



JI DETERMINATION REPORT FORM (F-JI-DRep) - Version 01

(By submitting this form, an accredited independent entity requests the publication of a determination pursuant to paragraph 33 of the JI guidelines in accordance with paragraph 34 of the JI guidelines.)

Name of accredited independent entity (AIE)	Det Norske Veritas Certification AS
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Proposed JI Project

Title and reference number of project	ACHEMA UKL-7 plant N ₂ O abatement project (Ref. 0089)
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Host Party(ies)	Lithuania
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Parties involved in the project	NA
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(Authorised) project participants	Achema AB
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Small-scale project (yes/no)	No
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Brief description of project

Det Norske Veritas Certification AS (DNV) has performed a determination of the "ACHEMA UKL-7 plant N₂O abatement project", situated in Jonavos region in Lithuania. The determination was performed on the basis of UNFCCC criteria for the Joint Implementation and host Party criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfillment of the stated criteria. By installing a secondary N₂O abatement catalyst underneath the ammonia oxidation catalyst in the ammonia oxidation burners, the generated N₂O during oxidation of ammonia will be decomposed into nitrogen and oxygen. The installed technology will according to suppliers allow more than 70% reduction of the N₂O content in the tail gas. At present the N₂O is emitted to the atmosphere, hence the project results in reductions of N₂O emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project 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.

The total emission reductions from the project are estimated to be in the average 946 508 tCO_{2e} per year during 2008 - 2012. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change. Adequate training and monitoring procedures have been implemented.

In summary, it is DNV's opinion that the "UKL-7 plant N₂O abatement project", situated in Jonavos region in Lithuania and as described in the PDD of 7 September 2009, meets all relevant UNFCCC requirements for the JI and all relevant host Party criteria.

Determination report

General information on determination

(Please describe:

- The scope of the determination process, including all documentation that has been reviewed and the names of persons interviewed during the determination process, as applicable;
- The AIE's determination team, including a list of all persons involved in the determination process and a description of the functions assumed.)

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. DNV as based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the determination, focusing on

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

The following documents have been reviewed:

The determination consisted of the following three phases:

- I a desk review of the project design documents*
- II follow-up interviews with project stakeholders*
- III the resolution of outstanding issues and the issuance of the final determination report and opinion.*

The following sections outline each step in more detail.

Desk Review of the Project Design Documentation

The following table outlines the documentation reviewed during the determination:

- /1/ Vertis Environmental Finance Zrt.: Project design document for the "ACHEMA UKL-7 plant N2O abatement project", Version 01, 17 October, 2007.*
Vertis Environmental Finance Zrt.: Project design document for the " ACHEMA UKL-7 plant N2O abatement project ", Version 1, 21 November, 2008.
Vertis Environmental Finance Zrt.: Project design document for the " ACHEMA UKL-7 plant N2O abatement project ", Version 4, 7 18 May 2009.
Vertis Environmental Finance Zrt.: Project design document for the " ACHEMA UKL-7 plant N2O abatement project ", Version 5, 7 September 2009.
- /2/ UNFCCC: Report of the review of the initial report for Lithuania. FCCC/IRR/2007/LTU. 31 October 2007.*
- /3/ International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): Validation and Verification Manual. <http://www.vvmanual.info>*
- /4/ CDM-EB: Approved Baseline and Monitoring Methodology AM0034 - "Catalytic reduction of N₂O inside the ammonia burner of nitric acid plants", Version 02*
- /5/ CDM-EB: Approved Baseline and Monitoring Methodology AM0028 - "Catalytic N2O destruction in the tail gas of Nitric Acid or Caprolactam Production Plants", Version 4.1*
- /6/ CDM-EB: Tool for the demonstration and assessment of additionality Version 3*
- /7/ UNFCCC: Decision 9/CMP1 Guidelines for the implementation of Article 6 of the Kyoto Protocol 30 March 2006*
- /8/ UNFCCC: Decision 9/CMP1 APPENDIX B Criteria for baseline setting and monitoring to Guidelines for the implementation of Article 6 of the Kyoto Protocol 30 March 2006*
- /9/ The Ministry of Environment of the Republic of Lithuania: Letter of Endorsement, No. (10-5)-D8-216. 8 January 2007*
The Ministry of Environment of the Republic of Lithuania: Letter of Approval, No. (10-07)-D8-4098. 11 May 2009.
- /10/ Achema AB. Technological regulation on nitric acid No. TR-122-01, amendment No. 10, dated 14 March 2008.*
- /11/ Term sheet for JI development between the parties Achema AB and Vertis Environmental Finance Zrt., dated 15 December 2006.*
Contract for JI development between the parties Achema AB and Vertis Environmental Finance Zrt., dated 15 February 2007.
- /12/ QAL1 suitability test report for the stack gas flow meter DURAG DFL200. Report-#. 99CU019 dated 12.08.2000, TÜV North.*
- /13/ QAL 1 suitability for N₂O analyzer Sermomex 4900 Multigas analyser. Example of Assessment of Compliance with Required Measurement Quality for Emmissions Monitoring Applications (QAL 1) in accordance with EN ISO14956 and EN14181.*
- /14/ Sira Certification Service. Product conformity certificate for Sermomex 4900 Multigas analyzer.MCERTS Performance Standards for Continuous Emission Monitoring Systems, March 2002.*

- /15/ ECM Eco Monitoring: List of spare parts for UKL-7 N₂O monitoring measurements equipment delivered.
- /16/ Achema AB Procedure No. 5666739-32. HNO₃ concentration methodology.
- /17/ Achema AB Procedure for operating conditions. Dated 25 May 2007.
- /18/ Financial analysis for JI project. Achema AB business model.
Achema Business Case Model v.C.06_ASSUMPTIONS
Achema Business Case Model v.C.06_SUMMARY
Achema Business Case Model v.C.06_TOTAL
- /19/ Achema AB. *Information on primary catalyst*
- /20/ Letter from The Mayor of Municipality of Jonava City regarding positive impact of the implementation of the JI project. Dated 28 November 2007.
- /21/ Vertis Environmental Finance Zrt.
Statement to the comment of German Federal Environment Agency regarding whether emissions of N₂O should be regulated by the Lithuanian authorities in the framework of the IPPC. Dated March 2008.
- /22/ Letter to Achema from the Lithuania Republic Environmental Ministry Kaunas Regional Environmental Department stating no limits on N₂O emissions are included in the IPPC permit No. 2/15-04, issued to SC "Achema" in 28-12-2004. Dated 25 January 2008.
Updated IPPC permit No. 2/15 code 156667299 dated 30 April 2008.
- /23/ Letter to Achema from the Lithuania Republic Environmental Ministry Kaunas Regional Environmental Department stating that Environmental Impact Assessment is not mandatory for implementation of the JI project.
- /24/ ISO 14001:2004 Certificate for Stock company Achema Jonava. Production and sales of fertilizer and other products. Number 99586. Issued first time 1 November 2000. Valid until 1 November 2009.
- /25/ ISO 9001:2000 Certificate for Stock company Achema Jonava. Production and sales of fertilizer and other products. Number 79828. Issued first time 1 February 1998. Valid until 1 January 2010.
- /26/ ECM ECO Monitoring: Maintenance Certificate for training of Achema AB personnel. N₂O monitoring system and data logging.
- /27/ ECM ECO Monitoring: Monitoring of N₂O emissions from HNO₃ production. Quality of monitoring. Discussion of total uncertainty according to EN ISO 14956 (QAL 1). Document No. 0105/07-287/2006.
- /28/ ECM ECO Monitoring: Operation and maintenance manual N₂O emission monitoring system Achema plant, Lithuania. Version 3. Dated September 2007.
- /29/ Achema AB: Primary ammonia oxidation catalyst information. Historical data.
- /30/ ECM ECO Monitoring: Revised Quotation for N₂O emission monitoring system for Achema plant, Lithuania. No. 287/2006. Dated March 2007.
- /31/ ECM ECO Monitoring: Monitoring of N₂O emissions from HNO₃ production. Quality assurance manual. Validation of monitored data according to QAL 3 under EN14181. Document No. 0109/07-287/2006.
- /32/ Excel sheet: Determination of normal campaign lengths, CL_{normal}.
- /33/ Excel sheet: Preliminary baseline campaign data.
- /34/ Achema AB: *Instrukcija A-245-07*
Annex 1 Description of internal audits
Annex 1 Description of QAL 3 procedure
Annex 3 Emergency procedure
Annex 5 Supervision of Monitoring systems
Annex 6 Supervision of QAL 3 procedure
Achema data processing procedure.
- /35/ ECM ECO Monitoring training certificates:
-Maintenance of N₂O monitoring system in Achema plant
-Operation and basic maintenance of N₂O monitoring system in Achema plant

Follow-up Interviews with Project Stakeholders

Date	Name	Organization	Topic
2007-11-22	Daniel Domanovsky	Vertis Environmental Finance	<ul style="list-style-type: none"> • Project activity • Legal requirements for nitric acid plants in Lithuania • Technology employed • Evidence to demonstrate additionality of the project • Monitoring plan • Ammonia oxidation primary catalyst information • Permitted operating conditions and baseline campaign data • Ex-ante emission reduction estimation • Environmental licenses and legal compliance • Stakeholders consultation process • Management system
	Juozas Tunaitis Technical director	Achema AB	
	Ausra Januskeviciute Project Manager	Achema AB Innovation Centre	
	Stasys Pakstys Managing Engineer	Achema AB Instrumentation Department	
	Ramunas Pilsudskas Deputy Chief	Achema AB Nitric Acid plant JI project responsible	
	Vytautas Petrikas Plant Manager	Achema AB Nitric Acid plant	
	Vaidas Januskevicius	Achema AB	
	Ausra Januskeviciute	Achema AB	
	Tadas Kastanauskas	Environmentalist Achema Group, Vilnius (mother company of Achema AB)	

The determination team consisted of the following personnel:

- Ms Trine Kopperud DNV Norway Team leader / CDM-validator / Sector Expert
- Mr Ole Andreas Flagstad DNV Norway JI Determinator
- Mr Michael Lehmann DNV Norway Technical reviewer

Description of determination process

(Please refer to:

- The review of the JI PDD and additional documentation attached to it;
- The assessment against JI requirements, e.g. by using a determination protocol;
- The report of findings by the AIE, including the use of different types of findings (e.g. corrective action requests, clarifications or observations etc.).

Statements or assessments should be included in section "Conclusions, final comments and determination opinion" below.)

The determination consisted of the following three phases:

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

The determination has been carried out in line with the verification procedure under the Article 6 supervisory committee, as well as, in line with determination process outlined in the Validation and Verification Manual.

In order to ensure transparency, a determination protocol was customised for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria.

For further details please refer to section 2 of the Determination Report.

Comments received from Parties, stakeholders and UNFCCC accredited observers

(Please:

- Summarise the comments received pursuant to paragraph 32 of the JI guidelines; and
- Provide a report of how due account was taken of these.)

There is no host country requirement for carrying out a local stakeholder consultation process.

Neither public nor any community are likely to be affected by the project and therefore the project developer did not conduct stakeholder consultations. However, a letter was sent to the Mayor of Municipality of Jonava City with reference to the project documents for the information of the project. In response to this, a letter dated 28 November 2007 /18/, stating a positive feedback to the implementation of the JI project, was received.

The PDD was made publicly available on the JI website and Parties, stakeholders and NGOs were through the JI website invited to provide comments during a 30 days period from 23 October 2007 to 21 November 2007 under ref. no. 0089.

One comment was received and is given (in unedited form) in the below text box.

One comment was received from Dr. Karsten Karschunke regarding analysis of the legal requirements for nitric acid plants in Lithuania taking EU Law into account in the Determination report.

Determination report issued by DNV has elaborated on this issue as stated in the Determination report.

Conclusions, final comments and determination opinion

(The requirements of Article 6 of the Kyoto Protocol and the JI guidelines and further relevant requirements defined by the COP/MOP or the JISC with regard to determinations pursuant to paragraph 33 of the JI guidelines have to be met.

Please provide:

- Conclusions on each of these requirements, describing how these requirements, in particular those referred to in paragraph 33 of the JI guidelines, have been met, including assessments and findings (e.g. corrective action requests, clarifications or observations) related to each requirement and statements on whether all issues raised have been addressed to the AIE's satisfaction;
- Final comments and a determination opinion.)

The project has no material adverse environmental impacts. The project's sole material environmental impact is the reduction in emissions of nitrous oxide. Immaterial, indirect, environmental impacts of the project are the environmental impact of the production and transport of steel alloy and catalyst material. However, these are considered immaterial, and are provided by suppliers which are subject to European Union environmental legislation.

The project does not require the preparation of an environmental impact assessment.

The PDD was made publicly available on the JI website and Parties, stakeholders and NGOs were through the JI website invited to provide comments during a 30 days period from 23 October 2007 to 21 November 2007 under ref. no. 0089.

All requirements of Article 6 of the Kyoto Protocol and the JI guidelines and further relevant requirements defined by the COP/MOP or the JISC with regard to determinations pursuant to paragraph 33 of the JI guidelines are met:

Yes

No

List of documents attached to the determination report

(Please attach:

- ✓ The JI PDD of the project;
- ✓ Written approvals by all Parties involved in an alphabetical order; and
- ✓ Other relevant documents, e.g. any determination protocol used in the determination process, a list of persons interviewed by the AIE's determination team during the determination process; and

check mark below accordingly.)

JI PDD of the project

Written approvals by the Parties involved

Other documents:

Determination report and protocol

List of persons interviewed

Any other documents (please list):

The AIE herewith declares that undertaking the determination for the proposed JI project referred to above does not constitute a conflict of interest which is incompatible with the role of an AIE under JI.

Name of authorized officer signing for the AIE

Trine Kopperud

25. September 2009

Date and signature

