



LIFE Project Number

LIFE09 ENV/EE/000227

Progress Report no 1

Covering the project activities from 1/09/2010 to 31/08/2011

Reporting Date

26/09/2011

LIFE+ PROJECT NAME or Acronym

OSAMAT

Data Project

Project location	Estonia
Project start date:	01/09/2010
Project end date:	31/12/2014
Total budget	€ 2 634 980
EC contribution:	€ 1 142 490
(%) of eligible costs	50

Data Beneficiary

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1 Abbreviations

OSAMAT – acronym for " Management of Environmentally Sound Recycling of Oil Shale Ashes into Road Construction Products. Demonstration in Estonia"

EE – Eesti Energia AS

NC – Nordecon AS

ERA – Estonian Road Administration

MoE – Ministry of Environment

RM – Ramboll

SG – Steering Group

EC – European Commission

EE NEJ – Eesti Energia Narva Elektriijaamad AS

2 Executive summary

2.1 General progress

The preparations for the project started in September 2010 with meetings of the beneficiary representatives. The OSAMAT project kick off meeting was held on 21th October 2010 and by now a lot of productive work has been carried out.

The most important activities that have been successfully carried out since the kick off meeting are the compilation of Steering Group, activating of the project homepage (www.osamat.ee), the choosing of the piloting locations, the start of material laboratory testing, the completion of technical design project Narva-Mustajõe, laboratory tests have been completed, the recipes have been worked out and the construction in pilot site has been started. A press conference has been held for introducing OSAMAT project, the DVD manuscript has been made and the filming of the process has been started.

In general it can be said that all the parties of the project have co-operated and given their contribution to a smooth start of OSAMAT LIFE+ project.

2.2 Assessment as to whether the project objectives and work plan are still viable

Based on the description of the general progress of the project above and descriptions of later chapters the project objectives and the work plan are still viable despite of some encountered problems.

2.3 Problems encountered

The co-financing agreement between Eesti Energia and Estonian Road Administration was signed in the beginning of March 2011. Due to the fact that co-financing agreement was delayed the partnership agreement between Eesti Energia and Nordecon was signed 31. May 2011.

Administrative changes in the name of associated beneficiary took place in the beginning of 2011. Please see chapter 3.2 for further information. In the request for administrative and financial changes can be found additional information about this administrative change.

The above mentioned situation does not compromise the project's final deadline. Continuous and active cooperation between relevant counterparties has been taken place to resolve issues regarding contracts.

Technical design process of the pilot sites has taken more time than estimated in the beginning, discussions with Road Administration were very detailed and thus time consuming. Action 3. Milestone: Planning, designing and production of instructions for piloting 2011 was planned to be finished 31. May 2011, but actually the Road Administration issued construction for Simuna-Vaiatu pilot site 10.08.2011. We have been seriously committed to resolve all the problems and we have found together with project stakeholders solutions for continuous action without jeopardising in any way overall project target and future perspective. All counterparties have positive and constructive attitude towards OSAMAT project.

Laboratory tests with different oil-shale ashes and mining waste needed more time to finalize the analyses and create necessary input for technical design. Finally after 90 days of laboratory testing results were reliable to conclude binder recipes to start test section engineering. Please see the laboratory tests details in Annex 6.7 Materials report.

Decision about initiate or not to initiate the EIA (Environmental Impact Assessment) of road projects is according to Estonian legislation in competence of Estonian Road Administration. They issue the construction permit, which is partly based also on the outcome of the preliminary EIA. For decision-making process we have prepared preliminary environmental impact assessment (EIA) report, where all necessary environmental aspects are described in detail. In OSAMAT project we decided additionally to consult with environmental authorities and they gave the recommendation to carry out full EIA. Their recommendation is based on the assumption that oil-shale ash is hazardous waste and therefore can be harmful to the surrounding environment. In OSAMAT project we have carefully planned that all the environmental impacts are analysed first in laboratory to decide the binder recipe, which does not influence the nature. Then we have took water and soil samples from the test sites and made laboratory analyses for background values and we continuously monitor the sites during and after construction activities. We take the stand that we have considered all the necessary environmental impacts during the project implementation in more detailed way that is usually done in EIA process and therefore full EIA is not reasonable to carry out. Recommendation from the environmental authority is not binding or mandatory for the decision making authority and therefore Estonian Road Administration made decision based on preliminary environmental impact assessment not to initiate EIA. We fully understand the responsibility that accompanies with this decision.

Please note that during this progress period preliminary EIA was modified according to discussions with environmental authorities and thus the latest version of preliminary EIA is added to this progress report as Annex 6.4.

Technical design of test sections has demanded more time and resources, because of profound discussions regarding best technical solutions between different stake holders: project partners, Estonian Road Administration, laboratory. Common goal is to have appropriate final result that can be implemented wider after OSAMAT project is finished. Issuing the construction permits has been delayed several months, but currently Narva-Mustajõe test section construction permit has been given out and construction works are ongoing. Regarding other test section (Simuna-Vaiatu) we are still negotiating engineering issues, but we have now moved towards final solution that is satisfying all parties. The estimated time for issuing construction permit for Simuna-Vaiatu is December 2011.

Laboratory test results proved that most suitable oil-shale ash for the stabilization works is coming from the 8th block of the power plant. Our challenge is related to a fact that actual release of this OSA is complicated as proper distribution equipment in power plant does not exist and therefore the amounts of OSA that can be released per day are relatively small and must be collected before usage in construction works. We are currently looking for facilities to storage the OSA. Positive laboratory test results are strong basis for making future investment into distribution equipment in power plant.

Most serious issue for us is related to administrative and financial changes in the project that we must co-ordinate with European Commission. We are currently preparing detailed proposals for changes in the project plan. We are planning to submit this proposal in September 2011. We are aware of the fact that some issues are substantially delayed and with some issues we take the risk that they may not be approved by EC despite we have already

carried them out. We strongly hope that you understand that the overall project target within existing budget can and will be achieved.

The above mentioned situation does not compromise the project's final deadline.

3 Administrative part

3.1 Description of project management

Eesti Energia AS (EE) as being the project coordinating beneficiary is managing the OSAMAT project. The main representative of OSAMAT project is Mr Aleksander Pototski from Eesti Energia AS, also he is the coordinator of the project. Coordinating beneficiary has offices in the capital of Estonia, Tallinn, but also in north eastern Estonia in Baltic Energy station. Associated beneficiary is Nordecon AS (NC) and coordinator from NC is Mr Ain Pähkel. Project co-financer is Estonian Road Administration (ERA) and contact person is Mr Taavi Tõnts.

For external assistance the beneficiaries have conducted a procurement and as a result a subcontract has been made with consortium Ramboll Eesti AS/Ramboll Finland OY (RM). External tasks are carrying out technical reporting, monitoring, environmental permit procedures, environmental laboratory tests and related documentation with reporting, civil-engineering for design and planning, inclusive control of field test and production of instructions for piloting, quality control and follow-up, carrying out reporting for LCA and LCC and other tasks described in application under the external assistance chapter.

In the Steering Group (SG) are representatives from all the above mentioned institutions but also representative of the Estonian Ministry of the Environment (MoE). In the SG are Tõnu Aas (EE), Märt Puust (ERA), Jaanus Taro (NC), Annika Varik (MoE) Peeter Škepast (RM).

The active co-operation of the beneficiaries involves beneficiary meetings at intervals of three to six months but also other work meetings, and active discussions on phone and by e-mail. As by now there has been launched projects website, this also can be used as a channel of information between the beneficiaries and other parties involved in the project.

All of the participating parties have been involved in their tasks and so far co-operation has been productive.

The kick off meeting of the project took place in the quarters of the Ministry of the Environment on 21 of October 2010. Next progress meeting is planned to be held in the beginning of April.

There have been taken place several technical meetings between partners and other counterparties.

Project management has been actively and continuously carried out. Overall distribution between co-ordinating beneficiary (EE) and associated beneficiary (NC) is decided that EE is responsible for the overall project management and reporting, NC is currently concerned mainly with design and construction activities on both test sites.

Changes in project are generally described in chapter 2.3 and will be explained in detail in separate request for changes. This will be substantial issue and challenge for project management team during the next progress period.

Numerous meetings have been held between different work teams. Most important meetings are listed below:

25.03 Progress meeting with representatives of Eesti Energia, Nordecon, Estonian Road Administration and Ramboll (see the meeting memo in Monitoring report Annex 6.3)

19.04 Working meeting between EE and Ramboll representatives

12.05 Working meeting regarding test sections design issues

20.05 Meeting with Environmental Board about EIA issues with representatives of Eesti Energia and Ramboll

27.05 Steering group meeting representatives of Eesti Energia, Nordecon, Estonian Road Administration and Ramboll (see the meeting memo in Monitoring report Annex 6.3)

27.05 Press event with participants from Eesti Energia, Nordecon, Estonian Road Administration and Ramboll (see the dissemination material in Annex 6.2)

31.05-01.06 Working meeting in laboratory and with possible stabilization equipment providers

31.05 Working meeting, Narva-Mustajõe test section design between Nordecon and Ramboll representatives

08.06 Working meeting, stabilization equipment procurement preparations between Eesti Energia and Ramboll representatives

17.06 Working meeting, stabilization equipment procurement preparations between Eesti Energia and Ramboll representatives

17.06 Working meeting, terms of references for DVD production between Ramboll and sub-consultant

28.06 Working meeting, Narva-Mustajõe test section design between Nordecon and Ramboll representatives

13.07 Working meeting, Narva-Mustajõe test section design between Estonian Road Administration and Ramboll representatives

28.07 Site visit to Helsinki to see the ongoing mass-stabilisation works between Nordecon and Ramboll representatives

12.08 Kick-off meeting of Narva-Mustajõe test section construction between Estonian Road Administration, Nordecon and Ramboll representatives

24.08 Monitoring meeting between Astrale-GEIE, Eesti Energia, Nordecon and Ramboll representatives

30.08 Working meeting, application of the changes between Nordecon and Ramboll

31.08 Working meeting, Narva-Mustajõe and Simuna-Vaiatu test sections between Estonian Road Administration, Eesti Energia, Nordecon and Ramboll representatives

During the previous reporting period the following reports were compiled and presented to EC:

1. Inception Report (project progress 1.09.2010-15.03.2011)
2. Report of Preparation Action
3. OSAMAT applications and test methods
4. Compilation report of technical, environmental and economical criteria for materials and applications and test procedures
5. Environmental screening/preliminary EIA (in Estonian)

During this progress reporting period the following reports were compiled:

1. Progress report 1 (project progress 1.09.2010-31.08.2011)
2. Monitoring report 1
3. Preliminary Environmental Impact Assessment Report (modified version)
4. Environmental survey programme
5. Report of civil-engineering and environmental survey
6. Materials report
7. Narva-Mustajõe test section detailed design
8. Written instruction for the implementation of pilot applications 2011
9. Written instructions for the quality control and follow-up of pilot applications
10. Carbon footprint report

3.2 *Organigramme of the project team and the project management structure*

Organigramme has remained the same since the start of the project, so same info in Inception report and in Progress report no 1.

The Organigramme for the project is given below (Figure 1). The project team consists of members of the beneficiary organisations EE and NC and co-financer ERA.

In OSAMAT project Eesti Energia Narva Elektriijaamad AS has been included as implementation counterpart.

We are currently preparing detailed proposals for changes in the project plan regarding the changes in the body of coordinating beneficiary. We are planning to submit this proposal in September 2011. Please see chapter 3.2 for more information.

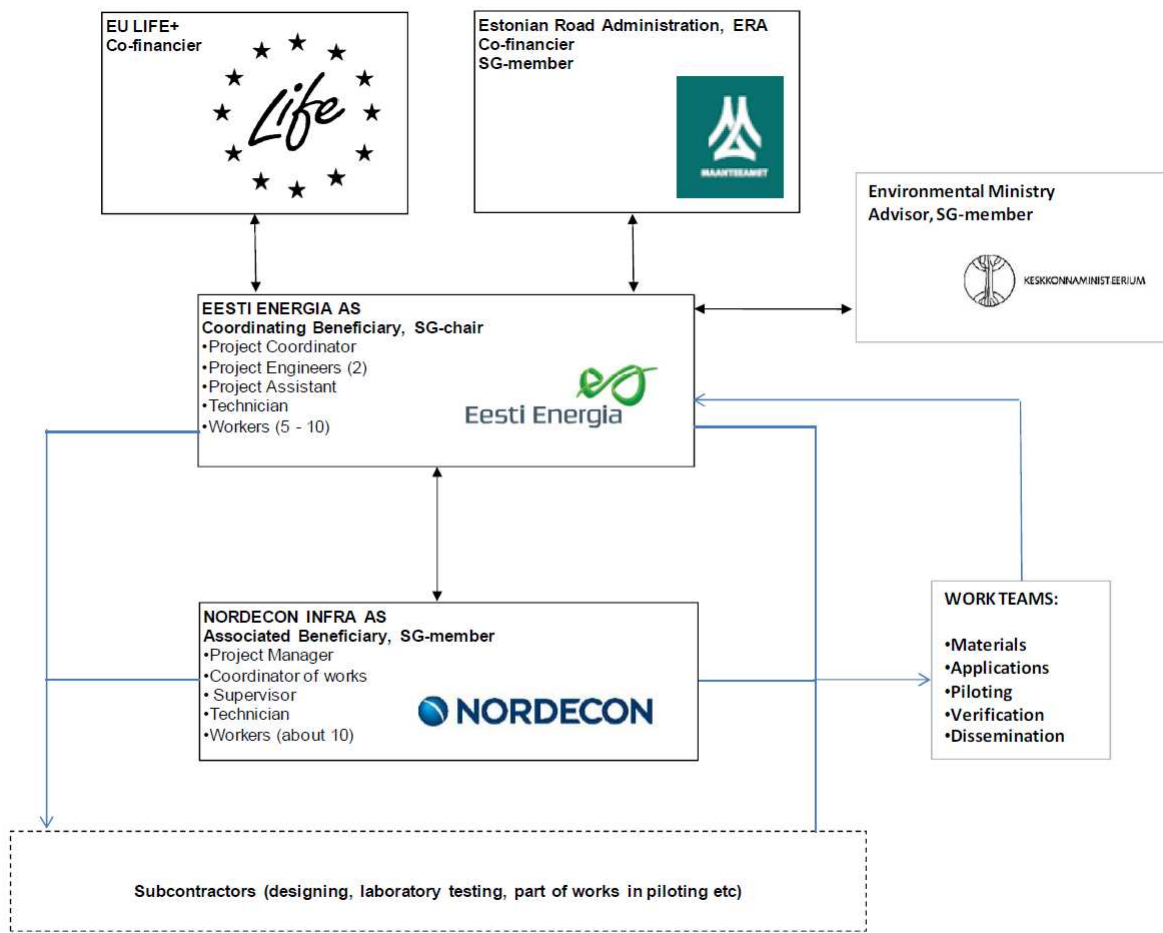


Figure 1. General Organigramme of OSAMAT project

There is one subcontractor Ramboll which participates in the project team as an external consultant. Subcontractor will be used during the OSAMAT project period.

In OSAMAT application phase in autumn 2009, all activities connected with oil shale ash (OSA) selling services were carried out by Department of Business Development under Eesti Energia AS (EE). Therefore it was well grounded that EE would be coordinating beneficiary in OSAMAT project. Mr Aleksander Pototski, project manager of OSAMAT, also worked directly in Business Development Department under EE.

Development plans of oil-shale ash services have been under focus for decades and continuous work have been carried out to find new opportunities for utilization of OSA. After OSAMAT application was granted and several other positive developments/ projects realized (registration in REACH, Klaipeda and Kokkola harbour stabilization research, Jätksaari urban area soil investigations) it became clear that it is time to create separate ash sales unit. On the 1st of December 2009 official Ash Sales Service under Eesti Energia Narva Elektriijaamad AS (EE NEJ) was formed.

Eesti Energia Narva Elektriijaamad (Eesti Energia Narva Power Plants) is the largest producer of electrical energy in Estonia and one of the most important power producers in the Baltic region. The company supplies electrical energy to Estonian consumers and heat to the town of Narva, and it exports electricity to the Baltic States and supplies electricity to the Nordic power market through the Estlink undersea cable.

The company also sells the oil shale ash created as a waste product of energy production, as oil shale ash is a valuable mineral raw material for the construction industry and agriculture.

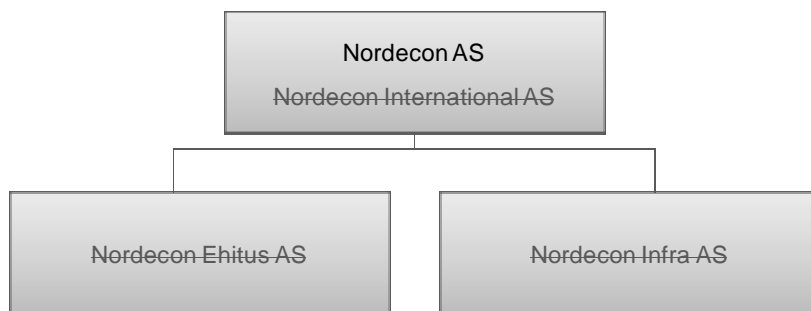
Ash Sales Service was formed under EE NEJ mainly because OSA is produced and stored in Narva, where two power plants are located and most of the ash related activities are performed. After forming separate business unit, OSAMAT project manager Aleksander Pototski was officially transferred to EE NEJ to work as Ash Sales Manager.

One of the objectives of creating special Ash Sales Service unit was projects like OSAMAT, where EE sees great potential for future development. From Ash Sales Service it is possible to purchase ash and require more information about its potential uses.

Working under separate unit, close to OSA producing processes, decreases bureaucracy, simplifies administration processes and minimizes the risks from EE being mediator. OSAMAT project team is also located in EE NEJ, Narva.

As legal status of associated beneficiary Nordecon Infra AS has changed as a result of the merger process, present modification request with appropriate justifications is submitted to the Commission.

Associated beneficiary Nordecon Infra AS signed a merger agreement on 4th of October 2010 with Nordecon International AS and Nordecon Ehitus AS. New corporate name of the merged enterprise is Nordecon AS. As a result of the merger Nordecon Ehitus AS and Nordecon Infra AS finished their activities and Nordecon International AS became their legal successor, which continues operations under business name Nordecon AS.



According to commercial code § 391 section 4 assets and liabilities of Nordecon Ehitus AS and Nordecon Infra AS will transfer to Nordecon AS. Contracts signed with Nordecon Ehitus AS and Nordecon Infra AS will remain valid with Nordecon AS. Additionally, authorities, rights and liabilities of parties chargeable will not be changed, unless notified separately.

Requisite information of united enterprise:

Nordecon AS

Legal registration no 10099962

Address: Pärnu mnt 158/1, 11317 Tallinn

VAT no EE100068463

3.3 Work teams according to actions

In the work teams of each action are the representatives from all counterparties. In the following table are shown the responsible persons of the work teams.

Action	Eesti Energia	Nordecon	Road Administration	Ramboll
Preparations	Mr Aleksander Pototski	Mr Jaanus Taro	-	Mr Hendrik Puhkim
Materials	Mr Aleksander Pototski	-	-	Mr Pentti Lahtinen
Applications	Mr Aleksander Pototski,	Mr Ain Pähkel	Mr Rainer Kuldmaa	Mr Andres Brakmann
Piloting	Mr Aleksander Pototski	Mr Andrei Anissimov	Mr Rainer Kuldmaa	Mr Andres Brakmann
Verification	Mr Aleksander Pototski	Mr Ain Pähkel	Mr Rainer Kuldmaa	Mr Hendrik Puhkim
Dissemination	Mr Aleksander Pototski	Mr Ain Pähkel	Mr Rainer Kuldmaa	Mr Hendrik Puhkim
Management	Mr Aleksander Pototski	Mr Jaanus Taro	-	Mr Hendrik Puhkim

3.4 Partnership agreements status and key content

In beginning of March 2011 the co-financing agreement with ERA was signed. The partnership agreement with NC has not yet been signed but the agreement is in revision phase. It is highly important to emphasise that never the less of the fact that the actual signing of the partnership agreement has not fully taken place most of the preparations actions have been completed and all of the projects participants have been working with the project.

Based on the above mentioned, the key content of the partnership agreement between EE and NC will be given in the next Progress report. Partnership agreement in general follows the proposed template of EC. According to the agreement NC will be responsible for carrying out pilot site construction works.

In general the consortium agreement contains beneficiary's official names and addresses, background and significance of the consortium, rights and obligations. It is expected that the partnership agreement shall be signed latest in May 2011. As soon as the contract is signed the copy will be delivered to European Commission.

Partnership agreement between Eesti Energia and Nordecon was signed on 31th of May 2011.

We got comments from the monitoring expert regarding shortages in the signed partnership agreement. Hereby the full copy of the agreement is given in Annex 6.12 but we acknowledge that there are issues and we have started dealing with them.

4 Technical part

The project is planned to be implemented by means of seven distinct but interdependent actions that are listed in the following (Actions 1 – 7).

4.1 *Actions*

4.1.1 **ACTION 1: PREPARATIONS**

Preparations include activities that are preliminary activities of the project and ascertain a smooth start of the actual LIFE-project. Most of the preliminary activities started before the LIFE project period but some continued at least during the first months of the LIFE project. Preliminary activities included choices of the piloting site(s), making of the consortium agreement, choices of the Steering Group participants, contracts for the new equipment for project purposes, starting and finalising the permit application procedure, determination of acceptance criteria for materials and applications, decision on the detailed material test program, and checking and eventual revision of the details of project plan.

The detailed description of the activities is given in the annexed Report of Preparation Action. Many preparations activities have been completed during the reporting period. Most important is that the piloting sites have been chosen. There has been delay in the completion of some of the activities (signing of the consortium agreement for example) but the delays have no impact on the implementation of other actions of the project.

According to application financial form F4b Eesti Energia was going to acquire mobile mixing equipment for the mixing of dry binders based on OSA. Nordecon was going to acquire mass stabilization equipment in order to carry out the stabilization process of the piloting and simultaneously learn the effective use of this equipment.

After consulting with mass-stabilization equipment and service providers and taking into account project objectives and time-schedule, Eesti Energia and Nordecon came to a conclusion that at this stage it would be economically efficient and reasonable to rent mass-stabilization equipment with qualified personnel. Market perspective for further usage of the equipment in near future is so far not covered with concrete projects; also there are no legislative normative to regulate mass-stabilization technology yet. Substantial results from OSAMAT project will create basis for norms and regulations and after that market possibilities for this equipment in question will grow. Project partners effectively and continuously are working for promoting the stabilization techniques among interested stakeholders in Estonia and in other Baltic Sea countries. Strong belief regarding future perspective exists and we express our willingness to acquire above-mentioned equipment in coming years above the OSAMAT project.

The above mentioned subject is a substantial change and we are submitting separate detailed request for administrative and financial change.

During this period Eesti Energia and Nordecon arranged tendering procedures to find contractors to provide special mass-stabilization equipment (mobile container and hydraulic mixer). Unfortunately no offers were submitted and therefore a new tendering procedure is initiated. EE is arranging open tendering procedure and NC is limited tendering procedure.

Consortium agreement was finally signed during this period. In first place partners waited for signing the co-financing agreement between Eesti Energia and Estonian Road Administration. After that they started to prepare partnership agreement and this long process was caused by technical and juridical reasons, but not once was under consideration a scenario that partners will not agree the terms of contract. Both partners are large enterprises with their own proceedings regarding contract signing and which is time-consuming process. See Annex 6.12.

Decision about initiate or not to initiate the EIA (Environmental Impact Assessment) of road projects is according to Estonian legislation in competence of Estonian Road Administration. They issue the construction permit, which is covering environmental aspects and therefore can be called also as environmental permit. For decision-making process we have prepared preliminary environmental impact assessment (EIA) report, where all necessary environmental aspects are described in detail .

Consultations and discussion regarding EIA took more time and resources than estimated beforehand.

The progress of the action in 2010 and plans for 2011 are described in the following table:

Indicator	Planned deadline	Actual progress
<i>Deliverables</i>		
Decisions of new equipment for the project	01.09.2010	Completed. See annex 6.3 chapter 2. Detailed information is given in the request for administrative and financial changes.
Preparations Action report	15.12.2010	Completed. Report was submitted with Inception Report
Compilation (report) of technical, environmental and economical criteria for materials and applications and test procedures	28.02.2011	Completed Report was submitted with Inception Report
Environmental permits	31.05.2011	Completed
<i>Milestones</i>		
<ul style="list-style-type: none"> • Consortium agreement • Pilot sites chosen • Steering Group ready 	1.09.2010	Completed
Starting to compile the report of criteria for materials and applications and about test procedures	01.10.2010	Completed
Report of Preparations Action started and finished	01.09.2010 – 15.12.2010	Completed
Finishing of the	01.02.2011	

compilation report of criteria for materials and applications and about test procedures		Completed
All complementary data and EIA for the environmental permit submitted	28.02.2011	Completed
Equipment of EESTI ENERGIA and Nordecon are available for field testing latest	31.03.2011	In progress. Tendering procedure will be carried out during 2011
All other potentially pending preparations activities are finished	31.05.2011	Completed

4.1.2 ACTION 2: MATERIALS

Materials Action has been carried out with help of geotechnical and chemical laboratories in order to ascertain appropriate materials based on OSA for the different pilot applications. The Action also demonstrates the required test procedures to ascertain the quality of OSA materials. The activities included sampling of required materials; characterisation of the material components; production of functional material recipes; determination of the potential variation of the different material components and the effect of the variation on the properties of the materials based on recipes; and control of the materials to be used in the pilot applications. The results of this Action will be used in Actions 3 and 4.

The soil samples, OSA samples and mining waste samples were taken in February 2011 and transported to a chosen laboratory in Finland for testing and laboratory analyses. For carrying out laboratory tests and analyses a separate report has been compiled – OSAMAT applications and test methods.

Intermediate report is the administrative unit to describe the status of activities during certain progress period. For example during the first progress period Inception reports annexes 6.2-6.5 and during this progress period for example Materials report in Annex 6.7.

In general the laboratory testing has been carried out according to project plan and all necessary results for the pilot sites technical design have been provided. In detail the content and results of materials actions main activity is given in Annex 6.7.

We tested in laboratory 4 different type of oil-shale ashes and additionally mining waste. In the laboratory different analyses were made to find appropriate binder mixture for stabilization works. The scope of laboratory works included water content, loss of ignition, active lime, pH, niton, particle size distribution, compatibility, Preparation of the aggregate specimens, preparation of the peat specimens, unconfined compressive strength, freeze-thaw durability test and soft wall permeability test with constant pressure.

The progress of the action in 2010 and plans for 2011 are described in the following table:

Indicator	Planned deadline	Actual progress
<i>Deliverables</i>		
Intermediate reports in Progress Reports (1)	28.02.2011	Completed
Intermediate report in Progress Reports (2)	30.08.2011	Completed
Intermediate report in Progress Reports (3)	28.02.2012	Like planned
<i>Milestones</i>		
Start of the Materials Action	01.09.2010	Completed
Choice of the laboratory for chemical analysis has been made latest on	15.09.2010	Completed
Sampling carried out, materials available and tests have started latest	30.09.2010	Completed
Intermediate report (1) for Progress Report started	01.02.2011	Completed
Tests for the piloting in 2011 have been finished	31.05.2011	Completed
Intermediate report (2) for Progress Report started	1.08.2011	Completed
Intermediate report (3) for Progress Report started	1.02.2012	Like planned

4.1.3 ACTION 3: APPLICATIONS

Applications Action will ascertain that the piloting Action 4 is based on appropriate and efficient plans to produce successful applications with respect to general civil engineering criteria, and that the project will achieve full and appropriate information and data for the evaluation of the results during the verification procedure of Action 5. The Action includes geotechnical and –environmental pilot site investigations; design and planning of pilot structures on the basis of data from Action 2; and production of instructions for the implementation of pilot structures, quality control and follow-up activities (Action 5). The Action also includes brief field tests of the new equipment and of the handling of the OSA materials with conventional construction equipment.

The detailed description of the activities done so far is given in the Compilation report of technical, environmental and economical criteria for materials and applications and test procedures.

Environmental screening report (in Estonian) has been compiled and will be submitted for approval to the environmental authorities in March 2011.

During period March-August relevant activity was technical design process of the pilot sections in Narva-Mustajõe and Simuna-Vaiatu. Detailed geological and geodetical surveys were conducted for having appropriate basis for road structure engineering. Close co-operation was done with Estonian Road Administration, who is owner of the road section and therefore must ensure the compliance of design with norms and legislation. Narva-Mustajõe technical design was accepted during this period and construction permit was issued in the beginning of August. In parallel we prepared the technical design of Simuna-Vaiatu pilot site and this activity is still ongoing, in the end of August we submitted design documentation to the Estonian Road Administration for comments.

We prepared all necessary documents for quality control and instruction regarding the Narva-Mustajõe test section construction works.

Report of Civil-engineering and environmental survey is in the Annex 6.6.

Technical design of Narva-Mustajõe pilot section is in Annex 6.8.

Written instruction for the implementation of pilot applications 2011 is in Annex 6.9.

Written instructions for the quality control and follow-up of pilot applications is in Annex 6.10.

The plans for 2011 are described in the following table:

Indicators	Planned deadline	Actual progress
<i>Deliverables</i>		
Report of civil-engineering and environmental survey	28.02.2011	Completed
Written instruction for the implementation of pilot applications 2011	31.05.2011	Completed
Written instructions for the quality control and follow-up of pilot applications	31.05.2011	Completed
<i>Milestones</i>		
Start of the Applications Action	30.09.2010	Completed
Civil-engineering and environmental survey finished and reporting started	30.11.2010	Completed
Planning, designing and production of instructions for piloting 2011 finished on	31.05.2011	Completed

4.1.4 ACTION 4: PILOTING

Piloting Action is going to demonstrate the practical implementation of three types of civil-engineering applications with materials based on OSA: layer stabilisation of existing road

base courses, mass stabilisation of peat e.g. for road and housing foundations, and road base based on mixtures of oil-shale mining waste and OSA. The pilots are implemented partly in the summer – autumn 2011 and partly during next summer – autumn 2012. All quality control activities are carried out as part of Action 5.

Pilot Action started with the construction activity in Narva-Mustajõe test section in the beginning of August with preparation activities – road side cleaning, traffic arrangements and milling the existing pavement. Layer stabilization with different oil-shale ashes (from block nr 3 and cyclon) will start in the September and will take about three weeks. LIFE notice board was installed on the site.

In Narva-Mustajõe 1,6 km long pilot section layer stabilization works will be carried out this autumn with three OSA binders recipes. Detailed information about layer stabilization technology and OSA binders is described in the Narva-Mustajõe detailed design documentation, see Annex 6.8.

In Simuna-Vaiatu 0,9 km long pilot section mass-stabilization is planned to carry out in spring-summer 2012.

The plans for 2011 are described in the following table:

Indicators	Planned deadline	Actual progress
<i>Deliverables</i>		
N/A during this reporting period	-	-
<i>Milestones</i>		
Start of action	01.03.2011	Completed
Final securing of the timetable, materials and equipment for pilot 2011	31.05.2011	Completed
Piloting 2011 starts 01/08/2011 and is finished	15.12.2011	In progress
Final securing of the timetable, materials and equipment for pilot 2012	31.01.2012	Like planned

4.1.5 ACTION 5: VERIFICATION

Verification Action is needed to give the project stakeholders proof that the methods, materials and applications based on OSA are environmentally safe and technically and economically feasible. The Action uses instructions from Action 3 and reported information and data from Actions 2 and 3. Action 1 is going to provide the criteria for the verification of materials and pilot applications. Environmental permits for the pilots are also used as basis for the verification. The verification is carried out with help of quality control and follow-up activities to gather and document relevant data from the pilots of Action 4. Additionally, environmental life-cycle assessment (LCA) and life-cycle costing (LCC) procedures are

carried out. The Verification and life-cycle assessment reports will be given for independent external experts for comments and evaluation.

Verification action started as planned in 01.03.2011.

Before construction works in Narva-Mustajõe we took the samples from the road side ditches to determine the environmental background values in three locations. We analyzed samples in the laboratory for different heavy metals but also other chemicals like K, Ca, Na, NH₄, Cl, NO₃, SO₄. Also we measured pH, water temperature and conductivity. This is reference information for further environmental sampling during the monitoring period after the construction works are concluded.

We have started work with LCA/ LCC and this activity will get serious attention during next progress periods. We have been studying available plans and choices for LCA and LCC. During the next period we will decide the method of LCA and LCC studies, compile a work plan, time schedule and key persons for implementation of this action.

The progress of the action in 2010 and plans for 2011 are described in the following table:

Indicators	Planned deadline	Actual progress
<i>Deliverables</i>		
N/A during this reporting period	-	-
<i>Milestones</i>		
Start of the Action	01.03.2011	Completed
Environmental background values: start by sampling and finished with results	15.06.2011	Completed
Plans and choices for LCA and LCC available	30.06.2011	In progress
Start of Quality Control at pilot site 2011	01.08.2011	In progress
Start of LCA and LCC studies	01.08.2011	In progress
Quality Control at pilot site 2011 finished	15.12.2011	Like planned

4.1.6 ACTION 6: DISSEMINATION

Dissemination Action is going to disseminate and communicate the results of the project to the target groups of the project so that the knowledge gained during the project can benefit whole Europe. The dissemination tools include the project webpage, notice boards at piloting sites, DVD-presentation, Guidelines for the European practice, Layman's report and all other published articles, reports and conference papers about the project. The project participants present the project at relevant conferences and in road shows for specified target groups in Europe during and after the project period. An international workshop will be arranged in

Estonia in 2013 or 2014. The project will also be presented in national and international professional magazines.

OSAMAT project has been introduced in Estonian newspaper "Põhjarannik" and in Estonian national broadcasting company.

The press conference took place on 27th of May in Nordic Hotel Forum and a press release was sent out immediately after that. The media coverage after the press conference was good and articles about OSAMAT project were published in on-line media and also in Estonian national television news. Dissemination materials are in Annex 6.2.

We are regularly updating the website in all languages. We have added links to OSAMAT media broadcasts in web and other media.

We have prepared manuscript for DVD production and other arrangements to be ready for filming the works. Professional crew (Alasti kino OÜ) have made first filming on the test site and will be on stand-by situation for stabilization works on Narva-Mustajõe pilot section. We have prepared detailed scenario to produce quality material for DVD. We are planning to film the OSA formation in the power plant and its life-cycle. Also we are gathering information (photos, movies) from different archives and making interviews with relevant persons.

We have sent abstracts for 2 conferences in 2012:

1. Nordic Geotechnical Meeting, 9-12.05.2012 in Copenhagen;
2. WASCON 2012, 30.05-1.06 in Gothenburg

For NGM the abstract was approved and therefore we will attend there with presentation.

We have prepared slide shows introducing OSAMAT project and for example we have done presentations for environmental authorities.

Local event has not taken place yet. According to our project plan local event will be arranged on the Simuna-Vaiatu pilot site when the mass-stabilization technology will be introduced. This is interesting technology for large group of authorities and enterprises and therefore we intend to use this occasion to demonstrate technology on the site.

Notice board was installed in the Narva-Mustajõe pilot area.

The progress of the action in 2010 and plans for 2011 are described in the following table:

Indicators	Planned deadline	Actual progress
<i>Deliverables</i>		
Press release about the project and piloting	01.07.2011	Completed. See Annex 6.2.
<i>Milestones</i>		
Start of the Action	01/09/2010	Completed
Starting to create the Webpage	15/09/2010	Completed
Webpage ready for use	31.10.2010	Completed
Manuscripts for the DVD start	31.10.2010	Completed
Starting to prepare the slide presentations	15.01.2011	Completed

Preparing of paper and poster for the conference in 2011 start	15.01.2011	In progress
Oil Shale Symposium in Estonia 2011	31.03.2011	N/A
Start arrangement of LIFE notice boards for pilots 2011 and 2012	30.04.2011	Completed
1 st version of slide presentations finished	30.04.2011	Completed
Arrangements for Local event for piloting start	31.05.2011	Not started
DVD production about the project, its methods and results start	30.06.2011	Completed
Local event(s) at piloting site(s)	15.07.2011	Not started, local event will take place when mass-stabilization works are carried out on Simuna-Vaiatu test section
Preparing of paper and poster for the conference in 2012 start	15.01.2012	Like planned

4.1.7 ACTION 7: MANAGEMENT

Management Action involves the overall management and co-ordination of the project according to the details of the project plan and financial budget and with respect to the contract with the Commission. The distinct activities of the Action include the official activity reports to the Commission, monitoring of the project, the audit of the financial statement and the After-Life communication plan as part of the final report. Monitoring measures and documents the effectiveness of the project actions as compared to the initial situation, the objectives and the expected results. The monitoring also evaluates the Carbon Footprint of the project.

The project manager of OSAMAT project is Mr Aleksander Pototski from Eesti Energia AS. Associated beneficiary is Nordecon AS (NC) and coordinator from NC is Mr Ain Pähkel. Project co-financer is Estonian Road Administration (ERA) and contact person is Mr Taavi Tõnts. Monitoring activities are carried out according to project plan and other relevant documents.

Consortium agreement was signed on 31th of May 2011. (Annex 6.12)

Monitoring report Nr 1 was not be compiled during last progress period because no actions were made concerning monitoring reporting during that period. In *Monitoring report nr 1* (Annex 6.3), which is presented with this progress report all necessary and relevant information is given since the start of the OSAMAT project.

We have prepared the first version of Carbon Footprint report. According to our method we calculate based on the travels the CO₂ emissions and for reference project we use LIFE ABSOILS in Finland.

Carbon Footprint report in Annex 6.11.

The progress of the action in 2010 and plans for 2011 are described in the following table:

Indicator	Planned deadline	Actual progress
<i>Deliverables</i>		
Consortium agreement of the beneficiaries	1.09.2010	Completed
Inception Report	15.12.2010	Completed
Progress Report 1 and Monitoring Report Nr 1	15.03.2011	<i>Inception report contains the material and progress of period from September 2010 up to March 2011. Progress report nr 1 is planned to be submitted on 15.09.2011 instead of Progress report nr 2.</i>
Progress Report Nr 1 with Carbon Footprint report Nr 1 and Monitoring Report Nr 1	15.09.2011	Completed
Progress Report 2 and Monitoring Report Nr 2	15.03.2012	Like planned
<i>Milestones</i>		
SG meeting (1); kick-off meeting	3.09.2010	Completed
Start to create the methodology for Carbon Footprint data gathering, calculations and benchmarking	15.09.2010	Completed
Start to compile Inception Report	15.11.2010	Completed
Start to compile Progress Report and Monitoring Report Nr 1	15.01.2011	<i>Deadline for the Inception report was changed to 15.03.2011 and therefore progress report was cancelled for the same date.</i>
SG meeting (2)	1.03.2011	Completed
Start to compile Progress Report Nr 1, Carbon Footprint report Nr 1 and Monitoring Report Nr 1-2	15.07.2011	In progress
SG meeting (3)	01.09.2011	Not started. Planned in November 2011.
Start to compile Progress Report Nr 2, Carbon Footprint report Nr 2 and Monitoring Report Nr 3	15.01.2012	In progress
SG meeting (4)	01.03.2012	Like planned

4.2 *Envisaged progress until next report.*

A Gantt chart which illustrates OSAMAT project progress since 1.09.2010 until 31.08.2011 and planned actions from 1.09.2011 up to 15.03.2012 is given in Annex 6.1.

4.3 *Impact*

During project implementation we have initiated wider discussions within road and environmental authorities to start again re-use of OSA in road construction. In 1970s several studies were made with OSA, but unfortunately because of poor technology and insufficient testing the usage of OSA were not largely recognized. Today we have presented in many occasions that laboratory tests and layer stabilization technology have significantly improved since then. Mass-stabilization technology has not been used in Estonia before and in OSAMAT project we have good opportunity to introduce it to relevant stakeholders. It has been already captivated interest among authorities and enterprises, which see the potential for the future.

We have discussions ongoing with environmental authorities regarding the status of waste for OSA. According to Waste Act definition "waste" is substance that the owner has thrown away or planning to do it. In OSAMAT project we are using OSA as dry binder material and not as waste. OSA is defined as waste when the pulp (OSA+water) is hydro-transported directly from power plant into landfill. Currently Estonian parliament is planning to pass into law waste act changes regulating the terms of "By-product" and "End-of-Waste" under which OSA can be operated. OSA is also registered in REACH as binder material and is also largely used in cement industry. Based on those arguments we define OSA as binder material and not waste. We hope that OSAMAT project will convince environmental authorities to change their understanding and to reach that we are planning to inform them regularly about the project results.

4.4 *Outside LIFE:*

We have initiated in parallel other OSA-related projects.

We have ordered studies in Klaipeda (Lithuania), Kokkola (Finland) and Jätkasaari (Finland) harbours, where laboratory tests are made with OSA and locally dredged sediments. The goal is to find appropriate stabilisation recipe with OSA that can be used later in large-scale stabilization works.

5 Financial part

5.1 Costs incurred.

Budget breakdown categories	Total cost in €	Costs incurred from the start date to 31.08.2011 in €	% of total costs
1. Personnel	864 500	68 486,6	7,92%
2. Travel and subsistence	20 500	2 170,2	10,59%
3. External assistance	474 000	138 297,1	29,18%
4. Durable goods			
Infrastructure			
Equipment	700 000	0	0,00%
Prototype			
5. Land purchase / long-term lease			
6. Consumables	363 500	146 244,0	40,23%
7. Other Costs	63 000	0	0,00%
8. Overheads	149 480	0	0,00%
TOTAL	2 634 980	355 197,9	13,48%

Financial break-down by Actions (including overhead costs):

Action number and name	Foreseen costs	Spent so far	Remaining	Projected final cost
Action 1 "PREPARATIONS"	38 000	36 311,0	1 689,00	38 000
Action 2 "MATERIALS"	132 875	48 803,0	84 072,00	132 875
Action 3 "APPLICATIONS"	868 475	39 502,6	828 972,37	868 475
Action 4 "PILOTING"	965 875	179 353,2	786 521,83	965 875
Action 5 "VERIFICATION"	185 175	0,0	185 175,00	185 175
Action 6 "DISSEMINATION"	142 300	12 694,1	129 605,86	142 300
Action 7 "MANAGEMENT"	152 800	38 534,0	114 266,00	152 800
TOTAL	2 485 500	355 197,9	2 130 302,06	2 485 500

6 Annexes

- 6.1 OSAMAT progress Gantt chart**
- 6.2 Dissemination materials**
- 6.3 Monitoring report 1**
- 6.4 Preliminary Environmental Impact Assessment Report (modified version)**
- 6.5 Survey programme**
- 6.6 Report of civil-engineering and environmental survey**
- 6.7 Materials report**
- 6.8 Narva-Mustajõe test section detailed design**
- 6.9 Written instruction for the implementation of pilot applications 2011**
- 6.10 Written instructions for the quality control and follow-up of pilot applications**
- 6.11 Carbon footprint report**
- 6.12 Partnership agreement**