flare and the compliance with manufacturer´s specifications has to be monitored.	B.7.1.20	The requested information has been included in the updated PDD.	The requested information has been included in revised PDD and is sufficient. ☑
Clarification Request No. 9: A description how the project was presented in the context of the local stakeholder consultation process (meetings) and how the people were invited should be included in the PDD.	E.1.2	A summary description of how the Project Activity was presented has been made in the updated PDD.	The requested description has been included in revised PDD and seems to be sufficient. ☑
Clarification Request No. 10: More detailed information on monitoring should be included in the revised PDD.	F.4.1	The monitoring plan has been updated.	The monitoring plan has been elaborated more detailed and is complete and traceable. ☑

Clarification Request No. 11: The Monitoring Plan shall include - an overview of the technical equipment / meters, - accuracies and calibration requirements as far as available, - indications on data storage and responsibilities.	F.4.3	The requested information has been included in the updated PDD.	The requested information has been added in the monitoring plan and is deemed to be sufficient. ☑

Industrie Service

TABLE 2 B: ADDITIONAL EXCHANGE OF QUESTIONS REGARDING THE CHANGES IN THE FINAL PDD AS WELL AS RECENT JI- SC GUIDANCE

Additional clarifications and / or corrective action requests by validation team	Summary of project owner response	Validation team conclusion
Request No. 1 As mentioned in the PDD (version number: 05, July 18, 2007) feasibility study on power generation has been conducted in April 2008. As the landfill characteristics, quantity, quality and flow rate of landfill gas, final equipment design and final decision regarding the implementation of one of the two options: flare of LFG or flare and electricity generation depend on the results of the study, please provide this feasibility study at least as a summary.	-We have included the English translated version of the feasibility study (attached: Feasibility study ENG Yalta Alushta LFG. Pdf). This is the translation of the FULL VERSION of the feasibility study. Please note that the power generation option was considered in the feasibility study when it was completed in 2007 but we have **decided not to implement the power generation option.** -During our phone call yesterday, you mentioned that you would like to know when the feasibility study was completed. We can provide the supporting document as follows: a. A cover letter to Ministry of Environment for HCA, registered by MoE on 2007 Aug 10 (attached: HCA-Cover Letter registered.pdf) b. An email, from our feasibility study writer Biomass, informing us about the submission of the cover letter, feasibility study and other documents to the MoE, on 2007 Aug 10 (at the bottom of this email). The email demonstrates the submission of both the cover letter and feasibility study, while the cover letter provides proof of date of submission. This proves when our feasibility study was completed.	The revised PDD has been amended according to the final implementation decision. The requested evidence documentation, among this a feasibility study incl. landfills characteristics and project financial scheme, has been provided to the assessment team and is considered to be sufficient. (IRL No. 3, 55, 56). ☑

Request No. 2 Before submission to CB review and upload to JI-SC additionality of the project should be re- assessed due to the final decision regarding the implementation of one of two options: flare of LFG or flare and electricity generation. We would advise you to carry out this re-assessment according to the most recent version of additionality tool.	The PDD has been amended accordingly. See also comments to requests 4 and 5.	The additionality of the project has been re- assessed and is demonstrated in complete and traceable manner. (IRL No. 3, 44) ☑
Request No. 3 Public stakeholder consultation process: the PDD gives a short summary of two stakeholder consultations which were carried out in 2007. Please provide an evidence for these two public stakeholder consultation processes e.g. minutes of the meetings.	Lists of participants and meeting schedules have been provided.	The requested documents have been provided and are sufficient. (IRL No. 53, 54) ☑

Request No. 4 Please clarify if for the project the benefits/ revenues exist other than JI income. If not- simple cost analysis should be applied in order to demonstrate additionality of the project. If yes- please identify these benefits/ revenues.	Simple cost analysis has been applied. The updated investment calculation sheet has been provided.	It has been shown transparently that the project has no other benefits than JI income. The correct investment analysis method has been applied and is acceptable and complete. The provided supporting calculation sheet is sufficient. (IRL No. 3, 52) ☑
Request No. 5 The recent investment calculation sheet (with only one option- flare of LFG) should be provided (the old version of the calculation sheet has to be updated as we have to upload) as well as proofs for the figures used for these calculations.	We have included (attached: Yalta Alushta LFG Project ER and Financial Analysis) the updated investment calculation sheet, stating that we will choose flare of LFG only.	The provided supporting calculation sheet is sufficient. (IRL No. 52) ☑
Request No. 6 Please identify the emergency procedures in the monitoring plan, particularly for the new gas engine generator, e.g. in case the gas generator will not be operational.	Please refer to page 53 of PDD, where we stated that in the case of gas generator failure, the diesel generator will NOT run, blower and flare will be shut down, and no LFG will be vented, thus no ERU claimed during that period.	The additional information is deemed to be sufficient. (IRL No. 3) ☑
Request No. 7 Please identify according to which local standards the listed equipment will be proved e.g. as a footnote (p. 8 of the PDD).	We have identified the local standards to be Ukrainian standards (as shown in page 8 of the PDD) and we will provide document proof upon verification.	The additional information is deemed to be sufficient. (IRL No. 3) ☑

Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Industrie Service

Annex 2: Information Reference List

Reference No.	Document or Type of Information
1	On-site interviews and visit at the landfill sites and town halls of Yalta and Alushta, conducted by TÜV SÜD lead auditor from April 23rd to April 25th 2007, with a representative of the project developer as well as a representatives of GAFSA, the Ukrainian project participant; SEC Biomass as project developer and representatives of the municipalities of Yalta and Alushta: Temporary or full-time participating in the audits: Determination team on-site: Thomas Kleiser — TÜV SÜD Industrie Service GmbH, Munich (Lead-Auditor; Assessment team leader) Interviewed persons: Alexandra Pukhnyuk — SEC Biomass (project developer; responsible for development of baseline scenario and monitoring plan) Kukhar Yaroslav Andreevich — Director, GAFSA company Alushta municipality: Kolot Stanislav Vasilyevich — Deputy Mayor of the City of Alushta Sorokin Alexander Ivanovich — Director of Municipal Transportation Company of Alushta Yalta municipality: Otchenashenko Yaroslav Borisovich — Deputy Head of Municipal Services Department of Yalta
2	PDD for Global Stakeholder Consultation of “Landfill methane capture and flaring at Yalta and Alushta, Crimea, Ukraine”, JI project in Ukraine; Version 03; dated April 17th, 2007

Reference No.	Document or Type of Information
3	Final PDD of “Landfill methane capture and flaring at Yalta and Alushta, Crimea, Ukraine”, JI project in Ukraine
4	Letter of Approval from Ukraine (ukr. and engl.), issued by National Environmental Investment Agency of Ukraine on July 29th 2008.
5	Project specific protocol for ACM0001, version 5
6	Reports of the Meetings of the JI Supervisory Committee (ji.unfccc.int)
7	Approved consolidated large scale CDM baseline and monitoring methodology for landfill gas project activities, ACM0001, version 5
8	Approved small scale CDM baseline and monitoring methodology AMS-I.D, version 10 for “Grid connected renewable energy generation”
9	IPCC: 2006, Guidelines for National Greenhouse Gas Inventories
10	IPCC: 2000, Good Practice Guidance for National Greenhouse Gas Inventories
11	Draft technological scheme, Alushta, .pdf-file, 2007, in Russian
12	Landfill plan, norm: 1:1000, Alushta, .pdf file, 2007, in Russian
13	Section, Alushta landfill, .pdf-file, 2007, in Russian
14	Draft technological scheme, Yalta, .pdf-file, 2007, in Russian
15	Landfill plan, norm: 1:1500, Yalta, pdf-file, 2007, in Russian
16	Section, Yalta landfill, pdf-file, 2007, in Russian
17	Yalta MSW Landfill, Pump testing results, .doc file, 2007
18	Yalta, Pump testing results, Technical evaluation report, .pdf file, March 2007
19	Result of manual sort at the Alushta landfill of municipal solid waste, executed by “Gafsa-Shid Ltd.” in 2005, in Russian and English translation, .doc and .pdf file
20	Alushta Land Usage Act, Alushta City Council and Yalta Land Usage Decree, Yalta City Council, in Russian and in English

Reference No.	Document or Type of Information
	translation, .doc and .pdf file
21	Alushta Landfill Passport, 2004, in Russian and in English translation, .doc and .pdf file
22	Yalta and Alushta transport charters, 2002, in Russian and in English translation, .doc and .pdf file
23	Yalta Altvater Charter, in Russian and in English translation, .doc and .pdf file
24	GAFSA-Yalta-Agreement, August 30th, 2005 and GAFSA-Alushta- Agreement, June 30th, 2005¸ in Russian and in English translation, .doc and .pdf file
25	Financial offer for biogas power stations, Madek company, Ukraine, January 2007, .doc and .pdf file
26	Diesel Power Station, Price offer, 2007
27	GAFSA cost estimates for both landfills, Yalta and Alushta, 2007, in Russian and English translation, .doc and .pdf file
26	Ukraine Autonomous Republic Crimea, Republican Committee of environmental protection, May 1st, 2007, landfill norms and current situation, in Russian and English translation
27	Ukraine Autonomous Republic Crimea, Republican Committee of environmental protection, 2007, Letter confirming endorsement of the landfill projects to Carbon Capital Markets, in Russian and English translation, .doc and .pdf file
28	Financial figures and calculations and ERU calculations for Alushta and Yalta Landfill, dated July 16th, 2007
29	Offer for the blower with additional information, June 15th, 2007
30	Information on gas extraction system for Yalta and Alsuhta landfill, 2007
31	GAFSA costs estimations on installation of landfill gas extracting and capturing system, dated June 18th 2007.
32	Agreement between GAFSA and SEC Biomass on JI project development, November 10th, 2005 for both landfills, Yalta and Alushta
33	Waste analysis and composition for Yalta and Alushta landfill, 2002 – 2007
34	Letter of Endorsement, Yalta and Alushta, Ukrainian ministry of Environmental Protection, September 12th, 2006

Reference No.	Document or Type of Information
35	Information on Ukrainian Bank Credit rates
36	Spreadsheets for Monitoring at Yalta and Alushta landfill, 2007
37	Annex 2 of the Justification UA baseline – Standardized emission factors for the Ukrainian electricity grid, Version 5 on February 2nd , 2007 by Global Carbon B.V.
38	Appendix B of the Marrakech Accords (2001): Information on Baseline Setting for JI projects
39	“Energy Strategy of Ukraine till 2030”, (Energetychna strategiya Ukrayiny do 2030 roku), Kyiv, 2006
40	Economist Intelligence Unit. 6, Country Forecast Ukraine updated September 2006; “www.eiu.com/”
41	The Law of Ukraine “On the environmental expertise”, Articles 8, 15, 36
42	The Law of Ukraine “On the environmental protection”, Article 51
43	Background information from Ministry of Economic Affairs of the Netherlands (2003): Operational Guidelines for Project Design Documents of Joint Implementation projects: Volume 1: General guidelines, Version 2.2, The Netherlands and TOR for ERUPT-4 Tender (2004) as background information
44	UNFCCC, CDM: “Tool for the demonstration and assessment of additionality”, version 5.
45	Link to the Global Stakeholder Consultation Process in the period from April 21st, 2007 to May 20th, 2007 on www.netinform.net: website and parallel on JI-SC website:: http://www.netinform.de/KE/Wegweiser/Ebene1_Projekte.aspx?Ebene1_ID=26&mode=1
46	Environmental Impact Assessment, dated July 13th 2007
47	Methodological Tool (Annex 10), “Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site”, version 4.
48	Methodological Tool (Annex 13), “Tool to determine project emissions from flaring gases containing methane”, version 1.
49	“Overview about data of electrical power plants 2001 – 2005”, Ministry of Fuel and Energy of Ukraine, October 2006 and November

Reference No.	Document or Type of Information
	16th, 2006
50	Sister V.G., Mirniy A.N., Skvortsov L.S. (2001) Solid Municipal Waste Hand-book, Academy of municipal service named after k.D. Panfilov, Moscow (in Russian)
51	Identification and preparation of ProjectPreCheck (PPC) documents for LFG collection and utilization projects in Ukraine. Final report. For KfW Entwicklungsbank; by DECON Gmbh, SEC “Biomass”, June 2005.
52	Final financial figures and calculations and ERU calculations for Alushta and YaltsaLandfill, final version
53	List of participants at the stakeholder consultations on this project, dated March 21st – 22nd 2007.
54	Meeting schedule for stakeholder consultation on this project.
55	Summary of the feasibility study (English translation) and supporting letter, dated August 10th 2007
56	An email from the feasibility study writer SEC “Biomass”, informing about the submission of the cover letter, feasibility study and other documents to the DNA, on August 10th 2007.
57	Letter of Approval from UK, issued by .Department of Energy and Climate Change, UK, dated February 3rd 2009
58	Modalities of Communication, dated June 8th 2009