



RINA

# JOINT IMPLEMENTATION DETERMINATION REPORT

**FINAL**

**“EMISSION REDUCTION OF NITROUS OXIDE IN  
NITRIC ACID PRODUCTION AT NEOCHIM PLC”**


in

**BULGARIA**


Report N° 11-DG-19-MD

Revision N° 1.1

## JOINT IMPLEMENTATION DETERMINATION REPORT

|  |                 |   |  |               |
|--|-----------------|---|--|---------------|
| <b>Project Title:</b><br>Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC  |                 | <b>Country:</b><br>Bulgaria                     | <b>Estimated ERUs (tCO<sub>2</sub>e):</b><br>84,537 annual average |               |
| <b>Client:</b><br>Neochim PLC  |                 | <b>Client contact:</b><br>Mr. Stefan Grancharov |  |               |
| <b>Report No.:</b><br>11-DG-19-MD  |                 | <b>Revision:</b><br>1.1                         | <b>Date of this report:</b><br>15/09/2011                          |               |
| <b>Approved by (Final Report – DCI Director approval):</b><br><br><br>Roberto Cavanna   |                 |   | <b>Date of approval:</b><br>15/09/2011                             |               |
| <b>Methodology –JI project specific methodology approach</b>   |                 |   |  |               |
| <b>Number:</b>   | <b>Version:</b> | <b>Title:</b>                                   | <b>Scale</b>   | <b>SS(s):</b> |
| <p>RINA Services S.p.A. (RINA), commissioned by Neochim PLC, has performed the determination of the project activity “Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC” in Dimitrovgrad, with regard to the relevant UNFCCC requirements for JI activities.</p> <p>The GHG emission reductions are calculated on the basis of the project specific Methodology presented in the latest PDD, ver. 03 dated on 09/07/2011.</p> <p>In conclusion, it is RINA’s opinion that the project activity “Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC”, in Bulgaria, as described in the PDD, ver. 3.0 dated on 09/07/2011, meets all relevant requirements for JI activities and all relevant host country criteria and correctly applies the baseline and monitoring JI Project specific Methodology. Hence RINA confirms that the project is correctly implemented and the installed equipment being essential for generating emission reduction. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements.</p> |                 |   |  |               |

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|---|---|
| <b>Work carried out by:</b><br>Konstantin RACHEV<br>Viktor MILKOV | <input checked="" type="checkbox"/> No distribution without permission from the Client or organizational unit responsible<br><input type="checkbox"/> Strictly confidential<br><input type="checkbox"/> Unrestricted distribution |
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| <b>Work verified by (Final Report – CRT person responsible approval)</b><br><br><br>Paolo Teramo | <b>Keywords:</b><br><br>Climate Change, Kyoto Protocol, Joint Implementation, Determination |
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## JOINT IMPLEMENTATION DETERMINATION REPORT

### Abbreviations

|                   |   |
|-------------------|---|
| BE                | Baseline Emissions                                    |
| PE                | Project Emission                                      |
| JI                | Joint Implementation Mechanism                        |
| VER(s)            | Verified Emission Reduction(s)                        |
| CH <sub>4</sub>   | Methane   |
| CL                | Clarification Request                                 |
| CAR               | Corrective action request                             |
| CO <sub>2</sub>   | Carbon dioxide  |
| CO <sub>2</sub> e | Carbon dioxide equivalent                             |
| CRT               | Coordination and Technical Control Staff              |
| DCI               | Certification Division of RINA Services Spa           |
| DFP               | Designated Focal Point                                |
| DVM               | Determination and Verification Manual                 |
| JISC              | Joint Implementation Supervisory Committee            |
| ER                | Emission Reductions                                   |
| GHG(s)            | Greenhouse gas(es)                                    |
| GWP               | Global Warming Potential                              |
| IPCC              | Intergovernmental Panel on Climate Change             |
| LoA               | Letter of Approval                                    |
| MoV               | Means of Verification                                 |
| MR                | Monitoring Report                                     |
| NGO               | Non-governmental Organization                         |
| ODA               | Official Development Assistance                       |
| PDD               | Project Design Document                               |
| PP(s)             | Project Participant(s)                                |
| Ref.              | Document Reference                                    |
| RINA              | RINA Services Spa                                     |
| SS(s)             | Sectoral Scope(s)                                     |
| UNFCCC            | United Nations Framework Convention on Climate Change |
| PIN               | Project Idea Note                                     |
| MOEW              | Ministry of Environment and Water                     |

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# JOINT IMPLEMENTATION DETERMINATION REPORT

## 1 INTRODUCTION

Neochim PLC has commissioned RINA to carry out the determination of the “Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC” project in Dimitrovgrad, Bulgaria.

This report summarizes the findings of the determination of the project, performed on the basis of UNFCCC criteria for JI, as well as criteria given to provide for consistent project operations, monitoring and reporting.

### 1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

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

### 1.2 Scope

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

Determination is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

## 2 METHODOLOGY

The overall determination, from Contract Review to Determination Report, was conducted using RINA Services S.p.A. (RINA) internal procedures.

The determination consisted of the following three phases:

- Document review;
- Follow-up actions;
- The resolution of outstanding issues and the issuance of the final determination report.

The following sections outline each step in more detail.

### 2.1 Document Review

The PDD ver.1 dated on 01/03/2011; ver. 2 dated on 17/06/2011 and last version 3 dated on 09/07/2011 /01/ and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Approved CDM methodology and/or Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

The following table lists the documentation that was reviewed during the determination.

|      |  |
|------|--|
| /01/ | PDD ver.1 dated on 01/03/2011; ver. 2 dated on 17/06/2011 and last version 3 dated on 09/07/2011 for project activity “Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC” in Bulgaria |
| /02/ | Protocols for platinum gauze exchanges from 22.03.2011; 25.02.2011; 08.02.2011;  |

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|      |   |
|------|---|
|      | 05.01.2011; 10.12.2010  |
| /03/ | Letter of Support issued by the Bulgarian Ministry of Environment and Water dated on 23 November 2010   |
| /04/ | Contract between Neochim PLC and Start Engineering LTD dated on 13.01.2011  |
| /05/ | Contract between Neochim PLC and Jonson Matthey PLC dated on 24 April 2006  |
| /06/ | Report for N <sub>2</sub> O emission measurements before and behind the partial changing of catalyst gauze on a fertilizer plant, Neochim PLC, issued by TUV SUV, dated on 15.02.2011 |
| /07/ | Environmental Complex Permission № 8/2006, issued by MOEW, dated on 17.04.2006  |
| /08/ | Neochim Board of directors Protocol for choosing the AMS device dated on 30/09/2010   |
| /09/ | Neochim Board of directors Protocol №76 dated on 07/10/2010 for approval of JI Project  |
| /10/ | Informative note for investment intention to Ministry of Environment and Water on 30th of March 2011  |
| /11/ | Project activity publication in newspapers Trakia and Novinar in April 2011   |
| /12/ | Approved baseline and monitoring methodology AM 0034 "Catalytic reduction of N <sub>2</sub> O inside the ammonia burner of nitric acid plants", ver. 05.1.0                           |
| /13/ | Approved baseline and monitoring methodology AM 0028 "N <sub>2</sub> O destruction in the tail gas of nitric acid or caprolactam production plants", ver. 05.1.0                      |
| /14/ | Tool for the demonstration and assessment of additionality, ver. 05.2   |
| /15/ | Guidance on criteria for baseline setting and monitoring, ver. 02   |
| /16/ | Guidance for users of the JI PDD form, ver. 04  |
| /17/ | JI determination and verification manual, ver. 01   |
| /18/ | Glossary of climate change acronyms   |

### 2.2 Follow-up actions

On 19/04/2011, RINA visited Neochim PLC (on site visit) in town Dimitrovgrad, Bulgaria to resolve questions and issues identified during the document review and to perform interviews with relevant stakeholders in the host country.

The key personnel interviewed and the main topics of the interviews are summarized in the table below.

|     | Date       | Name and Role   | Organization              | Topic   |
|-----|------------|---|---------------------------|---|
| /a/ | 19/04/2011 | Stefan Grancharov – Manager emission                  | Neochim PLC               | JI project details                                      |
| /b/ | 19/04/2011 | Pavel Pavlov – Director production                    | Neochim PLC               | Nitric Acid production details                          |
| /c/ | 19/04/2011 | Sonya Hristozova – Director quality and control       | Neochim PLC               | JI project details                                      |
| /d/ | 19/04/2011 | Simeonka Atanasova – Chemical process engineer        | Neochim PLC               | Nitric Acid production details                          |
| /e/ | 19/04/2011 | Julieta Balieva – Economist                           | Neochim PLC               | JI project financial aspects                            |
| /f/ | 19/04/2011 | Hristo Todev – Economist                              | Neochim PLC               | JI project financial aspects                            |
| /g/ | 19/04/2011 | Banko Banev - Chemical process engineer, technologist | Neochim PLC               | Nitric Acid production details                          |
| /h/ | 19/04/2011 | Daniel Dobrev – Environmental specialist              | Neochim PLC               | JI project Environmental details                        |
| /i/ | 31/03/2011 | Plamen Mitkov - chief Environmental specialist        | Municipality Dimitrovgrad | JI project Environmental details and stakeholder issues |

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### 2.3 Resolution of outstanding issues

The objective of this phase of the determination is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the project design.

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

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

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

- A corrective action request (CAR) is raised if the following occurs:  
mistake in the published PDD that is not in accordance with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw
- A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.
- A forward action request (FAR) is raised during determination to highlight issues related to project implementation that require review during the first verification of the project activity.

### 2.4 Internal quality control

The final Determination Report before being submitted to the client was subjected to an independent internal technical review to confirm that all determination activities had been completed according to the pertinent RINA instructions.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for JI determination and verification.

### 2.5 Determination team and the technical reviewer(s)

The determination team and the technical reviewers consist of the following personnel:

| Role               | Last Name | First Name | Country  |
|--------------------|-----------|------------|----------|
| Team Leader JI     | RACHEV    | Konstantin | Bulgaria |
| JI Determiner      | MILKOV    | Viktor     | Bulgaria |
| Technical Reviewer | Severino  | Laura      | Italy    |
|                    |           |            |          |
|                    |           |            |          |

## 3 DETERMINATION FINDINGS

The findings of the determination related to the project, as described in the PDD ver.1 dated on 01/03/2011; ver. 2 dated on 17/06/2011 and last version 3 dated on 09/07/2011 /01/, are stated in the following sections.

The determination requirements, the means of determination and the results from determining the identified criteria are documented in more details in the Determination Protocol in Appendix A.

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### 3.1 Approvals (19-20)

A Letter of Support issued by the Bulgarian Ministry of Environment and Water has been received, dated 23 November 2010 /03/. Republic of Bulgaria has ratified Kyoto Protocol on 15<sup>th</sup> of August 2002.

RINA Services S.p.A. (RINA) has received this Letter from the project participants and does not doubt its authenticity.

RINA Services S.p.A. (RINA) considers the Letter is in accordance with paragraphs 19 - 20 of the DVM.

### 3.2 Authorization of project participants by Parties involved (21)

The Bulgarian Ministry of Environment and Water has issued a Letter of Support, dated on 23 November 2010 /03/ and has approved this JI Project. As per the issued Letter of Support the project participant for this project activity is company Neochim PLC.

Bulgaria is a host country for this JI Project.

### 3.3 Project design

Nitric acid Plant produced through the oxidation of ammonia (NH<sub>3</sub>) on precious metal catalyst gauze in the ammonia burner of a nitric acid plant. During the production of nitric acid, nitrous oxide (N<sub>2</sub>O) is generated as an unintended by – product of the high temperature catalytic oxidation of ammonia. This waste N<sub>2</sub>O is typically released into the atmosphere. The existing plant is a network of twelve oxidation reactors, feeding NO<sub>x</sub> gas into a ring that distributes the gas stream to two absorption process trains each comprising of acid and alkaline low pressure absorption. Since there is no obligation for Neochim PLC to decompose the N<sub>2</sub>O from the nitric acid plant, so far it is released to the atmosphere. The main idea of the JI project is to install selective De N<sub>2</sub>O catalysts right below the platinum gauze in the catalytic reactor and that catalyst is to be called secondary catalyst. The baskets that hold the catalyst shall be installed in each reactor during the summer 2011 planned overhaul and charged with a De N<sub>2</sub>O catalyst. During the on-site visit of the company the platinum gauze exchanges documented in protocols have been checked /2/. The used Joint Implementation PDD form was verified and found to be in compliance.

### 3.4 Baseline setting (22-26)

In the final PDD ver. 3 dated on 09/07/2011 it is explicitly indicated that the PP use project specific approach. The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

- (a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:
  - Status quo: The continuation of the current situation, where there will be no installation of technology for the destruction or abatement of N<sub>2</sub>O
  - The proposed project activity not implemented as a JI project
  - The installation of Non Selective Catalytic Reduction device (Non Selective Catalytic Reduction NSCR), DeNO<sub>x</sub>
  - The installation of alternative for primary or tertiary N<sub>2</sub>O destruction or abatement technology
  
- (b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. In this context, the following key factors that affect a baseline are taken into account:



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The Baseline Scenario is the continuation of the existing situation, as neither a financial incentive nor a legal obligation exist so far that would justify the considerable investment into N<sub>2</sub>O abatement measures. Bulgaria has ratified Kyoto protocol in August 2002, thus engaging into national greenhouse gas emission reduction of 8% compared to year 1988 (base year). There are currently no compulsory and effective legislative and normative requirements in Bulgaria that could limit N<sub>2</sub>O emissions in Nitric acid production. In the absence of the proposed JI project, emission reductions would not occur, because no mandatory applicable legal and regulatory requirements to reduce nitrous oxide (N<sub>2</sub>O) from Nitric acid production plants do presently exist in Bulgaria ; IPPC does not provide best available technology reference emission levels for atmospheric plants; N<sub>2</sub>O emission reduction has been implemented in Bulgaria for the first time in nitric acid production unit at Agropolychim, Devnya. Secondary N<sub>2</sub>O abatement at atmospheric plant which is to be implemented at Neochim PLC, is first of its kind in Bulgaria and thus faces technical barriers and uncertainties; Relevant uncertainties come from a potential loss of production capacity in the atmospheric plant due to added pressure loss across the new catalyst bed; N<sub>2</sub>O reduction measures require high investment and do not lead to any financial income or economic benefit.

The current situation is in compliance with all applicable legal and regulatory requirements. The plant permission refers to the thresholds specified by Bulgarian law regarding allowed NO<sub>x</sub> emissions in the waste gas. Until now, no such limits exist for N<sub>2</sub>O emissions.

With above reasons, the continuation of the current situation is the most plausible baseline scenario. All explanations, descriptions and analyses pertaining to the baseline in the last version of the PDD, ver. 3 dated on 09/07/2011 are made in accordance with the project specific Methodology and the baseline is identified appropriately.

### 3.5 Additionality (27-31)

The most recent version 05.2 of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used for this project activity in the latest ver. 3 dated on 09/07.2011 in the PDD. All explanations, descriptions and analyses are made in accordance with the selected tool.

The alternatives of project activity as well as legal requirements for emissions from Nitric acid production at Neochim were defined as:

- Status quo: The continuation of the current situation, where there will be no installation of technology for the destruction or abatement of N<sub>2</sub>O
- The proposed project activity not implemented as a JI project

It can be mentioned that both alternatives are in compliance with all current applicable legal and regulatory requirements.

For this JI Project activity simple cost analysis is applied. The alternative scenario which is used for comparison in simple cost analysis is identified in B.2 step 1, sub-step 1a of the PDD and represent the continuation of the current situation where there will be no technology for N<sub>2</sub>O distraction. The comparison between financial data of the baseline and project scenarios shows that baseline scenario is less costly. The cost for the proposed project activity consists of the investment needed for the design, manufacturing and installation of the baskets, the cost for the catalyst fillings and the cost for uninterrupted monitoring. The operational costs include costs for regular change of catalyst and monitoring equipment maintenance. The analysis shows clearly that the project activity is not financially attractive compared to the baseline scenario due to increased cost of production. Calculations are provided in Annex 7 "Investment analysis" of the PDD and should be considered confidential..

No barrier analysis is performed because simple cost analysis is applied.

Common practice analysis for this JI project is applied. The installation of N<sub>2</sub>O emission reduction selective catalyst in the existing nitric acid plant is not a common practice in Bulgaria. When secondary catalyst is installed, attention has to be paid to the fact that installation, maintenance and most of all possible necessary corrections, are achievable only during downtime of the production unit. When such a decision is made the increased costs for downtime have to be taken into account.

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There are no national legislations or legal requirements in Bulgaria currently for N<sub>2</sub>O emissions. It is less likely for such N<sub>2</sub>O emissions restrictions to be applied until the end of the crediting period. In that case no investment in other technology for N<sub>2</sub>O destruction or abatement is necessary other than the project activity. There are neither national motivations nor sector policies for motivation of such project activities. In conclusion it can be mentioned that the additionality is demonstrated appropriately as a result of the analysis using the approach chosen in the PDD. Additionality is demonstrated appropriately as a result of the steps mentioned above. The proposed project is additional.

### 3.6 Project boundary (32-33)

The only gas to be included in the project boundary defined in the PDD is N<sub>2</sub>O, which is, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are under the control of the project participants and reasonably attributable to the project.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the latest version of the PDD – ver. 3 dated on 09/07/2011. Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

### 3.7 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 07/10/2010 /09/, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 15 years and 0 months.

The PDD states the length of the crediting period in years and months, which is 01 years and 04 months, and its starting date as 01/09/2011, which is the date the first emission reductions or enhancements of net removals are generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

### 3.8 Monitoring plan (35-39)

In the final PDD ver. 3 dated on 09/07/2011, in its monitoring plan section it is explicitly indicated that the PP use monitoring project specific approach.

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as N<sub>2</sub>O concentration in the stack gas; volume flow rate of the stack gas; N<sub>2</sub>O emissions; operating hours; nitric acid production (100% concentrate); temperature and pressure of the stack gas and emission factor.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that

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provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as baseline emission factor; nitric acid production (100% concentrate); emissions thresholds from introduced new policies and regulations; baseline and project emissions; global warming potential; baseline emission factor; production output; concentrations; flow rate and hours.

The monitoring plan draws on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring” developed by the JISC, as appropriate: baseline and project emissions; global warming potential; baseline emission factor; production output; concentrations; flow rate and hours.

The monitoring plan explicitly and clearly distinguishes:

- Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as baseline emission factor (default value – 4.5 kgN<sub>2</sub>O/tHNO<sub>3</sub>).
- Data and parameters that are monitored throughout the crediting period, such as N<sub>2</sub>O concentration in the stack gas; volume flow rate of the stack gas; N<sub>2</sub>O emissions; operating hours; nitric acid production (100% concentrate); temperature and pressure of the stack gas.

The monitoring data are documented in point D.1.1 and D.1.13 of the PDD.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as continuously; daily and yearly.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, as appropriate. The main used formulas in the latest version of the PDD – ver. 3 dated on 09/07/2011 are:

- $BEm = VSGm \times NCSGm \times 10^{-3} \times OHm$  where BEm is total N<sub>2</sub>O emissions during the measurement period (formulae 1)
- $EFBL = (BEm/NAPm) \times (1-UNC/100)$  where EFBL is Baseline N<sub>2</sub>O emission factor (kg N<sub>2</sub>O/tHNO<sub>3</sub>) (formulae 2)
- Formulae for the calculation of project emissions -  $PE_n = VSG \times NCSG \times 10^{-9} \times OH$  (formulae 3)
- $EFn = PE_n / NAP_n$  where EFn is Project N<sub>2</sub>O emission factor (tN<sub>2</sub>O/tHNO<sub>3</sub>) (formulae 4)
- Baseline emissions formulae  $BE_n = NAP_n \times EFBL$  (formula 5)
- Emission reduction formulae  $ER_n = (EFBL - EFn) \times NAP_n \times GWP_{N2O}$  (formulae 6)

The monitoring plan presents the quality assurance and control procedures for the monitoring process. This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request. The data received from the used AMS (Automated Measuring System) will be collected continuously and the system will be calibrated annually. The Nitric acid flow meter will be calibrated on every 2 years. The calibration data will be archived during 3 years time period. The monitoring data will be archived for period of 8 years as per the host country criteria.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The documented chart in the PDD shows the distribution of responsibilities for the JI project. The overall responsibility lies with the project manager, V.Grancharov. Emissions procedures, data acquisition, operation of AMS and process information system, service and maintenance and documentation are allocated to the different job positions under the supervision of the project management. This is documented in point D.3 of the PDD.

No leakage emissions pertain to this JI Project.

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On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs from the project.

### 3.9 Leakage (40-41)

No leakage emissions pertain to this JI project.

### 3.10 Estimation of emission reductions or enhancements of net removals (42-47)

The PDD indicates assessment of emissions in the baseline scenario and in the project scenario as the approach chosen to estimate the emission reductions generated by the project.

The PDD provides the ex-ante estimates of:

- (a) Emissions for the project scenario (within the project boundary), which are 54,684 tons of CO<sub>2</sub>eq;
- (b) Leakage (not applicable), which are 0 tons of CO<sub>2</sub>eq;
- (c) Emissions for the baseline scenario (within the project boundary), which are 167,400 tons of CO<sub>2</sub>eq;
- (d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 112,716 tons of CO<sub>2</sub>eq.

The formulae used for calculating the estimates referred above, which are documented in point 3.8 (Monitoring Plan) of this Report, are consistent throughout the PDD.

For calculating the estimates referred to above, key factors, data sources used for calculating Emission factors documented in point 3.8 (Monitoring Plan) of this Report are clearly identified, reliable and transparent.

The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The estimates referred to above are consistent throughout the PDD.

The annual average of estimated emission reductions or enhancements of net removals over the crediting period is calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

The PDD, on its item E.6, includes an illustrative ex ante emissions calculation.

## JOINT IMPLEMENTATION DETERMINATION REPORT

### 3.11 Environmental impacts (48)

The PDD states the situation for environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party. No requirements regarding the analysis of Environmental Impacts Assessment (EIA) are defined by host country competent authority. Informative note for investment intention is submitted to Ministry of Environment and Water on 30th of March 2011, in connection with the local requirements. The ministry's reply from 30th of May states that no environmental impact and ecological assessment are required for the above mentioned investment proposal.

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment.

### 3.12 Stakeholder consultation (49)

The PDD provides information that Neochim PLC has submitted information to the public for intentions for project idea implementation in various ways. Firstly it was held work meeting at Dimitrovgrad municipality held in November 2010, secondly press publications were made in "Trakia" newspaper, edition 15 9-13 of April 2011 and "Novinar Ug" newspaper, edition 15, 15th of April 2011. The project activity PDD had been published for stakeholders consultations on RINA's website on 11 March 2011. As a result no stakeholder's comments on the project have been received.

### 3.13 Determination regarding small scale projects (50-57) – Not applicable

### 3.14 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64) – Not applicable

### 3.15 Determination regarding programmes of activities (65-73) – Not applicable

## 4 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received

## 5 DETERMINATION OPINION

RINA Services Spa (RINA) has performed determination of the project activity "Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC" in Bulgaria, with regard to the relevant requirements for JI activities.

The review of the project design document ver.1 dated on 01/03/2011; ver. 2 dated on 17/06/2011 and last version 3 dated on 09/07/2011 and the subsequent follow-up interviews have provided RINA with sufficient evidence to determine the fulfilment of the stated criteria.

The monitoring plan provides for the monitoring of the project's emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is RINA's opinion that the project participants are able to implement the monitoring plan.

In conclusion, it is RINA's opinion that the project activity "Emission reduction of Nitrous Oxide in Nitric Acid Production at Neochim PLC" in Bulgaria, as described in the PDD, version 03 of 09/07/2011, meets all relevant UNFCCC requirements for the JI and all relevant host Party criteria.

**APPENDIX A:  
DETERMINATION PROTOCOL**

**TABLE 1 REQUIREMENTS CHECKLIST**

| DVM Paragraph  | Check Item   | Initial finding   | Draft Conclusion     | Final Conclusion |
|--|--|---|----------------------|------------------|
| <b>PDD</b>   |  |   |                      |                  |
| 12-13  | Does the PDD and any supporting documentation comply with the applicable requirements?   | The PP used the correct JI PDD form. The PDD is documented reliable. Tables are not modified or deleted. Confidential information listed in Annex 7 was received and treated correspondingly. However CLs were documented.  | CL-1<br>CL-3         | OK               |
| <b>Description of the project</b>  |  |   |                      |                  |
| -  | Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the:<br>a) Situation existing prior to the starting date of the project;<br>b) Baseline scenario; and<br>c) Project scenario (expected outcome, including a technical description)? | The purpose and description of the project is provided as well as technical description. However a CL is documented.  | CL-2                 | OK               |
| -  | Is the history of the project (incl. its JI component) briefly summarized?   | The history of the project and Nitric acid production plant are presented throughout the PDD.   |                      | OK               |
| <b>Technical description of the project</b>  |  |   |                      |                  |
| <b>Location of the project</b>   |  |   |                      |                  |
| -  | Host Party(ies)  | The host party is Bulgaria.   |                      | OK               |
| -  | Region/State/Province etc.   | Region Haskovo  |                      | OK               |
| -  | City/Town/Community etc.   | In the town of Dimitrovgrad   |                      | OK               |
| -  | Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)  | The identification and physical location is well shown in the PDD   |                      | OK               |
| <b>Technologies to be employed, or measures, operations or actions to be implemented by the project</b>  |  |   |                      |                  |
| -  | Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?  | The Nitric acid production scheme is documented in the PDD as well as the main technical aspects. Please also refer to the documented CL 2.<br>Lack of information and some discrepancies in point A.4.3 of the PDD lead to some more deviations documented as CLs. | CL-7<br>CL-8<br>CL-9 | OK               |
| <b>Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including</b> |  |   |                      |                  |

| DVM Paragraph  | Check Item  | Initial finding   | Draft Conclusion | Final Conclusion |
|--|---|---|------------------|------------------|
| <b>why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances</b> |   |   |                  |                  |
| -  | Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)  | Yes, the PDD provide sufficient information concerning how an anthropogenic GHG emission reduction is achieved.   |                  | OK               |
| -  | Is it provided the estimation of emission reductions over the crediting period?                                       | Yes, the estimation of emission reductions over the crediting period is provided.   |                  | OK               |
| -  | Is it provided the estimated annual reduction for the chosen credit period in tCO2e?                                  | Yes, estimate annual reduction for the chosen credit period is provided in tCO2e.   |                  | OK               |
| -  | Are the data from questions above presented in tabular format?  | Yes, the information is presented in the table format.  |                  | OK               |
| -  | Is the length of the crediting period Indicated?  | The length of the crediting period is not well provided in the PDD. CLs are documented.   | CL4<br>CL5       | OK               |
| -  | Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided? | Yes, all estimate reductions for the chosen credit period are provided in tCO2e.  |                  | OK               |
| <b>Project approvals by Parties</b>  |   |   |                  |                  |
| 19   | Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?              | Yes, written project approval (Letter of support) by Republic of Bulgaria is received. The Letter of support from the Ministry of Environment and Water was issued on 23 November 2010 /3/. However a CL is documented.   | CL6              | OK               |
| 19   | Does the PDD identify at least the host Party as a "Party involved"?  | Yes, the required information is provided in point A.3  |                  | OK               |
| 19   | Has the DFP of the host Party issued a written project approval?  | For this project activity a Letter of support issued by Republic of Bulgaria is received. The Letter of support by the Ministry of Environment and Water was issued on 23 November 2010 /3/. After determination process and project approval by the MOEW the PP will receive a Letter of approval. |                  | OK               |
| 20   | Are all the written project approvals by Parties involved unconditional?  | Yes, the Letter of support is unconditional.  |                  | OK               |
| <b>Project participants</b>  |   |   |                  |                  |
| <b>Authorization of project participants by Parties involved</b>   |   |   |                  |                  |
| 21   | Are project participants and Party(ies) involved in the project listed?   | A CAR is documented.  | CAR-1            | OK               |
| 21   | Is contact information provided in Annex 1 of the PDD?  | Yes, contact information is provided in Annex 1 of the PDD.   |                  | OK               |



| DVM Paragraph               | Check Item   | Initial finding  | Draft Conclusion  | Final Conclusion |
|-----------------------------|--|--|---|------------------|
| 21                          | Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: <ul style="list-style-type: none"> <li>- A written project approval by a Party involved, explicitly indicating the name of the legal entity? or</li> <li>- Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?</li> </ul>  | Yes, the project participant (Neochim PLC) is authorized by the Host party which is the Ministry of Environment and Water. The Ministry was issued a Letter of support.                              |   | OK               |
| <b>Baseline setting</b>     |  |  |   |                  |
| 22                          | Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? <ul style="list-style-type: none"> <li>- JI specific approach</li> <li>- Approved CDM methodology approach</li> </ul>   | The PDD gives information that the PP use JI project specific approach but this is not explicitly indicated which is documented as CL.   | CL-10   | OK               |
| <b>JI specific approach</b> |  |  |   |                  |
| 23                          | Does the PDD provide a detailed theoretical description in a complete and transparent manner?  | During the determination process it was found that the PDD provided lack of baseline information. For the purpose of detailed baseline setting determination following CARs and CLs were documented. | <del>CAR-2</del><br><del>CAR-3</del><br>CL-11<br>CL-12<br>CL-13 | OK               |
| 23                          | Does the PDD provide justification that the baseline is established: <ul style="list-style-type: none"> <li>(a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?</li> <li>(b) Taking into account relevant national and/or sectoral policies and circumstance?                             <ul style="list-style-type: none"> <li>- Are key factors that affect a baseline taken into account?</li> </ul> </li> <li>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?</li> <li>(d) Taking into account of uncertainties and</li> </ul> | Please refer to above comment and relevant CARs and CLs.   |   | OK               |

| DVM Paragraph   | Check Item   | Initial finding   | Draft Conclusion | Final Conclusion |
|---|--|---|------------------|------------------|
|   | using conservative assumptions?<br>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?<br>(f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate? |   |                  |                  |
| 24  | If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?  | Please refer to above comment and relevant CARs and CLs.  |                  | OK               |
| 25  | If a multi-project emission factor is used, does the PDD provide appropriate justification?  | The project does not use a multi-project emission factor. |                  | OK               |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b> |  |   |                  |                  |
| 26 (a)  | Does the PDD provide the title, reference number and version of the approved CDM methodology used?   | N/A   |                  |                  |
| 26 (a)  | Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?   | N/A   |                  |                  |
| 26 (b)  | Does the PDD provide a description of why the approved CDM methodology is applicable to the project?   | N/A   |                  |                  |
| 26 (c)  | Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?   | N/A   |                  |                  |
| 26 (d)  | Is the baseline identified appropriately as a result?  | N/A   |                  |                  |
| <b>Additionality</b>                                      |  |   |                  |                  |

| DVM Paragraph   | Check Item   | Initial finding   | Draft Conclusion       | Final Conclusion |
|---|--|---|------------------------|------------------|
| <b>JI specific approach</b>                               |  |   |                        |                  |
| 28  | <p>Does the PDD indicate which of the following approaches for demonstrating additionality is used?</p> <p>(a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals;</p> <p>(b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality;</p> <p>(c) Application of the most recent version of the “Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board”.</p> | <p>During the determination process it was found that the PP was not demonstrated, followed and assessed according to the latest version of “Tool for demonstration and assessment of additionality”. For the purpose of detailed additionality determination following CARs were documented.</p> | <p>CAR-4<br/>CAR-5</p> | <p>OK</p>        |
| 29 (a)  | <p>Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?</p>   | <p>Please refer to above comment and relevant CARs.</p>   |                        | <p>OK</p>        |
| 29 (b)  | <p>Are additionality proofs provided?</p>  | <p>Please refer to above comment and relevant CARs.</p>   |                        | <p>OK</p>        |
| 29 (c)  | <p>Is the additionality demonstrated appropriately as a result?</p>  | <p>Please refer to above comment and relevant CARs.</p>   |                        | <p>OK</p>        |
| 30  | <p>If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?</p>  | <p>Please refer to above comment and relevant CARs.</p>   |                        | <p>OK</p>        |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b> |  |   |                        |                  |
| 31 (a)  | <p>Does the PDD provide the title, reference number and version of the approved CDM methodology used?</p>  | <p>N/A</p>  |                        |                  |
| 31 (b)  | <p>Does the PDD provide a description of why and</p>   | <p>N/A</p>  |                        |                  |

| DVM Paragraph  | Check Item  | Initial finding   | Draft Conclusion | Final Conclusion |
|--|---|---|------------------|------------------|
|  | how the referenced approved CDM methodology is applicable to the project?   |   |                  |                  |
| 31 (c)   | Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology?  | N/A   |                  |                  |
| 31 (d)   | Are additionality proofs provided?  | N/A   |                  |                  |
| 31 (e)   | Is the additionality demonstrated appropriately as a result?  | N/A   |                  |                  |
| <b>Project boundary (applicable except for JI LULUCF projects)</b> |   |   |                  |                  |
| <b>JI specific approach</b>  |   |   |                  |                  |
| 32 (a)   | Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are:<br>(i) Under the control of the project participants?<br>(ii) Reasonably attributable to the project?<br>(iii) Significant? | Yes, the project boundary is defined in point B.3 of the PDD. The project boundary involved the nitric acid plant and the only greenhouse gas applicable for this JI project is N <sub>2</sub> O. |                  | OK               |
| 32 (b)   | Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?  | The project boundary is not defined on the basis of a case-by-case assessment.  |                  | OK               |
| 32 (c)   | Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?   | The project boundary involves the nitric acid plant and the only greenhouse gas is N <sub>2</sub> O. The information is provided in tabular format.   |                  | OK               |
| 32 (d)   | Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?   | Yes, the project boundary is defined in point B.3 of the PDD where all gases and sources are provided. The project boundary involves N <sub>2</sub> O gas only.                                   |                  | OK               |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b>          |   |   |                  |                  |
| 33   | Is the project boundary defined in accordance with the approved CDM methodology?  | N/A   |                  |                  |
| <b>Crediting period</b>  |   |   |                  |                  |
| 34 (a)   | Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?  | The project starting date is documented in the PDD in point C.1. The information is not corresponding with the definition for “starting date of the project”. A CAR is documented.                | CAR-6            | OK               |

| DVM Paragraph               | Check Item  | Initial finding  | Draft Conclusion | Final Conclusion |
|-----------------------------|---|--|------------------|------------------|
| 34 (a)                      | Is the starting date after the beginning of 2000?   | Yes, the starting date is after the beginning of 2000.   |                  | OK               |
| 34 (b)                      | Does the PDD state the expected operational lifetime of the project in years and months?  | No, the PP does not present the information in years and months which is documented as CAR.  | CAR-7            | OK               |
| 34 l                        | Does the PDD state the length of the crediting period in years and months?  | No, the PP does not present the information in years and months which is documented as CAR.  | CAR-8            | OK               |
| 34 l                        | Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?  | The starting date of the crediting period is before the first emission reduction generated by the project.   |                  | OK               |
| 34 (d)                      | Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?   | Yes, the information is provided in the PDD in section C.  |                  | OK               |
| 34 (d)                      | If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval?<br>Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012? | Yes, the information is provided in the PDD in section C. The ERUs are estimated only for applicable crediting period up to 2012. If the crediting period extends beyond 2012 it is written that this is subject to the host party approval. |                  | OK               |
| <b>Monitoring plan</b>      |   |  |                  |                  |
| 35                          | Does the PDD explicitly indicate which of the following approaches is used?<br>– JI specific approach<br>– Approved CDM methodology approach  | No, the PP does not explicitly indicate which approach is used in the PDD, which is documented as CL. However the PP use project specific approach throughout the section “D” of the PDD.  | CL-14            | OK               |
| <b>JI specific approach</b> |   |  |                  |                  |
| 36 (a)                      | Does the monitoring plan describe:<br>– All relevant factors and key characteristics that will be monitored?<br>– The period in which they will be monitored?<br>– All decisive factors for the control and reporting of project performance?                         | Yes, all monitoring data and parameters are described in the PDD, section “D”. The monitoring frequency is also shown. The company does not use the Guidelines for users of the JI PDD, which is documented as CAR. A CL is also documented. | CAR-9<br>CL-23   | OK               |
| 36 (b)                      | Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?  | Yes, the monitoring plan specifies the requested information.  |                  | OK               |

| DVM Paragraph | Check Item   | Initial finding   | Draft Conclusion | Final Conclusion |
|---------------|--|---|------------------|------------------|
| 36 (b)        | If default values are used:<br>– Are accuracy and reasonableness carefully balanced in their selection?<br>– Do the default values originate from recognized sources?<br>– Are the default values supported by statistical analyses providing reasonable confidence levels?<br>– Are the default values presented in a transparent manner? | Yes, the default value is used. This is the Baseline emission factor which is taken from the IPCC.<br>Default value: 4.5 kgN <sub>2</sub> O/tHNO <sub>3</sub> is used |                  | OK               |
| 36 (b) (i)    | For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?   | Yes, all selected monitoring values are justified in the Monitoring plan, documented in the PDD.  |                  | OK               |
| 36 (b) (ii)   | For other values,<br>– Does the monitoring plan clearly indicate the precise references from which these values are taken?<br>– Is the conservativeness of the values provided justified?  | Yes, all monitoring data sources are justified in the Monitoring plan. All monitoring data are conservative.  |                  | OK               |
| 36 (b) (iii)  | For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?   | The monitoring plan does not provide clear information for procedure if the expected data are unavailable, which is documented as CL.                                 | CL-15            | OK               |
| 36 (b) (iv)   | Are International System Unit (SI units) used?   | No. CLs are documented.   | CL-16<br>CL-25   | OK               |
| 36 (b) (v)    | Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?   | Yes, the monitoring plan notes parameters and variables that are used to calculate baseline emissions and are obtained through monitoring.                            |                  | OK               |
| 36 (b) (v)    | Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?   | Yes, the use of parameters and variables is consistent between the baseline and monitoring plan.  |                  | OK               |
| 36 l          | Does the monitoring plan draw on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”?   | Yes, the monitoring plan uses the standard variables contained in appendix B of „Guidance on criteria for baseline setting and monitoring”.                           |                  | OK               |
| 36 (d)        | Does the monitoring plan explicitly and clearly  | Yes, the monitoring plan distinguishes explicitly and clearly   |                  | OK               |

| DVM Paragraph | Check Item  | Initial finding   | Draft Conclusion | Final Conclusion |
|---------------|---|---|------------------|------------------|
|               | distinguish:<br>(12) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination?<br>(ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination?<br>(iii) Data and parameters that are monitored throughout the crediting period? | the data and parameters that are not monitored but are determined only once and they are available at the stage of determination.                     |                  |                  |
| 36 l          | Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?   | Yes, the frequency and recording procedure are documented in the Monitoring plan.   |                  | OK               |
| 36 (f)        | Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?   | All formulae used for baseline and project emissions estimations are documented in the Monitoring plan. No leakage emissions pertain to this project. |                  | OK               |
| 36 (f) (i)    | Is the underlying rationale for the algorithms/formulae explained?  | Yes, the PP provide the algorithm and formulae explanation.   |                  | OK               |
| 36 (f) (ii)   | Are consistent variables, equation formats, subscripts etc. used?   | Yes.  |                  | OK               |
| 36 (f) (iii)  | Are all equations numbered?   | Yes, all equations are numbered.  |                  | OK               |
| 36 (f) (iv)   | Are all variables, with units indicated defined?  | Yes, units are defined throughout the PDD.  |                  | OK               |
| 36 (f) (v)    | Is the conservativeness of the algorithms/procedures justified?   | Yes, the conservativeness is justified.   |                  | OK               |
| 36 (f) (v)    | To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?   | Yes.  |                  | OK               |

| DVM Paragraph | Check Item   | Initial finding   | Draft Conclusion | Final Conclusion |
|---------------|--|---|------------------|------------------|
| 36 (f) (vi)   | Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?   | Yes.  |                  | OK               |
| 36 (f) (vii)  | Are any parts of the algorithms or formulae that are not self-evident explained?   | N/A   |                  |                  |
| 36 (f) (vii)  | Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?  | Please refer to CL 7,8 and 12 and CAR 3   |                  | OK               |
| 36 (f) (vii)  | Are references provided as necessary?  | Yes.  |                  | OK               |
| 36 (f) (vii)  | Are implicit and explicit key assumptions explained in a transparent manner?   | Yes.  |                  | OK               |
| 36 (f) (vii)  | Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?  | Yes.  |                  | OK               |
| 36 (f) (vii)  | Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?  | Yes. That issue is assessed duly in D.2: QC/QA procedures undertaken for data monitored.  |                  | OK               |
| 36 (g)        | Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project?<br>Does the monitoring plan provide a reference as to where a detailed description of the standard can be found? | Yes. The international standards applied are identified in D.2: QC/QA procedures undertaken for data monitored.   |                  | OK               |
| 36 (h)        | Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?   | The Monitoring plan does not use statistical techniques.  |                  | OK               |
| 36 (i)        | Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?           | The QC and QA procedures are documented in the PDD, section D.2. The calibration procedure of used monitoring equipment is not presented in the Monitoring plan, which is documented as CL. | CL-17            | OK               |



| DVM Paragraph   | Check Item   | Initial finding  | Draft Conclusion                     | Final Conclusion |
|---|--|--|--------------------------------------|------------------|
| 36 (j)  | Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?  | Yes, the operational employees for this JI project are present in the PDD but their responsibilities are not presented, which is documented as CL. | <del>CL-18</del>                     | OK               |
| 36 (k)  | Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?<br>If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?   | Yes.   |                                      | OK               |
| 36 (l)  | Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations? | Yes, all monitoring data are presented in tabular format in the PDD.   |                                      | OK               |
| 36 (m)  | Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?  | No. CLs are documented.  | <del>CL-19</del><br><del>CL-20</del> | OK               |
| 37  | If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?      | Yes, please also refer to the applicable CLs and a CAR   |                                      | OK               |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b> |  |  |                                      |                  |
| 38 (a)  | Does the PDD provide the title, reference number and version of the approved CDM methodology used?   | N/A  |                                      |                  |
| 38 (a)  | Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?   | N/A  |                                      |                  |
| 38 (b)  | Does the PDD provide a description of why the  | N/A  |                                      |                  |

| DVM Paragraph  | Check Item   | Initial finding                               | Draft Conclusion | Final Conclusion |
|--|--|---|------------------|------------------|
|  | approved CDM methodology is applicable to the project?   |   |                  |                  |
| 38 l   | Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?   | N/A   |                  |                  |
| 38 (d)   | Is the monitoring plan established appropriately as a result?  | N/A   |                  |                  |
| <u>Applicable to both JI specific approach and approved CDM methodology approach</u> |  |   |                  |                  |
| 39   | <p>If the monitoring plan indicates overlapping monitoring periods during the crediting period:</p> <p>(a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently?</p> <p>(b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)?</p> <p>l Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met?</p> <p>(d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?</p> | N/A   |                  |                  |
| <b>Leakage</b>   |  |   |                  |                  |
| <b>JI specific approach</b>  |  |   |                  |                  |
| 40 (a)   | Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?  | No leakage emissions pertain to this project. |                  | OK               |

| DVM Paragraph  | Check Item  | Initial finding  | Draft Conclusion | Final Conclusion |
|--|---|--|------------------|------------------|
| 40 (b)   | Does the PDD provide a procedure for an ex ante estimate of leakage?  | No leakage emissions pertain to this project.  |                  | OK               |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b>                |   |  |                  |                  |
| 41   | Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?   | N/A  |                  |                  |
| <b>Estimation of emission reductions or enhancements of net removals</b> |   |  |                  |                  |
| <b>JI specific approach</b>  |   |  |                  |                  |
| 42   | Does the PDD indicate which of the following approaches it chooses?<br>(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario<br>(b) Direct assessment of emission reductions   | Yes, the PP use approach (a) which is documented in the PDD<br>A CAR and a CL are documented.  | CAR-10<br>CL-22  | OK               |
| 43   | If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of:<br>(a) Emissions or net removals for the project scenario (within the project boundary)?<br>(b) Leakage, as applicable?<br>I Emissions or net removals for the baseline scenario (within the project boundary)?<br>(d) Emission reductions or enhancements of net removals adjusted by leakage? | Yes, the PDD provide ex ante estimations. No leakage emissions pertain to this project.  |                  | OK               |
| 44   | If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of:<br>(a) Emission reductions or enhancements of net removals (within the project boundary)?<br>(b) Leakage, as applicable?<br>I Emission reductions or enhancements of net removals adjusted by leakage?  | N/A  |                  |                  |
| 45   | For both approaches in 42<br>(a) Are the estimates in 43 or 44 given:<br>(i) On a periodic basis?<br>(ii) At least from the beginning until the end of the crediting period?<br>(iii) On a source-by-source/sink-by-sink basis?   | All the required information is present in the PDD except the information in point (h) concerning the annual average of emission reductions, which is documented as CL. Please also refer to CL 5. | CL-24            | OK               |

| DVM Paragraph | Check Item   | Initial finding                               | Draft Conclusion | Final Conclusion |
|---------------|--|---|------------------|------------------|
|               | <p>(iv) For each GHG?</p> <p>(v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?</p> <p>(b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD?</p> <p>I For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate?</p> <p>(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?</p> <p>I Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?</p> <p>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?</p> <p>(g) Are the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?</p> |   |                  |                  |
| 46            | If the calculation of the baseline emissions or net removals is to be performed ex post, does  | Yes, the PDD include the ex-ante calculation. |                  | OK               |

| DVM Paragraph   | Check Item  | Initial finding  | Draft Conclusion | Final Conclusion |
|---|---|--|------------------|------------------|
|   | the PDD include an illustrative ex ante emissions or net removals calculation?  |  |                  |                  |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b> |   |  |                  |                  |
| 47 (a)  | Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology?  | N/A  |                  |                  |
| 47 (b)  | Is the estimation of emission reductions or enhancements of net removals presented in the PDD: <ul style="list-style-type: none"> <li>– On a periodic basis?</li> <li>– At least from the beginning until the end of the crediting period?</li> <li>– On a source-by-source/sink-by-sink basis?</li> <li>– For each GHG?</li> <li>– In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?</li> <li>– Are the formula used for calculating the estimates consistent throughout the PDD?</li> <li>– Are the estimates consistent throughout the PDD?</li> <li>– Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?</li> </ul> | N/A  |                  |                  |
| <b>Environmental impacts</b>                              |   |  |                  |                  |
| 48 (a)  | Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?   | No environmental impact assessment is requested for this JI project from the host party competent authority. A CL is documented. | CL-24            | OK               |
| 48 (b)  | If the analysis in 48 (a) indicates that the  | No significant environmental impact is expected. Please also   |                  | OK               |

| DVM Paragraph   | Check Item   | Initial finding  | Draft Conclusion | Final Conclusion |
|---|--|--|------------------|------------------|
|   | environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?   | refer to CL 24.  |                  |                  |
| <b>Stakeholder consultation</b>   |  |  |                  |                  |
| 49  | If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide:<br>(a) A list of stakeholders from whom comments on the projects have been received, if any?<br>(b) The nature of the comments?<br>I A description on whether and how the comments have been addressed?   | During the determination phase no comments were received. A CAR is documented. | CAR-11           | OK               |
| <b>Determination regarding small-scale projects (additional elements for assessment) – NOT APPLICABLE</b> |  |  |                  |                  |
| 50  | Does the PDD appropriately specify and justify the SSC project type(s) and category(ies) that fall under:<br>(12)One of the types and thresholds of JI SSC projects as defined in .Provisions for joint implementation small-scale projects.? If the project contains more than one JI SSC project type component, does each component meet the relevant threshold criterion?<br>(b) One of the SSC project categories defined in the most recent version of appendix B of annex II to decision 4/CMP.1, or an additional project category approved by the JISC in accordance with the relevant provision in “Provisions for joint implementation small-scale projects”? | N/A  |                  |                  |
| 51  | Does the SSC PDD confirms and shows that the proposed JI SSC project is not a debundled  | N/A  |                  |                  |

| DVM Paragraph  | Check Item  | Initial finding | Draft Conclusion | Final Conclusion |
|--|---|-----------------|------------------|------------------|
|  | component of a large project by explaining that there does not exist a JI (SSC) project with a publicly available determination in accordance with paragraph 34 of the JI guidelines:<br>(a) Which has the same project participants; and<br>(b) Which applies the same technology/measure and pertains to the same project category; and<br>(c) Whose determination has been made publicly available in accordance with paragraph 34 of the JI guidelines within the previous 2 years; and<br>(d) Whose project boundary is within 1 km of the project boundary of the proposed JI SSC project at the closest point? |                 |                  |                  |
| <b>Applicable to bundled JI SSC project – NOT APPLICABLE</b> |   |                 |                  |                  |
| 52 (a)   | Do all projects in the bundle:<br>(i) Have the same crediting period?<br>(ii) Comply with the provisions for JI SSC projects defined in “Provisions for joint implementation small-scale projects”, in particular the thresholds referred to in 50 (a) above?<br>(iii) Retain their distinctive characteristics (i.e. location, technology/measure etc.)?   | N/A             |                  |                  |
| 52 (b)   | Does the composition of the bundle not change over time?  | N/A             |                  |                  |
| 52 I   | Has the AIE received (from the project participants):<br>(i) Information on the bundle using the form developed by the JISC (F-JI-SSCBUNDLE)?<br>(ii) A written statement signed by all project participants indicating that they agree that their individual projects are part of the bundle and   | N/A             |                  |                  |

| DVM Paragraph | Check Item   | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|--|-----------------|------------------|------------------|
|               | nominating one project participant to represent all project participants in communicating with the JISC?<br>(iii) Indication by the Parties involved that they are aware of the bundle in their project approvals referred to in 19 above?   |                 |                  |                  |
| 53            | If the project participants prepared a single SSC PDD for the bundled JI SSC projects, do(are) all the projects:<br>(a) Pertain to the same JI SSC project category?<br>(b) Apply the same technology or measure?<br>I Located in the territory of the same host Party?  | N/A             |                  |                  |
| 54            | If the project participants prepared separate SSC PDDs for the bundled JI SSC projects, do(are) all the projects:<br>(12) Have SSC PDDs been prepared for all JI SSC projects in the bundle?<br>(b) Does each SSC PDD contain a single JI SCC project in the bundle?   | N/A             |                  |                  |
| 55            | If the projects in the bundle use the same baseline, does the F-JI-SSC-BUNDLE provide an appropriate justification for the use of the same baseline considering the particular situation of each project in the bundle?  | N/A             |                  |                  |
| 56            | Does the PDD indicate which of the following approaches is used for establishing a monitoring plan?<br>(a) By preparing a separate monitoring plan for each of the constituent projects;<br>(b) By preparing an overall monitoring plan including a proposal of monitoring of performance of the constituent projects on a sample basis, as appropriate. | N/A             |                  |                  |
| 56 (b)        | If the approach 57 (b) above is used,  | N/A             |                  |                  |



| DVM Paragraph  | Check Item  | Initial finding | Draft Conclusion | Final Conclusion |
|--|---|-----------------|------------------|------------------|
|  | (12)Are all the JI SSC projects located in the territory of the same host Party?<br>(ii) Do all the JI SSC projects pertain to the same project category?<br>(iii) Do all the JI SSC projects apply the same technology or measure?<br>(iv) Does the overall monitoring plan reflect good monitoring practice appropriate to the bundled JI SSC projects and provide for collection and archiving of the data needed to calculate the emission reductions achieved by the bundled projects?   |                 |                  |                  |
| <b>Applicable to all JI SSC projects – NOT APPLICABLE</b>  |   |                 |                  |                  |
| 57   | Is the leakage only within the boundaries of non-Annex I Parties considered?  | N/A             |                  |                  |
| <b>Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment) – NOT APPLICABLE</b> |   |                 |                  |                  |
| 58   | Does the PDD appropriately specify how the LULUCF project conforms to:<br>(a) The definitions of LULUCF activities included in paragraph 1 of the annex to decision 16/CMP.1, applying good practice guidance for LULUCF as decided by the CMP, as appropriate?<br>(b) In the case of afforestation, reforestation and/or forest management projects, the definition of “forest” selected by the host Party, which specifies:<br>(i) A single minimum tree crown cover value (between 10 and 30 per cent)? And<br>(ii) A single minimum land area value (between 0.05 and 1 hectare)? And<br>(iii) A single minimum tree height value (between 2 and 5 metres)? | N/A             |                  |                  |
| <b>JI specific approach – NOT APPLICABLE</b>   |   |                 |                  |                  |
| 59   | Baseline setting – in addition to 22-26 above<br>Does the PDD provide an explanation how the baseline chosen:   | N/A             |                  |                  |

| DVM Paragraph | Check Item  | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|---|-----------------|------------------|------------------|
|               | <ul style="list-style-type: none"> <li>- Takes into account the good practice guidance for LULUCF, developed by the IPCC?</li> <li>- Ensures conformity with the definitions, accounting rules, modalities and guidelines under Article 3, paragraphs 3 and 4, of the Kyoto Protocol?</li> </ul>  |                 |                  |                  |
| 60            | <p>Project boundary – alternative to 32-33</p> <p>(a) Does the project boundary geographically delineate the JI LULUCF project under the control of the project participants?</p> <p>(a) If the JI LULUCF project contains more than one discrete area of land,</p> <p>(i) Does each discrete area of land have a unique geographical identification?</p> <p>(ii) Is the boundary defined for each discrete area?</p> <p>(ii) Does the boundary not include the areas in between these discrete areas of land?</p> <p>(b) Does the project boundary encompass all anthropogenic emissions by sources and removals by sinks of GHGs which are:</p> <p>(i) Under the control of the project participants;</p> <p>(ii) Reasonably attributable to the project; and</p> <p>(iii) Significant?</p> <p>I Does the project boundary account for all changes in the following carbon pools:</p> <ul style="list-style-type: none"> <li>- Above-ground biomass;</li> <li>- Below-ground biomass;</li> <li>- Litter;</li> <li>- Dead wood; and</li> <li>- Soil organic carbon?</li> </ul> <p>I Does the PDD provide:</p> <p>(12) The information of which carbon pools are selected?</p> <p>(ii) If one or more carbon pools are not selected, transparent and verifiable information that indicates, based on conservative</p> | N/A             |                  |                  |

| DVM Paragraph   | Check Item   | Initial finding | Draft Conclusion | Final Conclusion |
|---|--|-----------------|------------------|------------------|
|   | assumptions, that the pool is not a source?<br>(d) Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria in (b) above?   |                 |                  |                  |
| 61 (a)  | Project boundary – alternative to 32-33 (cont.)<br>Are the delineation of the project boundary and the gases and sources/sinks included appropriately described and justified in the PDD?  | N/A             |                  |                  |
| 61 (b)  | Project boundary – alternative to 32-33 (cont.)<br>Are all gases and sources/sinks included explicitly stated, and the exclusions of any sources/sinks related to the baseline or the LULUCF project appropriately justified?  | N/A             |                  |                  |
| 62  | Monitoring plan – in addition to 35-39 Does the PDD provide an appropriate description of the sampling design that will be used for the calculation of the net anthropogenic removals by sinks occurring within the project boundary in the project scenario and, in case the baseline is monitored, in the baseline scenario, including, inter alia, stratification, determination of number of plots and plot distribution etc.? | N/A             |                  |                  |
| 63  | Does the PDD take into account only the increased anthropogenic emissions by sources and/or reduced anthropogenic removals by sinks of GHGs outside the project boundary?  | N/A             |                  |                  |
| <b>Approved CDM methodology approach – NOT APPLICABLE</b> |  |                 |                  |                  |
| 64 (a)  | Does the PDD provide the title, reference number and version of the approved CDM methodology used?   | N/A             |                  |                  |
| 64 (a)  | Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?   | N/A             |                  |                  |

| DVM Paragraph   | Check Item  | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|-----------------|------------------|------------------|
| 64 (b)  | Does the PDD provide a description of why the approved CDM methodology is applicable to the project?  | N/A             |                  |                  |
| 64 l  | Are all explanations, descriptions and analyses made in accordance with the referenced approved CDM methodology?  | N/A             |                  |                  |
| 64 (d)  | Are the baseline, additionality, project boundary, monitoring plan, estimation of enhancements of net removals and leakage established appropriately as a result?   | N/A             |                  |                  |
| <b>Determination regarding programmes of activities (additional/alternative elements for assessment) – NOT APPLICABLE</b> |   |                 |                  |                  |
| 66  | <p>Does the PDD include:</p> <p>(a) A description of the policy or goal that the JI PoA seeks to promote?</p> <p>(b) A geographical boundary for the JI PoA (e.g. municipality, region within a country, country or several countries) within which all JPAs included in the JI PoA will be implemented?</p> <p>l A description of the operational and management arrangements established by the coordinating entity for the implementation of the JI PoA, including:</p> <ul style="list-style-type: none"> <li>– The maintenance of records for each JPA?</li> <li>– A system/procedure to avoid double counting (e.g. to avoid including a new JPA that has already been determined)?</li> <li>– Provisions to ensure that persons operating JPAs are aware and have agreed to their activity being added to the JI PoA?</li> </ul> <p>(d) A description of each type of JPAs that will be included in the JI PoA, including the technology or measures to be used?</p> <p>l The eligibility criteria for inclusion of JPAs to the JI PoA for each type of JPA in the JI PoA?</p> | N/A             |                  |                  |
| 67  | <i>Project approvals by Parties involved – additional to 19-20</i>  | N/A             |                  |                  |

| DVM Paragraph | Check Item   | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|--|-----------------|------------------|------------------|
|               | Are all Parties partly or entirely within the geographical boundary for the JI PoA listed as "Parties involved" and indicated as host Parties in the PDD?  |                 |                  |                  |
| 68            | <i>Authorization of project participants by Parties involved – additional to 21</i><br>Is the coordinating entity presented in the PDD authorized by all host Parties to coordinate and manage the JI PoA?   | N/A             |                  |                  |
| 69            | <i>Baseline setting – additional to 22-26</i><br>Is the baseline established for each type of JPA?   | N/A             |                  |                  |
| 70            | <i>Additionality – additional to 27-31</i><br>Does the PDD indicate at which of the following levels that additionality is demonstrated?<br>(a) For the JI PoA<br>(b) For each type of JPA   | N/A             |                  |                  |
| 71            | <i>Crediting period – additional to 34</i><br>Is the starting date of the JI PoA after the beginning of 2006 (instead of 2000)?  | N/A             |                  |                  |
| 72            | <i>Monitoring plan – additional to 35-39</i><br>Is the monitoring plan established for each technology and/or measure under each type of JPA included in the JI PoA?   | N/A             |                  |                  |
| 73            | Does the PDD include a table listing at least one real JPA for each type of JPA?   | N/A             |                  |                  |
| 73            | For each real JPA listed, does the PDD provide the information of:<br>(a) Name and brief summary of the JPA?<br>(b) The type of JPA?<br>  A geographical reference or other means of identification?<br>(d) The name and contact details of the entity/individual responsible for the operation of the JPA?<br>  The host Party(ies)?<br>(f) The starting date of the JPA? | N/A             |                  |                  |

| DVM Paragraph | Check Item  | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|---|-----------------|------------------|------------------|
|               | (g) The length of the crediting period of the JPA?<br>(h) Confirmation that the JPA meets all the eligibility requirements for its type, including a description of how these requirements are met?<br>(i) Confirmation that the JPA has not been determined as a single JI project or determined under a different JI PoA? |                 |                  |                  |

**TABLE 2 RESOLUTIONS OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS**

| Clarifications and corrective action requests  | Ref. to table 1 | Response by project participants   | Determination team conclusion  |
|--|-----------------|--|--|
| <p><b>Corrective action request № 1</b><br/>Bulgaria as Party Involved (host) is not a Project participant. Please correct (A.3)</p>   | 21              | Table in Section A.3 page 6 has been corrected.  | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR. |
| <p><b>Corrective action request № 2</b><br/>The PDD states that a JI specific approach based on selected parts of CDM AM0034 methodology has been chosen for identifying of the baseline. AM0034 refers to AM0028 for the methodology of determination of the baseline scenario. There is no reason why the PDD should not follow that methodology and identify and assess all baseline scenario alternatives listed in AM0028 in order to investigate all technically feasible options which are realistic and credible. Please provide a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established by listing and describing all plausible future scenarios on the basis of conservative assumptions and selecting the most plausible on</p> | 23              | Detailed description has been provided in Section B.1 pages: 14; 15; 17-22                       | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR. |
| <p><b>Corrective action request № 3</b><br/>There is not followed the required steps from the latest version of the “Guidelines for users of the JI PDD for”, point B.1. There is also not used the required table from the Guidelines (B.1).</p>  | 23              | Required steps have been followed and required table is inserted in Section B.1 pages 13; 21; 23 | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR. |

|   |           |  |  |
|---|-----------|--|--|
| <p><b>Corrective action request № 4</b><br/>                 There is not demonstrated, followed and assessed the latest version of the “Tool for demonstration and assessment of additionally”. Please indicate the number and the version used. Please follow strictly the steps and requirements of the tool. The “Common practice analysis” should concerns the situation only in Bulgaria (B.2).</p> | <p>28</p> | <p>The latest version of “Tool for demonstration and assessment of additionally” and its steps and requirements have been followed in Section B.2 page 26</p> <p><b>PDD, Version 3: Step 2b is corrected and confidential investment analysis in annex 7 is added.</b></p> | <p><b>First response:</b><br/>                 The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CAR is still open.</p> <p>The section is now developed properly compared to the previous version. However Section B.2, Step 2, Sub-step 2b: Simple cost analysis is not developed properly. The “Tool for the demonstration and assessment of additionality”, V.05.2 requires in this item”</p> <p>(2) Document the costs associated with the CDM project activity and the alternatives identified in Step 1 and demonstrate that there is at least one alternative which is less costly than the project activity.<br/>                 “If it is concluded that the proposed CDM project activity is more costly than at least one alternative then proceed to Step 4 (Common practice analysis)”.</p> <p>Please amend Step 2.b. Option I.</p> <p><b>Second response:</b><br/>                 The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CAR is closed.</p> |
| <p><b>Corrective action request № 5</b><br/>                 There is not followed the required steps from the latest version of the “Guidelines for users of the JI PDD for”, point B.2</p>  | <p>28</p> | <p>The required steps from Guidelines for users of the JI PDD for” have been followed in Section B.2 pages 26,28</p>   | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR.</p>  |



|  |        |  |  |
|--|--------|--|--|
| <p><b>Corrective action request № 6</b><br/>The starting date of the project activity documented in the PDD do not corresponded with the definition for "starting date of the project". Please specify and provide additional information and evidences (C.1).</p> | 34 (a) | Starting date of the project has been specified in Section C.1 page 30                 | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR. |
| <p><b>Corrective action request № 7</b><br/>Please present the information in years and months (C.2).</p>  | 34 (b) | Information has been presented in C.2. – page 30                                       | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR. |
| <p><b>Corrective action request № 8</b><br/>The length of the crediting period is set by the Kyoto Protocol, not the MOEW of Bulgaria. Please state the length of the crediting period in years and months (C.3)</p>   | 34 (l) | Length of the crediting period has been stated and corrected in Section C.3. – page 30 | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR. |

|  |               |   |  |
|--|---------------|---|--|
| <p><b>Corrective action request № 9</b><br/>There is not followed the required steps from the latest version of the "Guidelines for users of the JI PDD form", point D.1</p> | <p>36 (a)</p> | <p>The required steps from the latest version of the "Guidelines for users of the JI PDD ", point D.1 have been followed in Section D.1 page 31</p> <p><b>PDD, Version 3:</b></p> <p>1) The version number of the approved methodology AM 0034 has been corrected throughout the whole document.</p> <p>2) The archiving period for all monitoring and measuring data is adjusted according to the National legislation in table D.1.1.1.</p> <p>3) The archiving period for calibration data from measuring equipment is indicated in table D.2.</p> <p>4) The calibration interval for AMS, except for annex 3 Monitoring plan, is indicated in table D.2 from PDD.</p> | <p><b>First response:</b></p> <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CAR is still open.</p> <p>Please present the latest version of used approved Methodology AM 0034 in the PDD. The written Methodology is not the actual one.</p> <p>Please present the period of archiving of all relevant monitoring and measuring data and also the period of archiving of calibration records in the PDD. Please take into consideration the Bulgarian legal requirements.</p> <p>Please present the period of calibration of AMS equipment in point D.2 of the PDD.</p> <p><b>Second response:</b></p> <p>The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CAR is closed.</p> |
|--|---------------|---|--|

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| <p><b>Corrective action request № 10</b><br/>Please provide a table with values obtained when applying formulae in the PDD. There is not followed the latest version of the “Guidelines for users of the JI PDD for”, point E.6</p> | 42    | <p>Table has been provided and Guidelines for users of the JI PDD ” followed in Section E.6 – page 49</p> <p><b>PDD, Version 3: The text in section E.6 is altered.</b></p>                                     | <p><b>First response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CAR is still open.</p> <p>Please amend table E.6 as follows:</p> <ul style="list-style-type: none"> <li>- Second column – the word is “estimated” not “expected” PE</li> <li>- Last column – the word is “estimated ER” not “baseline emissions”</li> <li>- Last row – the word is “Total” not “Average”</li> </ul> <p><b>Second response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CAR is closed.</p> |
| <p><b>Corrective action request № 11</b><br/>Please describe the stakeholder comment procedure for this project. Please present information if there any comments received (Section G)</p>  | 49    | Stakeholder comment procedure has been described in Section G.1. , page 50  | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CAR.  |
| <p><b>Clarification request № 1</b><br/>The PDD form should not be altered so please move abbreviations at the end of the PDD template.</p>   | 12-13 | Moved to Annex, 4 ; Page 63   | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.   |
| <p><b>Clarification request № 2</b><br/>Please shortly explain in p. A.2 the baseline and project scenario. Please present a process scheme and main chemical reactions, if appropriate (A.2)</p>                                   | 12-13 | <p>Baseline and project scenario</p> <p>Baseline scenario – Section A.2 (page 5 ) ;<br/>Project scenario Section A.2 (page 5 )</p> <p>Process scheme and major chemical reactions Section A.2 (p. 3 and 4 )</p> | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.   |

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| <p><b>Clarification request № 3</b><br/>Please indicate version number of the document. Please indicate the sectoral scope to which the project pertains (A.1)</p>   | <p>12-13</p> | <p>Indicated in Section A.1 page 3</p>  | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p>  |
| <p><b>Clarification request № 4</b><br/>The length of the crediting period is set by the Kyoto Protocol, not the MOEW of Bulgaria. Please correct (A.4.3.1).</p>   | <p>12-13</p> | <p>Text altered – Section A.4.3.1 page 11</p>   | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p>  |
| <p><b>Clarification request № 5</b><br/>Please indicate the length of the project crediting period in years and months (decimal value). Recalculate the estimated average annual emission reductions respectively (A.4.3.1).</p> | <p>12-13</p> | <p>Length of crediting period corrected – Section A.4.3.1. – table, page 12</p>                                   | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p>  |
| <p><b>Clarification request № 6</b><br/>Please attach to the PDD the received Letter of Support. (A.5)</p>   | <p>19</p>    | <p>Text in Section A.5 reference to Annex 6, page 12</p> <p>PDD, Version 3: The text in A.5 has been revised.</p> | <p><b>First response:</b></p> <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CL is still open.</p> <p>Please amend word “validation” with “determination”. Please specify that after positive determination and project approval from the MOEW the project proponent will receive a Letter of Approval (LoA).</p> <p><b>Second response:</b></p> <p>The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CL is closed.</p> |
| <p><b>Clarification request № 7</b><br/>Please analyse the legal requirements for Nitric acid plants in Bulgaria taking EU Law into account (A.4.3).</p>   | <p>19</p>    | <p>Analysis included – Section A.4.3 – page 10</p>  | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p>  |

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| <p><b>Clarification request № 8</b><br/>Please analyse the issue of “Common practice” with respect to the local situation in Bulgaria, not the European Union (A.4.3).</p>                               | 19 | Common practice analysis included –Section A.4.3 – page 10                              | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL. |
| <p><b>Clarification request № 9</b><br/>Please present the estimated anticipated total emission reduction (A.4.3).</p>   | 19 | Total emission reduction presented - Section A.4.3 – page 13                            | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL. |
| <p><b>Clarification request № 10</b><br/>Please explicitly specify throughout the whole section “B” which approach is following – approved CDM methodology or project specific approach (Section B)?</p> | 22 | The applied JI specific approach has been specified explicitly in Section B.1 – page 13 | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL. |
| <p><b>Clarification request № 11</b><br/>Please provide more detailed information and discuss relevant national policies and circumstances (B.1)</p>   | 23 | Detailed information has been provided in Section B.1. page 18                          | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL. |
| <p><b>Clarification request № 12</b><br/>Please specify the position of “Formula 2” and show respectively (B.1)</p>  | 23 | Position of “Formula 2” has been specified in Section B.1 – page 22                     | The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL. |

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| <p><b>Clarification request № 13</b><br/>Please insert the version number of the used approved methodology AM 0034 (B.1).</p>  | <p>23</p>          | <p>The versions of the documents, cited in the PDD, have been inserted in Annex 5.<br/><br/><b>PDD, Version 3: The version number of the approved methodology AM 0034 has been corrected throughout the whole document.</b></p> | <p><b>First response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CL is still open.<br/><br/>Please present the latest version of used approved Methodology AM 0034 in the PDD. The written Methodology is not the actual one.<br/><br/><b>Second response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CL is closed.</p> |
| <p><b>Clarification request № 14</b><br/>Please explicitly specify throughout the whole section “D” which approach is following – approved CDM methodology or project specific approach (Section D)?</p> | <p>35</p>          | <p>The applied JI specific approach has been specified explicitly in Section D.1 – page 31</p>  | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p>  |
| <p><b>Clarification request № 15</b><br/>Please describe in the Monitoring plan for all data sources, what procedures should be followed if expected data are unavailable (section D)?</p>               | <p>36 (b)(iii)</p> | <p>Description has been provided in Annex 3 – Monitoring plan pages 56; 63</p>  | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p>  |

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| <p><b>Clarification request № 16</b><br/>Throughout the whole document is not used SI unit. Transfer the non-system units into SI system units in all documents and tables.</p> | <p>36 (b)(iv)</p> | <p>Transfer has been performed in Section A.4.2 – page 9 and<br/>Annex 2 – Baseline information – table, page 52<br/><b>PDD, Version 3: The pressure unit is changed to Pa.</b></p> | <p><b>First response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CL is still open.<br/>Please use SI units for pressure in Section B.1, table on p. 24 (Normal oxidation pressure).<br/><b>Second response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CL is closed.</p>   |
| <p><b>Clarification request № 17</b><br/>The calibration procedure of used monitoring equipment is not presented in the Monitoring plan</p>                                     | <p>36 (i)</p>     | <p>Calibration procedure has been presented in Annex 3 – Monitoring plan – pages 56; 61<br/><b>PDD, Version 3: The calibration interval for AMS is adjusted to one year.</b></p>    | <p><b>First response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that this CL is still open.<br/>The determination team do not accept three years period of metrological control of AMS equipment. According to the Bulgarian environmental regulation № 6 (Regulation № 6 from 26 Mart 1999) this measuring equipment should be calibrated annually. Please amend.<br/><b>Second response:</b><br/>The determination team checks the additional provided information present in the revised PDD, ver. 3/09.07.2011 and considers that the provided information is correct and this CL is closed.</p> |

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| <p><b>Clarification request № 18</b><br/>Please present the responsibilities of every one person involved in the project and in the reporting chain (Figure 5 from the PDD, D.3)</p>  | <p>36 (j)</p> | <p>Responsibilities have been inserted in Section D.3 – pages 43; 44</p>                | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
| <p><b>Clarification request № 19</b><br/>Please indicate how many years the archived data will be kept after the last transaction of ERUs from the project (D.1.1.1)?</p>   | <p>36 (m)</p> | <p>The time period has been indicated in Section D.1.1.1, pages 32;33</p>               | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
| <p><b>Clarification request № 20</b><br/>Please indicate how many years the archived data will be kept after the last transaction of ERUs from the project (D.1.1.3)?</p>   | <p>36 (m)</p> | <p>The time period has been indicated in Section D.1.1.3, page 36</p>                   | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
| <p><b>Clarification request № 21</b><br/>Please correct p.10, “Annual average of estimated emission reductions [tCO<sub>2e</sub>]” and p.34, E.5, Table 3: “Average Emission reduction [tCO<sub>2e</sub>]”</p>              | <p>45</p>     | <p>Tables have been corrected in Section A.4.3.1. page 12 and Section E.5 – page 49</p> | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
| <p><b>Clarification request № 22</b><br/>Please correct the headline of p.34, E.4 , Table 2 – the emissions listed are not Project but Baseline emissions. The emission factor listed is Baseline emission factor (E.4)</p> | <p>42</p>     | <p>Section E.4 page 48 has been corrected.</p>  | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
| <p><b>Clarification request № 23</b><br/>Please clarify the role of TUV SUD and BULGARCONTROLA in establishing of the Monitoring Plan (D.4).</p>  | <p>36 (a)</p> | <p>Clarification of the role has been asserted in Section D.4 – page 47</p>             | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
| <p><b>Clarification request № 24</b><br/>Please describe the environmental investment intention procedure for this project. Please present evidences (Section F)</p>  | <p>48 (a)</p> | <p>Environmental investment intention has been described in Section F.1 – page 49</p>   | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |



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| <p><b>Clarification request № 25</b><br/>Throughout the whole document is not used the international standard format (e.g 1,000 representing one thousand and 1.0 representing one).</p> | <p>36 (b)(iv)</p> | <p>International standards format have been integrated throughout the whole PDD.</p> | <p>The determination team checks the additional provided information present in the revised PDD, ver. 2/17.06.2011 and considers that the information is correct and closed this CL.</p> |
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**TABLE 3 FORWARD ACTION REQUEST**

| Forward action request | Ref. to table 1 | Response by project participants | Determination team conclusion |
|------------------------|-----------------|----------------------------------|-------------------------------|
| None                   |                 |                                  |                               |