VERIFICATION REPORT
EKORESURSAI,UAB

VERIFICATION OF THE

LAPES LANDFILL GAS UTILIZATION AND ENERGY GENERATION

MONITORING PERIOD:
1 JANUARY 2010 TO 31 DECEMBER 2010

REPORT NO. LITHUANIA-VER/0018/2011
REVISION NO.02

BUREAU VERITAS CERTIFICATION

Report No: LITHUANIA-ver/0018/2011

VERIFICATION REPORT

Date of first issue:	Organizational unit:
01/03/2011	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
EKORESURSAI, UAB	Gerardas Zukauskas, Director

Summary:

Bureau Veritas Certification has made the 2nd periodic verification of the of the JI Track II Project "Lapes Landfill Gas Utilization and Energy Generation", project of Ekoresursai, UAB, located at Lapes Subdistrict, Kaunas District Municipality, Lithuania applying the project specific methodology on the basis of UNFCCC criteria for the JI as well as the criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during the defined verification period, and consisted of the following three phases: i) a desk review of the project design, baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Action Requests, Forward Action Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions or misstatements, and is total 19 323 tons of CO2eq for the monitoring period 01/01/2010-31/12/2010.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and to the approved project baseline and monitoring, and its associated documents.

Report No.:	Subject Group:	
LITHUANIA-VER/0018/2011	JI	
Project title: Lapes Landfill Gas Utilization and Energy Generation		
Work carried out by: Tomas Paulaitis: Lead Verifier; Witold Dżugan: Verifier		
Work reviewed by: Ashok Mammen		
Work approved by: Witold Dżugan		
Date of this revision: 04/03/2011	Rev. No.: 02	Number of pages: 21

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1 INTRODUCTION

Ekoresursai, UAB has commissioned Bureau Veritas Certification to verify the emission reductions of its JI project "Lapes Landfill Gas Utilization and Energy Generation" (hereafter called "the project") at Lapes Subdistrict, Kaunas District Municipality, Lithuania. This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as the criteria given to provide for consistent project operations, monitoring and reporting.
The order includes the second periodic verification of the project for the period 01/01/2010-31/12/2010.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during a defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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

1.2 Scope

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

The verification 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 monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:

Tomas Paulaitis, M.Sci. (chemical engineering)
Bureau Veritas Certification Team Leader, Climate Change Verifier
Tomas Paulaitis is a lead auditor for the environment and quality management systems and a lead GHG verifier (EU ETS, JI) with over 5 years of experience and was/is involved in the determination/verification of more than 15 JI projects.

Wytold Dzugan, M.Sci
Bureau Veritas Certification Team member, Climate Change Verifier
Witold Dzugan is a lead auditor for environment and quality management systems and a GHG verifier with over 10 years of experience. He holds a Master's degree in environmental engineering and have professional background in HVAC systems and waste / wastewater management.

This verification report was reviewed by:

Ashok Mammen
Bureau Veritas Certification, Internal Technical Reviewer
Bureau Veritas Certification Internal reviewer
Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier and tutor for GHG projects. He has been involved in the validation and verification processes of more than 100 CDM/JI and other GHG projects."

2 METHODOLOGY

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

In order to ensure transparency, a verification protocol was customized for the project according to version 01.1 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, the criteria (requirements), means of verification and results from verifying the identified criteria. The verification protocol serves the following purposes:

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

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

2.1 Review of Documents

The Monitoring Report (MR) first version dated 04/02/2011 submitted by Ekoresursai, UAB and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Project Determination Report, Initial and first verification report, Guidance on criteria for baseline setting and monitoring, Host party

criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the project as described in the final PDD version 9 dated 10/11/2009 and the Monitoring Report version 02 dated on 23/02/2011.

2.2 Follow-up Interviews

On 18/02/2011 Bureau Veritas Certification performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of were interviewed (see 5 References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Ekoresursai, UAB	Organizational structure, responsibilities and authorities Project implementation and technology Training of personnel Quality management procedures Metering equipment control Monitoring record keeping system Environmental requirements Monitoring plan Monitoring report

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that need to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

If the Verification Team assessing the monitoring report and supporting documents identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;

(b) Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan;

(c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

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

3 VERIFICATION CONCLUSIONS

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

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow-up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 1 Corrective Action Request.

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

3.1 Project approval by Parties involved (90-91)

A written project approval (Letter of Approval) from the Investor party was provided, issued by Swedish Energy Agency on 08/10/2009.

A written project approval (Letter of Approval) from the Host party was provided, issued by Lithuanian Ministry of Environment on 14/12/2006.

The above mentioned written approvals are unconditional (the Project approval does not provide any specific additional conditions for the Project implementation and monitoring).

3.2 Project implementation (92-93)

The project implementation has been checked according to the information provided in the PDD already during the 1st verification. The plant started to extract and flare landfill gas in June 2008 and was ready to generate emission reductions before the start of the 1st monitoring period (1 July 2008). Production and monitoring of the electric and heat power using landfill gas was started on 22 August 2008. It has been stated already that the project has been implemented in accordance with the PDD.

All the equipment has been installed as specified in the PDD, including:
- wells;
- measuring, pumping and regulation (MPR) station;
- flare;
- landfill gas pipeline;
- gas mixing equipment;
- cogeneration plant including electricity and heat interconnections.

There are no project changes identified during the second monitoring period. The project has operated without significant shutdowns and failures, flare was used randomly (only 0,08 % of produced LFG amount is flared). A slight decrease in productivity of LFG and methane fraction is observed compared with the previous monitoring period. The estimated emission reduction of 64 233 t and LFG production increase to 880 Nm3/h are not achieved and reached 272 Nm3/h in average. To increase LFG production the Project owners are planning to implement a few modernisation projects in 2011.

The efficiency of the electric power generation is about the same (31 percent) as for the previous period. See Table 2 for more productivity and efficiency data:

Table 2. Productivity and efficiency data

	07/2008-12/2009	2010	Average 2008-2009 per month	Average 2010 per month
Natural gas consumed, nm3	412648	368290	24273	30691
Electric power consumed, MWh	318	183	19	15
Electric power delivered to the grid, MWh	7389	4730	435	394
Heat produced, MWh	6610	4351,2	389	363
LFG to CHP, Nm3	3720634	2382877	218861	198573
Flared LFG, Nm3	257518	2001	15148	167
LFG extraction, Nm3/h	302	272	-	-
Methane to CHP, t	1301	773	77	64
Energy from natural gas, MWh	3851	3430	227	286
Energy from LFG, MWh	20068	11924	1180	994
Average methane fraction in LFG, %	53	49	-	-
Natural gas calorific value, kcal/Nm3	8027	8011	-	-
Energy efficiency total, %	58,5	59,1	-	-
Energy efficiency for electric power generation, %	30,9	30,8	-	-
CO2 reductions, t	34380	19323	2022	1610

Monitoring tests on the noise from electricity generation were carried out on 25/09/2008, the noise level near the surrounding living area (44 dBA)

was found below the limited level defined on hygienic norm HN 33:2007 (55 dBA).

3.3 Compliance of the monitoring plan with the monitoring methodology (94-98)

The monitoring was reviewed in accordance with the requirements of the monitoring plan included in the PDD version 9 regarding which the determination has been deemed final and is so listed on the UNFCCC JI website:
http://ji.unfccc.int/UserManagement/FileStorage/28AXHPSNLQ615ZRO7FU9YBDIMEG30T

There were reviewed monitoring activities or use of default values on:

Methane fraction in LFG, vol. %;
Amount of LFG to CHP plant, nm^3;
Amount of LFG flared, nm^3;
Flare temperature, ^0C;
Electric power produced, MWh;
Electric power consumed, MWh;
Heat generated, MWh;
Natural gas consumed, nm^3;
Natural gas calorific value, $kcal/nm^3$;
Emission factor for heat generation, tCO2/MWh;
Emission factor for electricity generation, tCO2/MWh;
Emission factor for natural gas.

Emission reductions from methane avoidance (LFG utilization) are calculated using day averages of the methane fraction and LFG flow, FAR4 from the previous verification is not implemented, hence FAR4 is classified to CAR1 with requirement to use paired values of the methane fraction of the landfill gas and LFG flow which are averaged for the same time interval in a time interval not greater than an hour.

CAR1 has been resolved in the latest monitoring report version 02 and the Excel calculation tool (dated 23/02/2011), see Annex A for more details. The correction action slightly increased the declared emission reduction from 19 317 t CO2e to 19 323 t.

3.4 Revision of monitoring plan (99-100)

There was no need identified to revise the monitoring plan.

3.5 Data management (101)

There are those outstanding FAR's from the previous verification related with data management:
FAR1: Please, establish a documented procedure addressing measures in case of failures of measuring equipment.
FAR2: Some data from SCADA system are transferred to process data sheets by manual method and then transferred to the final spreadsheet; it is recommended to use direct SCADA data transfer to the final spreadsheet where possible revising Procedure B2_Data Transfer respectively.
FAR3: Please, describe requirements for data storage and access restrictions to SCADA system in Procedure B1_Records Keeping.

The instruction "Measurement equipment maintenance requirements" is issued to address FAR1. Clear roles for measures in case of failures are defined, where applicable, references to legal or contractual requirements are provided. Additionally, responsibilities for maintenance the equipment are more detailed. Hence, FAR1 is closed.
Procedure B1_Record Keeping and Procedure B2_Data Transfer are revised to address FAR2, FAR3. The requirements on SCADA system data transfer and storage are defined as requested. Hence, FAR2 and FAR3 are closed.

All data collection and management procedures were verified according to the requirements of the PDD section D.3 and the Quality Management system, including necessary forms and procedures:

Form A1a_Process Data Sheet (week)
Form A1b_Process Data Sheet (month)
Form A2_Daily Check Form (LFG Plant)
Form A3_Daily Check Form (CHP)
Form A4_ Monthly QA Check Form
Form A5_Calibration Log Sheet
Procedure B1_Record Keeping
Procedure B2_Data Transfer
Procedure B3a_Daily Check for LFG Plant
Procedure B3b_Daily Check for CHP
Procedure B4_Calibration Records
Procedure B5_Monthly QA Check.

The implementation of these procedures and initial data documents (financial invoices on electricity supplied and consumed, natural gas consumed, heat supplied, SCADA data on LFG extracted and flared) were verified. The input of these initial data to the Excel calculation tool was verified and found without any mistakes.

FARs1,2,3 issued on previous verification are resolved efficiently. The function of the monitoring equipment, including its calibration status, is found in order, see Annex A for more details.

3.6 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 2nd monitoring period verification of the Lapes Landfill Gas Utilization and Energy Generation, which applies the project specific methodology mainly based on ACM0001.
The verification was performed on the basis of UNFCCC criteria and the host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) a desk review of the project design, baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and issuance of the final verification report and opinion.

The management of Ekoresursai, UAB is responsible for the preparation of the GHG emission data and the reported GHG emission reductions of the project on the basis set out within the project Monitoring Plan indicated in the final PDD version dated 10/11/2009.

The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report (final version 02 dated 23/02/2011) for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2010 to 31/12/2010

Baseline emissions	:	20 224 t CO2 equivalents.
Project emissions	:	801 t CO2 equivalents.
Emission Reductions	:	19 323 t CO2 equivalents;

5 REFERENCES

Category 1 Documents:
Documents provided by EKORESURSAI, UAB that relate directly to the GHG components of the project.

/1/ PDD "Lapes Landfill Gas Utilization and Energy Generation", version 9, dated 10/11/2009
/2/ Initial and first verification report, issued by Bureau Veritas Certification, No. LITHUANIA-VER/0003/2010, dated on 08/03/2010.
/3/ Monitoring Report, dated 04/02/2011 (initial version 01)
/4/ Excel calculation tool, dated 02/02/2011 (initial version 01)
/5/ Monitoring Report, dated 23/02/2011 (final version 02)
/6/ Excel calculation tool, dated 23/02/2011 (final version 02)
/7/ Letter of Approval from the Investor party, issued by Swedish Energy Agency on 08/10/2009
/8/ Letter of Approval from the Host party, issued by Lithuanian Ministry of Environment on 14/12/2006

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

/1/ Monitoring management and quality assurance system procedures
/2/ Monitoring management and quality assurance system training records
/3/ Daily LFG plant check records, shown on-site
/4/ Generated electric power selling invoices
/5/ Generated heat power selling invoices
/6/ Consumed electric power purchase invoices
/7/ Natural gas purchase invoices
/8/ Metering equipment calibration records and maintenance records
/9/ Noise monitoring test report No 0601352-1, dated 25/09/2008

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

/1/ Mr. Gerardas Žukauskas,director, EKORESURSAI UAB
/2/ Mr. Vaidotas Kairiūkštis, engineer, EKORESURSAI UAB
/3/ Ms. Živilė Markūnaitė, office administrator, EKORESURSAI UAB

APPENDIX A: LAPES LANDFILL GAS UTILIZATION AND ENERGY GENERATION VERIFICATION PROTOCOL

Check list for verification, according to the joint implementation determination and verification manual (version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	A written project approval (Letter of Approval) from the Investor party was provided, issued by Swedish Energy Agency on 08/10/2009. A written project approval (Letter of Approval) from the Host party was provided, issued by Lithuanian Ministry of Environment on 14/12/2006. These Letters of Approval have been submitted for IAE already during the determination process and were found acceptable.	O.K.	O.K.
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	O.K.	O.K.
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The project was finally determined in November 2010: http://ji.unfccc.int/UserManagement/FileStorage/1350OYZI987RHD4USXMKJT2EAB6CGF The project implementation has been checked according to the information provided in the PDD already during the 1st verification.	O.K.	O.K.
93	What is the status of operation of the project during the monitoring period?	There are no project changes identified during the second monitoring period. The project has operated without significant shutdowns and failures, flare was used randomly (only 0,08 % of produced LFG amount is flared). A slight decrease in productivity of LFG and methane fraction is observed compared with the previous monitoring period, what is normal for the third year of operation. The efficiency of the electric power generation is about the same (31 percent) as for the previous period.	O.K.	O.K.

<table>
<tr><th>DVM Paragraph</th><th>Check Item</th><th>Initial finding</th><th>Draft Conclusion</th><th>Final Conclusion</th></tr>
<tr><td colspan="5">Compliance with monitoring plan</td></tr>
<tr><td>94</td><td>Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?</td><td>The Excel based calculation tool is developed for monitoring. This calculation tool and data sources used for monitoring were analyzed and compared with the requirements of the monitoring plan. The results of this analysis are described in the table below:

<table>
<tr><th>Requirement</th><th>Results</th></tr>
<tr><td>Continuous direct measurements</td><td></td></tr>
<tr><td>Methane fraction in LFG, vol. %;</td><td>CAR1</td></tr>
<tr><td>Total amount of LFG captured, nm3</td><td>O.K.*</td></tr>
<tr><td>Amount of LFG to CHP plant, nm3</td><td>O.K.*</td></tr>
<tr><td>Amount of LFG flared, nm3</td><td>O.K.*</td></tr>
<tr><td>Flare temperature, ^{0}C</td><td>O.K.</td></tr>
<tr><td>Periodic direct measurements</td><td></td></tr>
<tr><td>Electric power produced, MWh</td><td>O.K.</td></tr>
<tr><td>Electric power consumed, MWh</td><td>O.K.</td></tr>
<tr><td>Heat generated, MWh</td><td>O.K.</td></tr>
<tr><td>Natural gas consumed, nm3</td><td>O.K.</td></tr>
<tr><td>Natural gas calorific value, kcal/nm3</td><td>O.K.</td></tr>
</table>

* Density ratio 0,00068 tCH4/m^{3}CH4 is used for calculations instead of 0,0007168 tCH4/m^{3}CH4 which is defined in the PDD, because the landfill gas meter uses 293.15 K (20 ^{0}C) temperature value to calculate the gas amount in m3 under normal conditions. This issue was clarified during the first verification (CL6).

CAR1: Emission reductions from methane avoidance (LFG utilization) are calculated using day averages of the methane fraction and LFG flow, hence FAR4 from the previous verification is not implemented. Paired values of the methane fraction of the landfill gas and LFG flow which are averaged for the same time interval as an average value in a time interval not greater than an hour should be used. See the requirement of the baseline methodology ACM0001 “Consolidated baseline and monitoring</td><td>CAR1</td><td>O.K.</td></tr>
</table>

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		methodology for landfill gas project activities", section III, page 16).		
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	Not applicable.	O.K.	O.K.
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	See section 94 above.	O.K.	O.K.
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	All emission factors used are default values and are already defined in the PDD. The calculation tool was reviewed in order to check if these emission factors are used as defined in the PDD. The results of this analysis are described in the table below: Default emission factors Emission factor for heat generation: 0,223 tCO2/MWh — O.K. Emission factor for natural gas: 56,1 tCO2/MWh — O.K. Emission factor for electric power generation: 0,611 tCO2/MWh — O.K.	O.K.	O.K.
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	Not applicable.	O.K.	O.K.
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?			
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	Not applicable.	O.K.	O.K.
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	Not applicable.	O.K.	O.K.
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable.	O.K.	O.K.
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	There was no need identified to revise the monitoring plan.	O.K.	O.K.
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	Not applicable.	O.K.	O.K.
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	There are those outstanding FAR's from the previous verification related with data management: FAR1: Please, establish a documented procedure addressing measures in case of failures of measuring equipment.	O.K.	O.K.

<table>
<tr><th>DVM Paragraph</th><th>Check Item</th><th>Initial finding</th><th>Draft Conclusion</th><th>Final Conclusion</th></tr>
<tr><td></td><td></td><td>FAR2: Some data from SCADA system are transferred to process data sheets by manual method and then transferred to the final spreadsheet; it is recommended to use direct SCADA data transfer to the final spreadsheet where possible revising Procedure B2_Data Transfer respectively.
FAR3: Please, describe requirements for data storage and access restrictions to SCADA system in Procedure B1_Records Keeping.

The instruction “Measurement equipment maintenance requirements” is issued to address FAR1. Clear roles for measures in case of failures are defined, where applicable, references to legal or contractual requirements are provided. Additionally, responsibilities for maintenance the equipment are more detailed. Hence, FAR1 is closed.
Procedure B1_Record Keeping and Procedure B2_Data Transfer are revised to address FAR2, FAR3. The requirements on SCADA system data transfer and storage are defined as requested. Hence, FAR2 and FAR3 are closed.</td><td></td><td></td></tr>
<tr><td>101 (b)</td><td>Is the function of the monitoring equipment, including its calibration status, in order?</td><td>The results of the monitoring equipment verification are described in the table below:

<table><tr><th>Measurement device, No</th><th>Validation/ calibration date</th><th>Validation/ calibration validity date</th></tr><tr><td>Amount of LFG to CHP meter: (including flow meter CGR-01 G400 and calculation unit ST2L10P)
No 340127
No LL19348</td><td>2008.02.13
2010.11.09</td><td>2011.02.13
2012.11.09</td></tr><tr><td>LFG composition analyser: AWITE
No 443</td><td>2010.06.03</td><td>2011.06.03</td></tr></table></td><td>O.K.</td><td>O.K.</td></tr>
</table>

<table>
<tr><th>DVM Paragraph</th><th>Check Item</th><th>Initial finding</th><th>Draft Conclusion</th><th>Final Conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Amount of LFG flared (including flow meter CGR-01 G400and calculation unit CMK-02)
No 340128
No 09807</td><td>2008.02.14
2010.04.14</td><td>2012.02.14
2012.04.14</td></tr>
<tr><td>Amount of natural gas: (including flow meter G-25 and calculation unit UNIGAZ PTZ)
20401155
11143</td><td>2010.04.29
2010.04.29</td><td>2014.04.29
2012.04.28</td></tr>
<tr><td>Generated and consumed electric power meter EPQS 121.09.04 in Domeikava
Consumed electric power meter LZ M in Lapes
No 478436
No 51881</td><td>2007.05.18
2008.11.17</td><td>2015.05.18
2016.11.17</td></tr>
<tr><td>Heat meter: SKM-1M-U1 (including flow detector, calculation unit, temperature detector)
No O18768
No O28091
No 943A</td><td>2010.06.17</td><td>2012.06.17</td></tr>
</table>
All measurement equipment was calibrated/validated on time. Special maintenance requirements for gas analyser are fulfilled (half year change of filtering elements, condensate level control, working temperature conditions).</td><td></td><td></td></tr>
<tr><td>101 (c)</td><td>Are the evidence and records used for the monitoring maintained in a traceable manner?</td><td>The evidence and records are kept according to Procedure B1_Record Keeping. The retention period is defined during the crediting period and two years after (until 31/12/2014).</td><td>O.K.</td><td>O.K.</td></tr>
<tr><td>101 (d)</td><td>Is the data collection and management system for</td><td>A monitoring management and quality assurance system has been</td><td>O.K.</td><td>O.K.</td></tr>
</table>

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the project in accordance with the monitoring plan?	developed and implemented efficiently, including necessary forms and procedures: Form A1a_Process Data Sheet (week) Form A1b_Process Data Sheet (month) Form A2_Daily Check Form (LFG Plant) Form A3_Daily Check Form (CHP) Form A4_ Monthly QA Check Form Form A5_Calibration Log Sheet Procedure B1_Record Keeping Procedure B2_Data Transfer Procedure B3a_Daily Check for LFG Plant Procedure B3b_Daily Check for CHP Procedure B4_Calibration Records Procedure B5_Monthly QA Check. This management system is in accordance with the requirements of the monitoring plan section D.3.		
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable.	O.K.	O.K.
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable.	O.K.	O.K.
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable.	O.K.	O.K.
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable.	O.K.	O.K.
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable.	O.K.	O.K.
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE:	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(a) Describe its sample selection, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?			
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	Not applicable.	O.K.	O.K.
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	Not applicable.	O.K.	O.K.
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment?	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(Optional)			
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	Not applicable.	O.K.	O.K.

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
Emission reductions from methane avoidance (LFG utilization) are calculated using month averages of the methane fraction and LFG flow, FAR4 from the previous verification is not implemented, hence FAR4 is classified to CAR1: Paired values of the methane fraction of the landfill gas and LFG flow which are averaged for the same time interval as an average value in a time interval not greater than an hour should be used. See the requirement of the baseline methodology ACM0001 "Consolidated baseline and monitoring methodology for landfill gas project activities", section III, page 16).	94	Paired values of the methane fraction of the landfill gas and LFG flow which are averaged for the same hour interval have been added to the Excel calculation tool (version 02). The Monitoring report figures are revised according to recalculation results.	The Excel calculation tool was verified and compared with SCADA data, no discrepancies or mistakes were found. The correction action slightly increased the declared emission reduction from 19 317 t CO2e to 19 323 t CO2e. The Monitoring report version 02 is revised accordingly, hence CAR1 is closed.