



4TH SEMI-ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

Period covered 01.01.2010 until 30.06.2010

Environment Department OLYMPIA ODOS S.A.



Contents

Introduction	3
Progress of the environmental agenda	4
General	5
Permits – Designs related to construction	6
Hazardous and non hazardous materials and waste management	7
Environmental parameters monitoring programme (noise, traffic load vibrations, air quality, water)	8
Energy conservation and efficiency	9
Vegetation, planting and road cleaning	9
Environmental accident, green area fires	10
Training, awareness raising and corporate social responsibility activities	11

Introduction

Based on the Concession Agreement (article 11.2.2), OLYMPIA ODOS S.A. is obliged, throughout the entire Concession Period to deliver to the Service, a semester environmental report . This is the third semester Environmental Management Report and covers the period 01.07.2009 to 31.12.2009.

The data of each semester environmental management report are incorporated in the Annual Report to be submitted to EYPE/MEPPW until January 31st of each year and throughout the entire Concession Period.

The above six-month and annual reports shall be publicized in the internet site www.olympiaodos.gr created and maintained by the Concessionaire, in accordance with the Concession Agreement.

During the motorway's construction and operation, both the constructor as well as the operator comply with all pertinent provisions, as they are recorded in the Greek Legislation, ensuring the same for their contractors and subcontractors.

Within this framework and as a part of its Environmental Management System, JV APION KLEOS has developed the "Environmental Legislation Monitoring Procedure" , incorporating all existing pertinent legislation and updated in case the latter is amended or updated. The specific procedure is copied to all parties who are obliged to then copy it to all cooperating sub-contractors.

Note: all appendices of the present report have been submitted to the Special Environment Service of the Ministry of Environment, Energy and Climate Change, responsible for the environmental supervision of the OLYMPIA ODOS project and are available upon request.

Progress of the environmental agenda

General

Appendix A of Annex 2 of the Concession Agreement states the Common Ministerial Decisions (CMD) and the Law comprising the Project's environmental licensing and forming the main framework for the monitoring of the progress of the Project's environmental issues.

More specifically:	
1	Law 2338/1995 Thiva I/C – Elefsina Toll Plaza
2	CMD 126393/16.02.2007 Elefsina – Korinthos (excluding Kakia Skala section)
3	CMD 108569/18.10.2006 Kakia Skala
4	CMD 92073/16.05.1994 Isthmos – Ancient Korinthos I/C
5	CMD 104892/16.06.2006 Ancient Korinthos I/C – Patra By-Pass K1 I/C
6	CMD 106321/28.07.2006 Patra By-Pass K1 I/C – Mydilogli Semi-I/C
7	CMD 102696/30.05.2006 Mydilogli I/C - Amaliada
8	CMD 100163/30.05.2006 Amaliada – Tsakona

Both in the construction as well as in operation phase, the procedures and directives for the works' environmental management are implemented by the Constructor, aiming at the in compliance with the terms and constraints of the above decisions.

APION KLEOS submits to OLYMPIA ODOS S.A. monthly reports regarding the progress of the construction related works.

Permits – Designs related to construction

DESIGNS RELATED TO CONSTRUCTION

Within the framework of complying with the environmental terms and the required environmental licensing, Special Technical Implementation Designs (STID) accompanying the specific works are elaborated and submitted for approval and licensing to EYPE/MEECC. Such designs are presented in detail in the following appendices 1, 2, 3 and 4.

“Elefsina – Korinthos” road section is an existing part of the National Road Network. Thus, the foreseen structures pertain mainly to its maintenance and the creation of the safest possible traffic conditions as well as the servicing of the motorway users. The following structures are foreseen, among others, during the project’s operation:

- Operation of Elefsina Toll Station around K.P. 27+000, and
- Construction and operation of parking and rest areas roughly every 10km (taking into account the MSS locations as well). The areas shall be developed in locations where expropriated land is available. The final arrangement of the above mentioned technical projects as presented in appendix 11 of this Report shall be derived after the finalization of the necessary designs, currently under elaboration.

Already in this direction, the modification of project sections, as they are described in the EIS, is conducted according to the necessary process foreseen by article 13 of CMD No 11014/703/F104/14.3.2003 (Gov. Gaz. 332/B), pursuant to the approved environmental terms.

Appendix 10 states the positive recommendations by EYPE/MEECC pertaining to:

- a. The assessment of the environmental differentiations caused by the installation and operation of ramp toll stations along Elefsina – Korinthos motorway and
- b. The environmental licensing of the project: “Alignment modification in the area of Xylokastro (from K.P. 31+000 to IK.P. 33+000 along Korinthos – Patra motorway”.

Following the aforementioned measures to address the environmental impact stated in the EIS (ch. 9) and with respect to Ancient Korinthos I/C – Patra By-Pass K1 I/C section, the Constructor is submitting a full file for approval to the competent EPAE in order to integrate the Kerinitis, Selinountas, Meganitis, Foinikas, Krathis, Sithas and Elissonas river bridges as best as possible into the landscape of particular aesthetic value (the file also contains the bridges’ architectural design).

Appendix 6 contains the positive recommendation by Achaia Pref. Admin./ Directorate for Urban Planning and Environment/ EPAE on the submitted design file pertaining to the Krathis river bridge.

Regarding the archaeological surveys that take place within the limits of the project, the Constructor is in direct contact and cooperation with the competent archaeological services. According to the Concession Agreement and the Design – Construction Contract, the CJV is responsible for the execution of archaeological investigations pursuing a recommendation by the pertinent archaeological service. The progress of the archaeological surveys is presented in appendix 7 of the present Report.

A halt of all works is imposed by the 5th Section of the Supreme State Court, which has released an order for the pausing of the enforcement of JMD 100163/30.5.2006 regarding the approval of the environmental terms at the section Pyrgos(Alfeios)-Tsakona, 18+700 to 23+000.

Hazardous and non hazardous materials and waste management

During the construction and the operation of the project, waste of any nature is managed based on the pertinent legislation and the constraints/ requirements imposed by the approved environmental terms, both for the Project’s existing and new sections.

As a result of the implementation of the project’s Environmental Management Plan, and the respective procedures, all environmental parameters for waste management, hazardous material management as well as energy and material usage for the construction of the project, are recorded. These data refer to environmental protection projects related to construction and operation. A synopsis of these data is presented in appendix 8 of the present Report.

Environmental parameters monitoring programme

(noise , traffic load vibrations, air quality, water)

A programme for the Project's environmental monitoring and audit is been implemented, based on the relevant study, in order to ensure compliance with the Project's environmental requirements.

This study in its next phase shall also include the installation of an audit system with permanent and periodical noise and air pollutants measurement stations in positions to be approved by EYPE/MEECC, as required by the Project's approved environmental terms.

During the last period, a PM and traffic load vibrations measurements campaign has been undertaken. The programme and the methodology applied in the monitoring of the environmental parameters (S.C.C. article 2.4.2) shall be submitted for approval to EYPE/MEECC. The PM_{2,5} and 10 as well as the traffic load vibrations measurements acquired are presented in appendix 9 of the present Report.

Air quality management as well as noise obstruction minimization due to the motorway's construction is the main object of the Project's Constructor and its Operator.

For that purpose, the Constructor develops a programme for the Project's monitoring and audit during construction. The implementation of this programme has already started from the existing sections of "Elefsina – Korinthos" and "Patra By-Pass K1 I/C – Mydilogli Semi-I/C". Measurements have been conducted along these sections within the framework of the elaboration of the "Noise-Barriers Implementation Special Acoustic Design".

With respect to the Motorway's New Sections, acoustic measurements are being conducted in order to establish the current traffic noise status along "Ancient Korinthos I/C – Patra By-Pass K1 I/C", "Midilogli I/C – Kato Achaia" sections as well as the Rio – Antirio bridge road accesses.

During the motorway's operation sample sound measurements shall be conducted while at the same time monitoring the traffic load per six months or less.

The Operator carries out traffic counts at the Project's toll plazas. More specifically, each month the company drafts an operation report, including precise traffic data, i.e. number of vehicles passing through all toll plazas and the traffic composition; said report is duly submitted to the competent supervising Services of the Ministry EPPPW. The company has at its disposal both the primary and the processed traffic data.

Water resources shall be managed according to the pertinent legislation and the restrictions/limitations imposed by the approved environmental terms both for the existing as well as the new project sections.

Energy conservation and efficiency

The JV APION KLEOS has, on behalf of OLYMPIA ODOS S.A., coordinated the design regarding the realization of the action plan aiming to save energy in buildings to be constructed to fulfill the project's operation requirements. Specifically, the building facilities for Nea Peramos MOMC were studied, along "Elefsina – Korinthos" section.

Thus, based on the design results, the buildings' best possible energy efficiency performance shall be achieved via designing low energy consumption buildings (bio-climate design, efficient energy design), implementing mature and efficient energy technologies to cover the auxiliary energy requirements (heating, cooling, lighting) as well as installing control systems for the building facilities' efficiency and operation.

OLYMPIA ODOS S.A. has awarded a study for the assessment of the energy consumption of the project.

This study aimed amongst other at:

- Quantifying, assess and analyze the use of electricity for street lighting along the existing sections of the road
- Proposing concrete measures for energy consumption reduction and energy conservation

Vegetation, planting and road cleaning

The vegetation and planting pertain to the environmental integration and protection of the areas adjacent to the project.

In order to facilitate the fulfillment of the above obligations, a Final Planting Design for the surrounding areas, the respective I/Cs, slopes and median strips was elaborated for Elefsina – Korinthos section. This design was approved by the project's Independent Engineer.

The planting of Patra By-Pass is in very good shape due to the "recent" construction and maintenance for the last period of time.

There are very few locations along the road where the flower-beds/median strips are not planted. The CJV's designer is of the opinion that the overall planting plan of the road does not require this "character" to change via planting new plant species. All that is required is to plant species already planted nearby to the remaining sections.

The Operator's personnel and the competent subcontractors carried out regular trimming, weeding and cleaning works for the most part of the project, and specifically of 97 km of central reserve, 402 km of shoulders and of the 28 interchanges and their branches, as well as of the 45 parking areas.

During the 2nd semester of 2009, the Operator's personnel in collaboration with external subcontractors carried out and still does regular cleaning works along the entire project (202 km), in the 28 interchanges, the toll stations (lanes, booths, pavement, surrounding area, buildings), in the tunnels and in the 45 parking areas (washing, sweeping, waste removal from bins and surrounding areas).

It is noted that cleaning pertains to the entire cross section until the expropriation limits.

Environmental accident, green area fires

In the framework of road safety, the Operator, Olympia Odos Operation S.A. has Patrollers and Intervention Teams patrolling the Project with specially marked vehicles dealing with incidents (immobilized vehicles, accidents, traffic problems etc.) by implementing temporary signage to safely arrange traffic and assist the emergency services (Police, Fire Brigade and Paramedics). In this framework, within the 2nd semester of 2009:

- 2,136,000 (about 11,600 per day) kilometers of Patrols and Interventions were covered to supervise the road network
- 10,345 incidents were handled with the Company's assistance, such as: 7,218 immobilized vehicles (mechanical failure, flat tire, lack of fuel, abandonment), 1,820 obstacles on the pavement, 814 road accidents (37 with injured and 777 with material damage), 188 user problems (pedestrians, vehicles moving in the opposite direction, non authorized users, dangerous traffic violations), 192 traffic congestions and 113 other emergency incidents (fire, adverse weather conditions, etc.) out of which:
 - 5,501 were handled immediately by the Company, since they were detected (located) by its own vehicles, or by its subcontractors' vehicles

- 4,844 incidents were handled within 11' in average by the Company, since they were otherwise detected (phone, cameras etc.), while regarding the response of the subcontractors respectively: 16' for light vehicles and 29' for heavy vehicles

The Operator's competent personnel (Intervention Teams) implement on a daily basis temporary signage for incidents and for the safe execution of works carried out on the road either by the Operation Company or the Construction JV. Regarding Korinthos-Patra NNR special attention is paid due to its features (no central reserve) and the sections with steep turns and limited visibility.

Based on the "Emergency Procedure", there is a provision for the management and handling of "green areas fire" incidents, as well as for environmental accidents, such as substance leakage on the carriageway etc. Within the framework of elaborating the fire hoses designs along the EKPPT motorway, maps were prepared depicting the forest land for "Elefsina - Korinthos", "Ancient Korinthos I/C - Patra By-Pass K1 I/C" and "Patra By-Pass K1 I/C - Midilogli Semi-I/C" sections.

The Construction JV APION KLEOS is in direct cooperation with the other Project services and contributes to the management and handling of such incidents. According to the procedures-directives for the management of the relevant issues, JV APION KLEOS works and cooperates closely with the Environmental Service and other departments of OLYMPIA ODOS S.A.

Training, awareness raising and corporate social responsibility activities

Environmental training aims to reinforce knowledge and raise awareness about the environment, to develop the necessary skills, to form the right behaviour, to activate and make informed decisions and responsible actions.

Audit/ inspection is a tool of the environmental management system, including the systematic, substantiated, periodic and objective assessment of the performance of the working sites, the environmental protection management system and processes.

Along this direction, the JV APION KLEOS is organizing training and briefing seminars whereas all internal inspections are accompanied by the training and briefing of all competent persons at working sites regarding issues and developments pertaining to the environment.

In the frame of its Corporate Social Responsibility regarding society and the environment, OLYMPIA ODOS S.A. supported financially the project for the protection from landslides of the Lepreo Elementary School in the Municipality of Zacharo.

Following the destructive forest fires of August 2007, the school suffered serious damages due to the landslides and the rockfalls from the adjacent hill deforested by the fire. The students were in danger and therefore their number was dramatically reduced during the school year of 2007-2008.

ECOCITY, an environmental nongovernmental organization, within the framework of actions to support and reorganize the local communities, victims of the forest fires of August 2007, took the initiative to construct structures in order to secure the soil from landslides around the surrounding area of the school and the schoolyard.

Under the supervision of a volunteer civil engineer, a geotechnician and a landscape architect as well as of the Technical Services of the Municipality of Zaharo and the Community of Lepreo, the works for the construction of a protective wall, the installation of mesh and its painting, the structure for the drainage of the mountain foot, the planting, cleaning and arrangement of the surrounding areas were completed.

The project was completed in the beginning of June 2009, thus ensuring a sense of security to students, teachers and parents.

The sponsorships and the volunteer work were the driving forces of the entire operation.



Olympia Odos S.A.

4, Rizariou street, 152 33 Halandri, Greece

Tel +30 210 68 43 041

Fax +30 210 68 43 049

Email environmentservice@olympiaodos.gr

www.olympiaodos.gr



**OLYMPIA
ODOS**



Project co-financed by the European Union