

JOINT IMPLEMENTATION VERIFICATION REPORT

FINAL

“Sunflower and rape seed – bio diesel fuel
production and use for transportation in Bulgaria”


in

Bulgaria


Monitoring period: 01/01/2010 to 31/12/2010

Report N° 11-DG-61-MD
Revision N° 1.2

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| | | |
|--|---|---|
| Project Title: "Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria" | Country: BULGARIA | Estimated ERUs (tCO₂e): From the PDD 135,443 annual average |
| JI Registration Reference: N° BG1000172 | Monitoring period: 01/01/2010 to 31/12/2010 | Verified ERUs (tCO₂e): 67,553 |
| Client: ASTRA BIO PLANT Ltd | Client contact: Mr. Ivan Kalchev | |
| Report No.: 11-DG-61-MD | Revision: 1.2 | Date of this report: 18/07/2011 |
| Approved by (Final Report – DCI Director approval):  Roberto Cavanna | | Date of approval: 20/07/2011 |
| Methodology – if applicable | | |
| Number: | Version: | Title: Project specific methodology |
| | | Scale Large |
| | | SS(s): 7 |
| <p>RINA Services S.p.A. (RINA), commissioned by ASTRA BIO PLANT Ltd, has verified the greenhouse gas emission reductions reported for the project activity "Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria", in Bulgaria, JI Registration Reference N° BG1000172, for the period 01/01/2010 to 31/12/2010, with regard to the relevant requirements for JI activities. The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable UNFCCC requirements.</p> <p>The project was validated by TUV SUD (determination report N° 893345, version 0, issued on 25/05/2007) and it was registered on 03/08/2010 under the JI registration reference N° BG1000172</p> <p>The GHG emission reductions are calculated on the basis of the project specific methodology and the revised monitoring plan included in the present latest Monitoring Report ver. 03 of 14/06/2011 covered emission reduction for 2010..</p> <p>In conclusion, it is RINA's opinion that the project activity "Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria", in Bulgaria, as described in the Monitoring Report ver. 3.0 from 14/06/2011, 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 implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements. Hence RINA is able to certify that the emission reductions from the project during the monitoring period 01/01/2010/ to 31/12/2010 is the amount of 67,553 tCO₂e and they are calculated correctly without material misstatement.</p> | | |

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

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Abbreviations

| | |
|-------------------|---|
| PE | Project Emission |
| BE | Baseline Emissions |
| JI | Joint Implementation Mechanism |
| VER(s) | Verified Emission Reduction(s) |
| CH ₄ | Methane |
| CL | Clarification Request |
| CAR | Corrective action request |
| FAR | Forward Action Request |
| CO ₂ | Carbon dioxide |
| CO ₂ e | Carbon dioxide equivalent |
| CRT | Coordination and Technical Control Staff |
| DCI | Certification Division of RINA Services Spa |
| DFP | Designated Focal Point |
| AIE | Accredited Independent Entity |
| 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 |
| DVM | Determination and Verification Manual |
| PIN | Project Idea Note |
| ABP | Astra Bio Plant |
| MOEW | Ministry of Environment and Water |

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1 INTRODUCTION

ASTRA BIO PLANT Ltd has commissioned RINA to verify the emissions reductions of its JI project “Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria” (hereafter called “the project”) at Rousse, Bulgaria. JI Registration Reference N° 1000172, for the period 01/01/2010 to 31/12/2010.

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

1.1 Objective

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

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

The objective of this verification/certification was to verify and certify emission reductions reported for the “Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria” project in Bulgaria for the period 01/01/2010 to 31/12/2010.

1.2 Scope

The verification 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.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

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

| Role | Last Name | First Name | Country |
|---------------------|-----------|------------|----------|
| Team Leader JI | Rachev | Konstantin | Bulgaria |
| Technical Expert JI | Milkov | Viktor | Bulgaria |
| Technical Reviewer | Valoroso | Rita | Italy |

2 METHODOLOGY

Verification was conducted using RINA procedures in line with the requirements specified in the JI Guideline, the latest version of the JI Determination and Verification Manual, and relevant decisions of the COP/MOP and applying standard auditing techniques.

The verification consisted of the following three phases:

- Desk review;
- On-site assessment:
- The resolution of outstanding issues and the issuance of the final verification report and certification.

In order to ensure transparency, a verification 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 verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;

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- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

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

2.1 Review of Documents

The Monitoring Report (MR) /3/ and revised Monitoring Plan /4/ for 2010 submitted by ASTRA BIO PLANT Ltd and additional background documents (excel files /6/ and /7/) related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved CDM methodology (if applicable) and/or Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the last version of the Monitoring Report /3/; and the last version of the revised Monitoring Plan /4/ and project as described in the determined PDD/1/.

2.2 Follow-up Interviews

On 02/06/2011 RINA performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of ASTRA BIO PLANT Ltd are interviewed (see References from /16/ to /19/). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

| Interviewed organization | Interview topics |
|--------------------------|---|
| ASTRA BIO PLANT Ltd | <ul style="list-style-type: none"> ❖ Revised Monitoring plan for 2010; ❖ Monitoring Report for 2010; ❖ Monitoring equipment and measurement; ❖ Monitoring parameters; ❖ Calibration and maintenance of the used monitoring equipment; ❖ Roles, responsibilities and legal environmental requirements; ❖ Project specific documentations and monitoring of the main data; ❖ Organization scheme and responsibilities; ❖ Data collecting and archiving; ❖ GHG Emission reduction estimation and calculations. Baseline and Project emission estimations; ❖ Biodiesel production scheme during 2010; ❖ Social and Environmental Responsibilities; ❖ Main distribution channels. |
| (LOCAL Stakeholder) | During the second verification no local stakeholder is consulted |
| CONSULTANT | For this project no external consultant is used |

2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

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

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

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

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

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

2.4 VERIFICATION CONCLUSIONS

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 8 Corrective Action Requests, 7 Clarification Requests, and 0 Forward Action Requests. As a result of these CLs and CARs the Project Proponent has been correctly revised the documentation and all CLs and CARs have been closed during the second verification.

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

2.5 Project approval by Parties involved (90-91)

Written project approval by the Bulgarian Ministry of Environment and water in January 2010 /8/ and Letter of Approval from the Republic of Austria in March 2008 /9/ have been issued by the DFP of that Party when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

The above mentioned written approval is unconditional.

2.6 Project implementation (92-93)

The project implementation date is described in the PDD /1/ and in the Monitoring Report point 2.6 /3/. In this point is documented a list of major JI Project stages.

Project implementation is per the table below:

| Description of the Document and Action | Date according to PDD | Date actual |
|--|-----------------------|-------------|
| First version of PIN sent by ABP to Bulgarian Ministry of Environment and Water (MOEW) /16/. | 22.02.2006 | 22.02.2006 |
| Letter from MOEW to ABP with request for improvement of the PIN /17/ | 17.03.2006 | 17.03.2006 |
| Second version of PIN sent by ABP to MOEW /18/ | 24.03.2006 | 24.03.2006 |
| Official registering of the Project Proposal by MOEW – number: 26-00-587 /19/ | 29.03.2006 | 29.03.2006 |
| Announcement in the local newspaper UTRO – Notification for Investment in the | 01.04.2006 | 01.04.2006 |

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| | | |
|---|------------|--------------------------|
| area of the municipality /20/ | | |
| Letter from ABP to the mayor of SLIVO POLE – Notification for Investment in the area of the municipality /21/ | 03.04.2006 | 03.04.2006 |
| Standpoint by MOEW on the second version of PIN /22/ | 04.05.2006 | 04.05.2006 |
| Notification Letter for Investment intend /23/ | 12.05.2006 | 12.05.2006 |
| Standpoint by MOEW – Branch Rousse on the Notification Letter /24/ | 25.05.2006 | 25.05.2006 |
| LETTER OF SUPPORT by MOEW /25/ | May 2006 | May 2006 |
| Construction Permit by Municipality of SLIVO POLE /26/ | Oct. 2006 | 24.10.2006 |
| Start of the project | Nov. 2006 | 09.11.2006 |
| LOA by the Republic of Austria through the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management /9/ | | 06.03.2008 |
| Complex Permission to put in operation of the Plant No 810 and amended one dated on 24/09/2010 /12/ | | 18.08.2008 24/09/2010 |
| Commissioning (Act. 16) of Bio-diesel Facilities (Extractor). /27/ | | 18.08.2008 |
| Estimated start of production bio-diesel | 01.07.2007 | 01.12.2008 |
| Presentation of the Project to the MOEW Steering Committee | | 29.11.2009 |
| LOA by the Bulgarian MOEW /8/ | | 15.01.2010 |
| Registration as JI Project (Track 1) on UNFCCC Website with ITL project ID BG 1000172 | | 03.08.2010 |

The purpose of the project is to produce Bio diesel derived from sunflower and rape crop for substituting petroleum diesel. The project has capacity of 60,000 tons of Bio diesel per year. The produced Bio diesel is distributed of the base of contract with buyers only in Bulgaria. The current Monitoring period compared with the previous is characterized by significant increases in production and distribution of Bio diesel. The bad economic situation in the country was an obstacle to be achieved the design capacity of the Bio diesel production. For this verification period the Astra Bio Plant is produced an amount of 24,780 tons Bio diesel which is less than 50 % of the factory capacity. The Plant produced Bio diesel according to the requirements of the Norm DIN EN 14214 which is equivalent to Bulgarian BDS EEM 14-214. The production parameters are documented in the Monitoring Report. The production process also corresponds to the Bulgarian local legislations. All relevant measuring and monitoring equipment's used for the production activity as well as for the purpose of the monitoring plan are technically maintenance and calibrated from competent authority. As a result it can be mansion that the production activity strictly follows the documented one in the determined PDD. During the second verification of this project, it can be stated that the bio diesel installation has been worked without interruption strictly in accordance with all technological procedures and regulations /10/.

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

The monitoring occurred in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

For calculating the emission reductions or enhancements of net removals, key factors, monitoring parameters, fixed data influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project were taken into account, as appropriate.

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Data sources used for calculating emission reductions or enhancements of net removals, such as emission factors; Biodiesel data and sold biodiesel to clients are clearly identified, reliable and transparent.

Emission factor is selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The calculation of emission reductions or enhancements of net removals is based on conservative assumptions and the most plausible scenarios in a transparent manner.

2.8 Revision of monitoring plan (99-100)

The project participants have been provided an appropriate justification for the proposed revision, which mainly covered the change of distribution channels and their percentages. The main revision is that the company has been using during the whole 2010 mainly companies from Canal 3. During 2010, no company from Canal 4 has been used. These amendments are documented in the Monitoring Report and revised Monitoring Plan. The amendments have been also checked during the on-site visit. The proposed amendments are documented in point 2.3 of Monitoring Plan for 2010 and point 3.3.5 of Monitoring Report for 2010. The actual situation throughout 2010 is the overall quantity of produced bio diesel has been sold to the clients for the use in transportation in Bulgaria /28/, /29/, /30/, /31/.

The proposed revision improves the accuracy and/or applicability of information collected compared to the original monitoring plan without changing the conformity with the relevant rules and regulations for the establishment of monitoring plans.

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2.9 Data management (101)

The data and their sources, provided in Monitoring Report ver. 1 dated on 27/05/2011; ver. 2 dated on 14/06/2011 and final version 3 dated on 14/06/2011 /3/ and Monitoring Plan ver. 1 dated on 27/05/2011; ver. 2 dated on 14/06/2011 and final version 3 dated on 14/06/2011 /4/, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the revised Monitoring plan ver. 1 dated on 27/05/2011; ver. 2 dated on 14/06/2011 and last version 3 dated on 14/06/2011 /4/, including the quality control and quality assurance procedures and internal company requirements.

The function of the monitoring equipment, including its calibration status, is in order. Company used next measuring equipment's:

- Weight bridge №1 and №2 – calibrated during February 2010 and Mart 2011 as per the official sticker (stamp) on them /11/. The calibration period is annually.
- Electricity meter owned by company EON (grid electricity supplier) – last replacement dated on 25/05/2010 as per the Protocol № 506179 /32/. The calibration period is on every four years and should be held by the owners.
- The waste water from the production activity is measured with used weight bridges

The used measuring equipment and their parameters are documented in the MR.

Because of the big amount of the input data listed in the "BD_data_2010" /7/ excel file used for the Monitoring plan on the random base has been verified the next input data used for emission reduction calculations: sold Bio diesel Invoices and weight bridges bills; rape and sunflower seed weight bridges bills; grude oil weight bridges bills; methanol and hexane weight bridges bills; used electricity Invoices and waste water weight bridges bills. After that all data are used in "Astra emissions Reruction_2010" /6/ excel file for emission reduction estimation. All formulas and calculations follow the requirements of the determined PDD. During the second verification activity all formulas and calculations have been verified and found correctly as per the determined PDD. The evidence and records used for the monitoring are maintained in a traceable manner. The data collection and management system for the project is in accordance with the monitoring plan.

The difference between the estimated emission reduction (135,443 t/CO₂e) and verified emission reduction (67,553 t/CO₂e) is that during the second verification covered 2010 Bulgaria was under bad economic situation and big financial crisis.

2.10 Verification regarding programmes of activities

Not applicable

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3 VERIFICATION OPINION

RINA Service Spa (RINA) has performed verification of the emission reductions reported for the project activity “Sunflower and rape seed - bio diesel fuel production and use for transportation in Bulgaria ” in Bulgaria, JI Registration Reference N° 1000172, for the period 01/01/2010 to 31/12/2010, with regard to the relevant requirements for JI activities.

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

The project participants of the “Sunflower and rape seed - bio diesel fuel production and use for transportation in Bulgaria ” project are responsible for:

- the preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered project design document version 05 of 25/05/2007
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project

It is RINA's opinion that the GHG emission reduction stated in the monitoring report version 03 of 14/06/2011 for the “Sunflower and rape seed - bio diesel fuel production and use for transportation in Bulgaria ” project in Bulgaria for the period 01/01/2010 to 31/12/2010 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the project specific monitoring methodology and the monitoring plan contained in the registered PDD.

Hence RINA is able to certify that the emission reductions from the project during the monitoring period 01/01/2010 to 31/12/2010 are: .:

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

| | | |
|--|-----------------|---------------------------|
| Baseline emissions | : 83,958 | t CO2 equivalents. |
| Project emissions | : 9,472 | t CO2 equivalents. |
| Leakage emissions | : 6,933 | t CO2 equivalents. |
| Emission Reductions (Year 2010) | : 67,553 | t CO2 equivalents. |

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4 REFERENCES

The monitoring report, version 1 of 27/05/2011 /3/, the revised monitoring report version 02 of 14/06/2011 /3/ and final version 3 of 14/06/2011 /3/, the emission reduction calculations provided in the form of a spreadsheets "ASTRA_emissions_reduction_2010" ver. 1 of 27/05/2011, revised version 2 of 14/06/2011 and final version 3 of 14/06/2011 as well as "DB_data_2010" ver. 1 of 27/05/2011, revised version 2 of 14/06/2011 and final version 3 of 14/06/2011 /, were assessed as part of the verification.

In addition the Project Design Document (PDD) /1/ in particular the baseline estimations and the monitoring plan, the previous verification report revision 3 of 19/10/2010 /5/ and the determination report, revision 0 of 25/05/2007 /2/ for the project were reviewed.

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

Category 1 Documents:

Documents provided ASTRA BIO PLANT Ltd that are related directly to the GHG components of the project.

- /1/ PDD "Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria" dated 25/05/2007, version 5
- /2/ Determination Report № 893345 made from TUV SUD, version 0 of 25/05/2007
- /3/ Monitoring Report of JI Project - "Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria" ver. 1.0 of 27/05/2011; ver. 2.0 of 14/06/2011 and ver. 3.0 of 14/06/2011
- /4/ Revised Monitoring plan of JI Project - "Sunflower and rape seed – bio diesel fuel production and use for transportation in Bulgaria" for 2010 – ver. 1 dated on 27/05/2011; ver. 2 dated on 14/06/2011 and last version 3 dated on 14/06/2011
- /5/ First periodic verification Report № 0004/2010, version 3 of 19/10/2010 made from Bureau Veritas
- /6/ ASTRA "emission reduction estimation" excel file for 2010 – ver. 1 dated on 27/05/2011; ver. 2 dated on 14/06/2011 and last version 3 dated on 14/06/2011
- /7/ ASTRA "BD data" excel file for 2010 – ver. 1 dated on 27/05/2011; ver. 2 dated on 14/06/2011 and last version 3 dated on 14/06/2011

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /8/ Letter of approval from the Ministry of Environment and Water, Bulgaria, dated on 15/01/2010
- /9/ Letter of Approval from the Republic of Austria, dated on 06/03/2008
- /10/ ABP Bio Diesel Technology Regulation dated on 01/01/2010 based on Bulgarian National Standards and local legislation
- /11/ Weight bridges measurement devices calibration files and stickers – held by local state metrology agency on Mart 2011
- /12/ Complex Environmental Permission (IPPC) dated on 18/08/2008 and amended dated on 24/09/2010 issue by MOEW
- /13/ Protocols №528/15.02.2010 and №391/21.02.2011 for determination of Bio Diesel NCV from SGS Laboratory
- /14/ Permission №11530039 for using underground water, dated 25/06/2007 issue by Regional inspectorate of Environment and Water – Rousse
- /15/ Certificate ISO 9001:2008 issued by SGS dated on 23/11/2009
- /16/ Project Idea Note (PIN) sent by ABP to MOEW dated on 22/02/2006
- /17/ Letter from MOEW to ABP with request for improvement of the PIN dated on 17/03/2006
- /18/ Second version of PIN sent by ABP to MOEW dated on 24/03/2006
- /19/ Official registering of the Project Proposal by MOEW – number 26-00-587 dated on 29/03/2006
- /20/ Announcement in the local newspaper UTRO – notification for investment in the area of the municipality dated on 01/04/2006
- /21/ Letter from ABP to the mayor of Slivo Pole - notification for investment in the area of the

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- municipality dated on 03/04/2006
- /22/ Standpoint by MOEW on the second version of PIN dated on 04/06/2006
 - /23/ Notification Letter for Investment intend dated on 12/05/2006
 - /24/ Standpoint by MOEW – branch Rousse of the notification Letter dated on 25/05/2006
 - /25/ Letter of support by MOEW from May 2006
 - /26/ Construction Permit by Municipality of Slivo Pole dated on 24/10/2006
 - /27/ Commissioning (Act 16) of Bio diesel facilities (Extractor) dated on 18/08/2008
 - /28/ Certificate from company Zara E Ltd that the quantity of Bios diesel is used from transporting activity in Bulgaria, dated on 14/06/2011
 - /29/ Certificate from company Bulmarket DM Ltd that the quantity of Bios diesel is used from transporting activity in Bulgaria, dated on 13/01/2011
 - /30/ Certificate from company Nafteks Petrol Ltd that the quantity of Bios diesel is used from transporting activity in Bulgaria, dated on 01/02/2011
 - /31/ Certificate from company Lukoil Bulgaria Ltd that the quantity of Bios diesel is used from transporting activity in Bulgaria, dated on 10/01/2011
 - /32/ EON (grid electricity supplier) Protocol № 506179 for Electricity meter replacement dated on 20/05/2010

Persons interviewed:

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

- /33/ Mr. Stanko Stankov – General manager
- /34/ Mr. Ivan Kalchev – Project Manager and consultant
- /35/ Mr. Dimitar Minchev – Bio Diesel Plant Manager
- /36/ Mrs. Marinela Czvetkova – Chief accountant

APPENDIX A: VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECK LIST

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|--|--|------------------|------------------|
| Project approval by the parties involved | | | | |
| 90 | Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest? | Yes, Letter of approval from the Ministry of Environment and Water, Bulgaria, dated 15/01/2010 and Letter of Approval from the Republic of Austria dated 06/03/2008 have been issued and verified during the second verification. | | OK |
| 91 | Are all the written project approvals by Parties involved unconditional? | Yes, both Letters of approval are unconditional. | | OK |
| Project implementation | | | | |
| 92 | Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website? | Yes, the project is been implemented as described in the registered PDD. During 2010 no changes in the production are found. The producing process is carried on as per the technology plan. Please also refer to the revised Monitoring Plan DVM Paragraph. | | OK |
| 93 | What is the status of operation of the project during the monitoring period? | During 2010 the biodiesel plant has been working without interruption strictly according to all technological procedures. No changes were found. | | OK |
| Compliance with monitoring plan | | | | |
| 94 | Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website? | Yes, the project monitoring plan in MR for second verification covering 2010 is according to the registered PDD. Please also refer to DVM 99 (a). Please also refer to the documented CARs and CLs. | | OK |
| 95 (a) | For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as | The ERUs are generated by the project, which foresees the production of bio-diesel derived from sunflower and rape seeds. The reduction of the greenhouse gas (GHG) emissions is achieved by partially or fully substituting petroleum diesel in transportation and replacement of fossil fuel in the baseline. The reporting procedures are described in the MR and revised MP. All of the used monitoring methods and parameters are verified during the on-site visit | | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|--|--|--|------------------|
| | appropriate? | of the company and are found reliable. | | |
| 95 (b) | Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent? | <p>All monitoring data are clearly identified, transparent and conservative. For more traceability and accuracy the following Corrective actions and Clarification requests were documented:</p> <p><u>Corrective action requests from №1 to №6 are documented</u> <u>A CAR 8 is documented</u> <u>A CL №1 is documented</u> <u>Clarification requests from № 5 to № 7 are documented</u></p> | CAR 1–6 CAR 8 CL 1 CL 5–7 | OK |
| 95 (c) | Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? | Emission factors are calculated and documented reasonably. | | OK |
| 95 (d) | Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner? | <p>All monitoring parameters and used emission reduction calculations are well described and documented in the MR and MP for 2010.</p> <p>Please also refer to above CARs and CLs</p> | | OK |
| Applicable to JI SSC projects only | | | | |
| 96 | <p>Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?</p> <p>If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?</p> | n/a | | |
| Applicable to bundled JI SSC projects only | | | | |
| 97 (a) | Has the composition of the bundle not | n/a | | |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|--|------------------|------------------|
| | changed from that is stated in F-JI-SSCBUNDLE? | | | |
| 97 (b) | If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report? | n/a | | |
| 98 | If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past? | n/a | | |
| Revision of monitoring plan | | | | |
| Applicable only if monitoring plan is revised by project participant | | | | |
| 99 (a) | Did the project participants provide an appropriate justification for the proposed revision? | Yes, the company provided appropriate justification for the proposed revision of the monitoring plan which is documented in point 2.3 from the MP and point 3.3.5 of Monitoring Report. The proposed changes refer to the actual situation and company trading activity. The amendments are reliable and correspond to the requirements. However a CL is documented. | CL-2 | OK |
| 99 (b) | Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans? | Yes, the proposed revisions improve the accuracy of the used Monitoring Plan. The revised MP is based on current regulations for the establishment of monitoring plans. The proposed MP is based also on the actual company situation as well as host party economical and trading situation. | | OK |
| Data management | | | | |
| 101 (a) | Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures? | Different data as dispatch notes; crude oil, sunflower and rape delivery notes; weigh – bridge notes are collected from the responsible persons and then transferred to the required monitoring excel files. This data are cross-checked all the time. Final monitoring files are checked again before | | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|--|---|------------------------------------|------------------|
| | | presented to the verifiers. During the on-site visit of the company on the random basis have been verified the documented data in file “ASTRA emission reduction” and “BD data” excel sheets for 2010. Mr. Kalchev as well as other staff connected with Bio diesel production and accountant are responsible for monitoring management. The staff's responsibilities are identified and documented in the MR. | | |
| 101 (b) | Is the function of the monitoring equipment, including its calibration status, is in order? | The company maintains the elaborate calibration plan for each of the monitoring equipment. The verifiers checked the status of all the equipment at the sites and found them to be complying with the requirements. The main equipment that is used are two weigh-bridges. During the verification is proved that they are with valid calibration up to 03/2012. Company also uses one electro meter that is owned by the grid owner (National electrical Company). This meter is periodically replaced with new one. The last replacement is done during 05/2010. For the quantity of waste water are used weigh-bridges. All devices are calibrated from authorized laboratory and regarding Bulgarian Laws. All necessary protocols are physically available and checked. No deviation found. | | OK |
| 101 I | Are the evidence and records used for the monitoring maintained in a traceable manner? | Yes, all the documentation concerning monitoring equipment and data is maintained in good traceable manner. Please also refer to the documented CARs and CLs. CLs are documented. | CL-3 CL-4 | OK |
| 101 (d) | Is the data collection and management system for the project in accordance with the monitoring plan? | CO2 emission reductions calculations have been performed on at monthly basis by the Project manager and consultant. All energy sources flows such as electricity, logging in Excel file. All dispatch notes and Invoices are collected from the chief accountant. All the monitoring parameters are collected, documented and checked by the Project manager and consultant, Mr. Kalchev as per the MP. All the data collection and emission reduction estimation correspond to the revised monitoring plan for 2010. The documentation is reliable. | CAR-7 | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|------------------|------------------|
| | | Please also refer to the documented CARs and CLs. A CAR is documented. | | |
| Verification regarding programs of activities (additional elements for assessment) | | | | |
| 102 | Is any JPA that has not been added to the JI PoA not verified? | n/a | | |
| 103 | Is the verification based on the monitoring reports of all JPAs to be verified? | n/a | | |
| 103 | Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA? | n/a | | |
| 104 | Does the monitoring period not overlap with previous monitoring periods? | n/a | | |
| 105 | If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing? | n/a | | |
| Applicable to sample-based approach only | | | | |
| 106 | Does the sampling plan prepared by the AIE: (2) Describe its sample selection, taking into account that: (2) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: – The types of JPAs; – The complexity of the applicable technologies and/or measures used; – The geographical location of each JPA; | n/a | | |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---------------|--|-----------------|------------------|------------------|
| | <ul style="list-style-type: none"> - The amounts of expected emission reductions of the JPAs being verified; - The number of JPAs for which emission reductions are being verified; - The length of monitoring periods of the JPAs being verified; and - The samples selected for prior verifications, if any? | | | |
| 107 | Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation? | n/a | | |
| 108 | Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification? | n/a | | |
| 109 | Is the sampling plan available for submission to the secretariat for the JISC's ex ante assessment? (Optional) | n/a | | |
| 110 | If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing? | n/a | | |

TABLE 2 RESOLUTIONS OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

| Draft report clarifications and corrective action requests by validation team | Ref. To checklist question in table 1 | Response by project participants | Verification team conclusion |
|---|---------------------------------------|--|---|
| <u>Corrective action request № 1</u> Throughout the whole document the International Standard format is not used (e.g 1,000 representing one thousand and 1.0 representing one). | 95 (b) | For the all documents the International Standard Forms are corrected. | The verification team has checked the provided additional information in documents /3/ and /4/ and has found it correct and reliable. This CAR 1 is closed. |
| <u>Corrective action request № 2</u> Please present average truck capacity used for monitoring parameter 111.9 | 95 (b) | The average truck capacity for monitoring parameter 111.9 is calculated with the amount of 25 tons in the column “M” of the File “WB_Data_2010_Verified”, Sheet “All Project Materials”. That amount is reflected in the File: WB “ASTRA_Emission_Reduction_2010_Verified”, Sheet “Input” and in the in the File: “ASTRA_MReport_2010”, Table 3.2. | The verification team has checked the provided additional information in documents /3/; /4/; /6/ and /7/ and has found it correct and reliable. This CAR 2 is closed. |
| <u>Corrective action request № 3</u> The verification team does not accept the revision made for monitoring parameter 111.04 and 111.10. Please use the value of 800 km. determined in the PDD. | 95 (b) | The project owner accepts the proposed request. The value of 800 km used for monitoring parameters 111.04 and 111.10 is reflected in the File: WB “ASTRA_Emission_Reduction_2010_Verified”, Sheet “Input” and in the in the File: “ASTRA_MReport_2010”, Table 3.2. | The verification team has checked the provided additional information in documents /3/; /4/ and /6/ and has found it correct and reliable. This CAR 3 is closed. |
| <u>Corrective action request № 4</u> Please present average truck capacity used for monitoring parameter 111.12 | 95 (b) | The average truck capacity for monitoring parameter 111.9 is calculated with the amount of 25 tons in the column “N” of the File “WB_Data_2010_Verified”, Sheet “All Project Materials”. That amount is reflected in the File: WB “ASTRA_Emission_Reduction_2010_Verified”, Sheet “Input” and in the in the File: “ASTRA_MReport_2010”, Table 3.2. | The verification team has checked the provided additional information in documents /3/; /4/; /6/ and /7/ and has found it correct and reliable. This CAR 4 is closed. |
| <u>Corrective action request № 5</u> Please present information in box “value for 2010” in table 3.2 of MR for monitoring parameter 113.13 (list the percentage of the | 95 (b) | In the table 3.2 of MR for monitoring parameter 113.13 is presented 1 % of the blended fuel for 2010 on the base of Annual Report by the MEET: http://www.mi.government.bg/gnews/gnews/docs.html?i | The verification team has checked the provided additional information in document /3/ and has found it correct and reliable. |

| Draft report clarifications and corrective action requests by validation team | Ref. To checklist question in table 1 | Response by project participants | Verification team conclusion |
|---|---------------------------------------|---|--|
| blended fuel for 2010) | | d=340093 | This CAR 5 is closed. |
| Corrective action request № 6 Please present the applicable information for the verification period in table 2.5 of the MR. | 95 (b) | The information for the verification period in table 2.5 of the MR is presented, as far as an additional table with Amendments is presented. | The verification team has checked the provided additional information and has found it correct and reliable. This CAR 6 is closed. |
| Corrective action request № 7 Please present for all clients Annex II of MP. | 101 (d) | Annex 2 of MP for the clients are presented in separate files. | The verification team has checked the provided additional information and has found it correct and reliable. This CAR 7 is closed. |
| Corrective action request № 8 Because there is a prescription by The Environmental Agency in Rousse to organize a new route for dumping of the waste waters the latter are transported to the city waste-water management plant by the means of truck tanks. The tanks are being weighed by the plant's weigh-bridges. Please provide the real quantities of the waste water transported as per the records of the weigh-bridges. Calculate the emission reductions due to the waste water as per the real quantities registered in the monitored period. | 95 (b) | The real quantities of the waste water transported as per the records of the weigh-bridges are calculated in separate sheet “Waste Water” of the File “BD_Data_2010_Verified” with the amount of 7440.58 tons. Those quantities are only for the period June 2010 – December 2010. For the period January 2010 – June 2010 the Water meter shows amount of 5589.30 tons. The whole amount of waste water for the monitoring period is 13029.88 tons. The Project Owner propose to be used described in the MP methodology as follow: The quality of the treated water has to meet requirements of “Regulation No 6/09/11/2000” by the MOEW. According to this regulation in Chapter five, Art.18 is described all procedures for monitoring the treated water. The capacity is designed with 4 tons per hour. A conservative assumption is 4 tons per hour times 24 hours times 300 production days = 28.800 t each year. | The verification team has checked the provided additional information and has found it correct and reliable. This CAR 8 is closed. |
| Clarification request № 1 Please clarify the monitoring frequency for monitoring parameter 113.1 in table 3 of the MR | 95 (b) | The monitoring frequency for monitoring parameter 113.1 in the table 3 of the MR is amended from Monthly | The verification team has checked the provided additional information in document /3/ and |

| Draft report clarifications and corrective action requests by validation team | Ref. To checklist question in table 1 | Response by project participants | Verification team conclusion |
|---|---------------------------------------|---|---|
| | | to Annually. | has found it correct and reliable. This CL 1 is closed. |
| Clarification request № 2 Please explain more deeply and precisely all amendments for this crediting period done. Please explain them in point 2.3 in MP and in point 3.3.5 in MR. | 99 (a) | All amendments done during monitoring period are explained in point 2.3 of the MP and in point 3.3.5 in MR. | The verification team has checked the provided additional information and has found it correct and reliable. This CL 2 is closed. |
| Clarification request № 3 Please clarify the sectoral scope of this JI Project (1 and/or 7). | 101 (I) | The sectoral scopes of this Ji Project are 1 and 7 | The verification team has checked the provided additional information and has found it correct and reliable. This CL 3 is closed. |
| Clarification request № 4 Please present Annex III in the content of the MR. | 101 (I) | A scanned copy of Annex III is presented in separate file. | The verification team has checked the provided additional information in document /3/ and has found it correct and reliable. This CL 4 is closed. |
| Clarification request № 5 In Table 3: List of Parameters to be monitored, please indicate that the archived date will be kept for two years after the last transaction of the Emission reductions generated by the project. | 95 (b) | In the MR 2010 (at the end of Table 3) is included the following Notice: All data in the Table 3 to be archived and kept for two years after the last transaction of the Emission reductions generated by the project | The verification team has checked the provided additional information and has found it correct and reliable. This CL 5 is closed. |
| Clarification request № 6 In Table 3, parameter 113.3 – please quote IPCC 2006 | 95 (b) | In the MR 2010 for the parameter 113.3 is quoted IPCC 2006. | The verification team has checked the provided additional information and has found it correct and reliable. This CL 6 is closed. |
| Clarification request № 7 In Table 3, parameter 113.4 – please quote data from IPCC 2006. Re-calculate in case there is difference in the new value. | 95 (b) | 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2: Stationary Combustion, TABLE 2.2 , and Default Emission Factor – 0.6 Second response: | First response: Not acceptable. Please use 0.5 as it appears in the MR. |

| Draft report clarifications and corrective action requests by validation team | Ref. To checklist question in table 1 | Response by project participants | Verification team conclusion |
|---|---------------------------------------|---|---|
| | | Corrected. Please see the last version of the documentation provided. | Second response: The verification team has checked the provided additional information in documents /3/, /4/ and /6/ and has found it correct and reliable. This CL 7 is closed. |

TABLE 3 FORWARD ACTION REQUEST

| Forward action request | Ref. to checklist question in table 1 | Summary of project participant response | Verification team conclusion | |
|------------------------|---------------------------------------|---|------------------------------|--|
| None | | | | |