

CENTRAL GREECE MOTORWAY (E-65)



1. INTRODUCTION

This Environmental Management Report is the approach of the Construction J/V's Environmental Management Process for the first semester of 2011 and has been drawn up in the context of its contractual obligation deriving from Article 13.3 paragraph (c) of the Project's Design - Construction Agreement (11.2.2 (iii) of the Concession Agreement 3597/20-07-2007 - OGG 3445A/25-07-2007).

The documentation of each semi-annual environmental management report is part of the Annual Report submitted to the EYPE of YPEKA by January 31 of each year throughout the Design - Construction and Operation Period, in accordance with the approved Environmental terms of the project.

Also, it has to be noted that this report constitutes a development / improvement of the structure of previous retrospective reports and it is clear that the purpose of this development/improvement is the improvement of addressing environmental issues. The ongoing Environmental Management Plan of the project, which is characterized by its continuous improvement, plays an important role in this development.

This Semi-annual Environmental Management Report refers to the first semester of 2011 (01.01.2011 to 31.06.2011).

1.1 DESCRIPTION OF THE PROJECT

State: Hellenic Republic

Concessionaire: CENTRAL GREECE MOTORWAY S.A.

Constructor: CENTRAL GREECE MOTORWAY (E65) J.V

Independent Engineer: SCOTT WILSON- OMEK



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The scope of the project includes the design, financing, construction, operation maintenance and use for thirty (30) years in accordance with the respective Concession Agreement:

- (i) "Central Greece" Motorway with a length of 174 km
- (ii) Skarfia - Raches section of the PATHE motorway with a total length of approximately 57 km

The project is a part of the Trans-European Networks (TEN).

It serves international traffic portals in Igoumenitsa and Kristallopigi as well as the trans-regional traffic.

The Central Greece Motorway (E65) starts at CH. 203+000 of the PATHE motorway and ends at Egnatia Odos, area of Panagia Trikalon, crossing the prefectures of Fthiotida, Karditsa and Trikala.

It includes:

15 Interchanges

7 Toll Stations

6 Motorists Service Stations

3 Operation & Maintenance Centers

5 Tunnels

As well as bridges, over and under-passes, support walls, drain-pipes, etc.

According to the environmental terms of the project, the Central Greece Motorway (E65) is divided in the following three sections:

Section	From CH.	To CH.	A.E.T. Decision*
1 st Section	0+000	85+800	Joint Ministerial Decision 144504/18.11.2005



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2 nd Section	85+800	137+550	Joint Ministerial Decision 145521/18.11.2005
3 rd Section	137+550	175+000	Joint Ministerial Decision 147014/18.11.2005

The sections of the Concession Agreement Project are divided in eleven (11) Geographical Units (GU). For each GU, the physical object is analyzed into Groups of similar operations in the Partial Section Bi Price of Designs - Constructions.

The New State Sections that are already being constructed by the State and that, after their completion, will be incorporated into the Concession Project are as follows:

S/W	SECTION	Km.
12 S/W	Skarfia - Thermopiles section	17,320
13 S/W	Thermopiles - Sperchios section (except for the ERGOSE bridge which is under construction)	8,5
	Bridge under construction by ERGOSE at Thermopiles - Sperchios section	
14 S/W	Sperchios - Ag. Paraskevi I/C	3,5
15 S/W	Ag. Paraskevi I/C - Ag. Marina Section	8,5
16 S/W	Ag. Paraskevi Marina - Raches section	19,200
	Technical works at PATHE - Lianokladi section which is under construction by ERGOSE	

The above New State Sections, pursuant to the relevant environmental terms, are divided into five sections, as stated below:

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Section	FROM CH.	TO CH.	A.E.T. Decision	Description
Skarfia – Thermopiles in Skarfia – Lamia section of PATHE motorway	Skarfia 179+300 (NEW)	Thermopiles 196+750 (NEW)	JMD 146113/12.07.2005	From OSE (Hellenic Railway Corporation S.A.) Bridge – 250m. NW Edge beginning of Thermopiles I/C 17,5km.
			JMD 126696/06.06.2007	Amendment of the JMD 146113/12.07.2005
			122881/08.03.2010 EYPE/YPEKA	Environmental Licensing of Ag. Triada & Molos I/C Toll Stations
Optimization of the National Road to a PATHE motorway in Skarfia – Lamia section, subsection from the beginning of Thermopiles I/C to Nea Kiti of Sperchios river”.	Thermopiles I/C 198+300	Nea Kiti of Sperchios River	JMD 131550/04.05.2003	8,8km.
			121668/08.02.2010 ΕΥΠΕ/ΥΠΕΚΑ	Environmental Licensing of Thermopiles I/C Toll Station
"Optimization of the National Road to a PATHE motorway, section from Nea Kiti of Sperchios river to Roditsa I/C".	Nea Kiti of Sperchios River	Roditsa I/C	JMD 146109/30.09.2005	3,78km. From 130m. before the axis of the New Kiti of Sperchios River up to the East of Roditsa village



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Section	FROM CH.	TO CH.	A.E.T. Decision	Description
“Optimization of Athens – Thessaloniki National Road in PATHE motorway, Lamia – Raches section, subsection from CH. 3+500 to CH. 12+000”	3+500	12+000	JMD 130665/02.05.2003	8,5km. From 211+000
			JMD 195214/11.01.2011	Amendment of 130665/02.05.2003
“Overall Bypass at Stylida – Karavomilos”	12+000	31+500	JMD 100198/30.05.2006	19,50km. From New National Road to the western edge of RACHES I/C
			121667/08.02.2010 EYPE/YPEKA	Environmental Licensing of Ag. Marina I/C - Stylida I/C & Stylida I/C & Karavomilos Toll Stations

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2. GENERAL ISSUES

2.1 BRIEF REPORT

2.1.1 Outstanding Issues

1. On 25/01/2011, the J/V informed the Concessionaire on the decision to exercise the right to suspend the works. After 14/02/2011 only outstanding works settlement activities and works on security and fencing of the project's constructed sections took place.

2. The 2nd EPD was not achieved due to serious delays in the delivery of land. On 11/10/2010, the Technical Dispute Resolution Committee decided that this time extension should be of 10-months, i.e. until 31/01/2011. On 14/12/2010, the J/V informed the Concessionaire that there are still delay events relating to the 2nd EPD and therefore the above extension shall not be achieved and a further extension was requested. On 09/02/2011, EGNATIA S.A. approved a six-month extension and the Concessionaire informed the Independent Engineer to hold over the relevant consultatory opinion since both parties attempt to reach a consensual resolution of the matter.

3. After request for suspension of JMD Approval with no. 147014/18.11.2005 of Environmental Terms for the section CH. 137+550 – Ch. 175+000 submitted to the Council of State by 3 local associations and 2 local authorities of the broader region, a preliminary injunction on behalf of the President of the Fifth Division of the State of Council regarding the suspension of the said JMD until the issuance of the decision on behalf of the Suspension Committee on the pending application for suspension was issued. All J/V's works in this section have been suspended from 02/07/2010.

4. Acceptance of the Ministerial Decision on proposed changes to the basic design of the project (prot. No. 2036/29.11.2010).

5. The J/V has not received the approved Certifications 11 to 19 (Works of April, May, June, July, August, September, October, November & December 2010), which come in the unpaid amount of 116.108.344,58 € including VAT and amortization of advance payment, creating a serious problem of financing which led to the recent suspension of works.

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6. There is a significant works disruption along the Motorway due to non-delivery of reserved areas where archaeological findings were identified.

7. With respect to the Public Utility Networks, so far relevant applications have been completed until 25/4/11 (removing mainly electricity networks). The concerned department –DEH (PPC) - has started works on GE 1N.2, 4N, 5N, 6N, 7N & 9N but the whole process has already been delayed overdue and it should be speeded up since it causes disruption of works.

8. The contractual deadline for delivery of the private lands 31.3.2009 has not been achieved. Furthermore, the public lands of the project have been officially delivered to the J/V with one year of delay although the ownership of some sections is not clear. Regarding the private lands through requisition process, until the reference date (25/04/11) the following parts have been delivered formally to the J/V, taking into consideration that no additional area has been delivered from 19/05/2010 up to NOVEMBER 2010.

In many cases the received sections are not continuous including non-expropriated parcels and do not allow the occupation of land across the width of the expropriated zone in sufficient length with obvious implications in the progress of the construction.

- **GU 1N.1 (CH. 0+000 – CH. 6+200)**, on 14/02/2011 all the non-deliverable sections have been delivered. Also, in February 2011, ERGOSE finally (after a year of delay) designated sites for the deposition of gravel located on the CH. 5+610/5+680, but - due to the current suspension of the works - this activity cannot be realized. **In GU 1N.2 (CH. 6+200 - CH. 14+500)**, on 14/02/2011 all the non-deliverable sections have been delivered. **It should be noted that up to 14/02/2011, the situation of the expropriations for the critical section 0+000 - 14+500 remained as it was from 05/03/2010, (almost one year of delay), which was the date of the last delivery protocol and thus the finally approved extension of the 2nd EPD completion fails.**
- **In GU 2N.1 (CH. 14+500 - CH. 28+500)**, there are still non-delivered sections (63 parcels). Most parcels are located on the main motorway and prevent the construction of embankments, the structures and the access to the places of works. The vertical roads and service roads are blocked.



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- **In GU 3N.2 & 3N.3 (CH. 43+200 - CH. 48+161)**, on 20/01/2011 some areas between CH. 46+813 – Ch. 48+145 have been received. Up to date OSE sections CH. 43+200 – CH. 47+000 have not been delivered. Resubmission of the revocable land register entitled: Partial revocation of non-completed obligatory expropriation on the Road Axle of Central Greece (E65), Section CH. 46+813 – CH. 48+145.
- **In GU 4N, 5N, 6N.1 (CH. 48+500 - CH. 90+500)**, some requisitions have been paid but not all of them. In the City of Menelaida (CH. 47+000- CH. 56+000), the parcel owners, accompanied by the police, stopped the works, although these parcels are delivered to the J/V as public land. Serious delays in the commencement of construction works of Overpasses due to the refusal of the owners of adjacent parcels to lease the land for the diversion of traffic resulting in the creation of large detours causing additional delays. Furthermore, OSE areas on CH. 76+710 have not been delivered. Finally, there is a delay of works due to non-requisitioned parcel in CH. 80+880, which occupies almost the entire width of the road artery.
- **In GU 6N.2 (CH. 90+500 - CH. 97+000)**, the delivery of land has not been completed.
- **In GU 7N.1 (CH. 97+000 - CH. 109+500)**, EOSA does not go to any further requisitions in section from CH.104+000 - CH.110+000 where the most problems are identified, since works cannot be performed in the section CH.106+000 - CH.109+500 because the delivered land has been fragmented (the involvement with KO34 is still pending). A very important problem in CH. 99+000 still remains, where the axis is being cut off completely from existing properties and the route needed to be done now is 6km. It has to be noted that there are decisions on behalf of the Greek courts for the JMDs concerning the execution of expropriations on CH. 92+000 - CH. 104+000 and CH. 104+000 - CH. 110+000 and, despite all this, Egnatia Odos S.A. does not proceed with the necessary deposit tables and the payment thereof, having as a result for the sites to remain non-available.
- **In GU 7N.2 (CH. 109+500 - CH. 111+000)**, there are still undeliverable lands because several owners of non-requisitioned property deny the requisition. Section CH. 109+500 ~ CH. 110+500 is inaccessible and works cannot be carried out.
- **In GU 8N (CH. 111+000 - CH. 123+000)**, there are still inconsistencies and undeliverable lands in Raksa area (CH. 118+000 ~ 122+000), resulting in failure to perform the works (for example Underpass CH. 117.1). In this region (Raksa), the non-completion of the delivery of land makes the commencement of the irrigation network relocation works impossible, creating a negative timeframe, given the archaeological involvement in the same region as well.



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- In **GU 9N (CH. 123+000 - CH. 136+000)**, there are still properties that appear to be public but they are claimed by individuals and the access to the motorway and the works execution is impossible, creating a negative timeframe.
- In **GU 10N (CH. 136+000 - CH. 144+000)**. Undeliverable lands remain in section CH. 137+200 ~ CH. 144+000. By 02/07/2010 works in CH. 137+553 ~ CH. 144+000, after the temporary injunction by the Council of State, have been interrupted (No. 827/2010).
- In **GU 11N.1, 11N.2 & 11N.3** Suspension of all works by 02/07/2010 because of a temporary injunction by the Council of State (No. of request for works suspension 827/2010).
- Regarding **PATHE**, the works are delayed because both the contractual and the revised land delivery dates in sections 12NΔ, 13NΔ, 14NΔ have not been achieved (construction area of Thermopiles I/C toll station was delivered on 03.02.2010). Under Protocol VII, a section of motorway from CH.: 9+630 – CH.: 10+385 was delivered to the J/V for the construction of the frontal toll stations of Agia Triada and Molos I/C and in particular the road SRK3 and branches 1.2 for the construction of Molos lateral toll station. The delivered areas have serious problems due to the already established construction work in Agia Triada and the non-delivery of additional land expropriations in Molos I/C. In addition, there are delays in 15NΔ section because of inalienable land in the areas of Mavromantila and Agia Paraskevi toll stations.

2.1.2 Report period

At the reporting date of this report (31/06/2011) the main issues of the involved with the Public Utility Networks work are the following:

➤ **PPC:**

GU 1N.1: The low-voltage and medium-voltage networks in the area where the sections AB1 & AB2 are crossing the Old National Road have been relocated.

GU 1N.2: The relocation works of High Voltage in Lianokladi MSS remain stopped affecting the safe construction of the embankments higher levels (the PPC conducted an inspection on 17/9/2010). The local Service of PPC has not responded so far on the relocation of networks along the axis (CH.8+470, 10+300, CH. 11+300, CH. 12+040, CH. 12+500) since EGNATIA has not proceeded with the relevant payment. However, the PPC has started the network power relocation works in CH. 9+500 in the main artery of E-65 but the quality of



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the restoration works is not acceptable, since the embankment works of the motorway in this CH. have been completed; hence the PPC subcontractors carry out excavations on our embankments in order to create underground passages. Finally, the issue of power cut and relocation of drilling (CH. 8+470, 10+300, 11+300) remains, while impeding the embankments construction. The relocation of the electricity grid from the vertical road to Kompotades in CH. 12+831 is still pending because of the non-payment of the relocation design on behalf of the PPC; so the works have been stopped and the 2nd phase of the construction of the required bypass has been delayed. Also, OSE optical fibers in TE47 1 structure in Karpenissi I/C branch 1 impede the construction of the A1 abutment and thus the completion of branch 1 for the linking of E65 with the existing National Road. On 20/09/2010 a visit was conducted by OSE representatives, but this issue still remains since the relevant report on behalf of OSE has been sent on 11/01/2011 to EOSA.

All the above pending problems have created continuous delays resulting to the failure even of the approved extension for completion.

GU 3N.2-4N: Delays in the PPC networks relocation. On 11/2/2011 a relocation of PPC network took place in section between CH. 43+200 – Ch. 47+500 and Ch. 53+900 – CH. 54+200. There was a timely communication (correspondence) with PPC of Lamia & Karditsa regarding the networks of Anavra – Thavmakos new connecting road.

GU 5N, 6N.1: There are delays due to non-timely networks relocation. The relocation of PPC network in the area of Karditsa I/C has not been completed in CH. 89+500.

GU 6N.2: All Public Utilities Networks within the expropriation zone of the project have been localized and all necessary arrangements for their relocation have been made.

GU 7N.1: All Public Utilities Networks within the expropriation zone of the project have been localized and all necessary arrangements for their relocation have been made.

GU 7N.2 & 8N: The relocation cost of PPC network from E.O.S.A. has been paid. The contractor installation is expected.

GU 9N: The network design and relocation in the area of Kalampaka I/C is still pending.



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GU 10N: Contacts with PPC and additional information and clarifications provision in order for the relevant relocation design to be made.

PATHE/GU 12S/W: No relocation of PPC network in CH. 10+270 and 12+160 SRD1 (Responsibility of EYDE PATHE TKE Lamia).

PATHE/GU 12S/W: The relocation of PPC network in DSR3 (Mavromantila Toll Station) has not been completed.

➤ **Hellenic Organization of Telecommunications (OTE):**

GU 1N.1: OTE organizes the network's relocation in the area where AB1 and AB2 branches cross the old National Road.

PATHE: Horizontal alignments have been submitted to all the organizations of telecommunications for possible underground networks and their relocation. WIND & COSMOTE have been answered negatively so far. The air network from 12+300 to 12+500 (SRD1) has not been relocated.

➤ **Local Organization For Land Improvement (TOEB)**

GU 3N.3 – 4N: There has been timely information regarding the commencement of the works of Anavra – Thavmakos new connecting road.

GU 6N.1: The works of irrigation network rehabilitation in Tavropo have been started in January 2011.

GU 9N: The relocation works of Theopetra TOEB and Vassiliki TOEB networks have started. Contacting YEB of Trikala for the acceleration of the design regarding the relocation of Raksa irrigation system.

➤ **Water supply - Drainage**

GU 1N.2: The Municipal Water Supply and Sewerage Company of Lamia (DEYAL) has not yet relocated part of the water supply pipeline to the area of TE40 overpass which affects the construction of the embankments in the area.

➤ **Military fuel pipeline in CH. 111+950 and 122+990:**

GU 8N: GEA submitted the safety standards of the fuel pipeline, and details on the relocation of the pipeline on 26/06/2010. In Vassiliki I/C (CH. 122+800) where, - according to the instructions of GEA - changing of the route of the pipeline will be demanded, a technical solution along with the design of the junction is under consideration.

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2. The designs preparation and submission is under development.
3. The process to obtain permits for quarries, borrow pits, disposal site and equipment is in progress for the project's needs. The requests for the permits have been sent to the relevant services. Moreover, five (5) from these have been approved in their entirety (Kalamaki, Geladaria, Onohonas River, Geladaria, Kioska/Anavra) so far, while many areas have been rejected from the involved Archaeological Services & Forestries. Especially for the area of Lamia the relevant STIS for borrow pits has been submitted in early March 2009 and has been approved on 11/08/09 (lapse of 5 months), having received a final complete approval (including the lease of site) only for one (1) in Kalamaki, and thus the construction of embankments is in severe delay. The whole issue is critical.
4. A Certificate of Environmental Control for Thermopiles I/C has been issued. Regarding Molos I/C, despite the fact that a design on traffic regulations has been submitted and implemented, the IE did not issue the Certificate of Environmental Control because of lack of necessary expropriated site in branch 1.
5. The implementation of the Environmental Operating System of the Project continues as usual.
6. The revision of the Environmental Management System of the Project is under development.

2.1.3 Problems and possible risks

- While the J/V's operations are under suspension, all G.U.s are 'charged' with additional delays corresponding to the period from 14/02/2011 until the end of the works' suspension and the remobilisation time of the appropriated funds.
- Delays in the process of requisition which also lead to delay in the delivery of certain sites and in turn of several parts of the project, as in GU 1N.1 & 1N.2 (CH. 0+000 – CH. 14+500) where the 2nd Exclusive Deadline was not achieved and a 10-month extension has been granted. The fact that these expropriations finally have been completed on 14/02/2011, and the aforementioned delays in Public Utility Network relocations resulted in failure to achieve the approved extension (up to 31/01/2011), when an additional

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extension has been requested. Furthermore, these delays affected GUs 8N, 9N, 10N, 11N where additionally for the last two sections, the works of J/V have been stopped from 02/07/2010 (CH. 137+553 – CH. 175+000), due to temporary injunction on behalf of the Council of State (no. 827/2010). Under those circumstances, the 3rd Exclusive Partial Deadline cannot be achieved.

- ERGOSE temporary bypass of the existing Lamia-Karpenissi National Odos along with the cessation of the works in the bridge of ERGOSE (MICHANIKI SA constructor) prevents the construction works of E-65 motorway in CH. 15+375, until the completion of the said bridge.
- Delays in the test archaeological cuts due to the fact that the sites are not delivered and also due to the inadequacy of the staff provided by the Archaeological Services at GUs 2N, 4N, 5N, 6N, 9N & 10N. The continued delays regarding the approved schedule (according to which most of the works should have been completed on June 2009).
- Significant disorganization due to the engagement of the sites with archaeological findings along the motorway alignment. More specifically in G.U. 1N.2 (CH. 14+200), the archaeological rescue works were interrupted on 06/12/2010 due to termination of the contracts of the on-site staff. The works restarted in March 2011.
- Delays due to the delayed relocation of Public Utility Organizations at GU 1N.2, 5N, 6N, 7N, 8N.
- Delays due to the lack / rejection of the appropriate borrow pits/quarries, as up to now a number of such sites has been rejected by the Archaeological & Forest Services. Delays were also due to the delay of the competent Service to reply to our submissions. For example, up to now, only one (Kalamaki Vryssi) of the four (4) borrow pits to be approved in the area of Lamia has received a permit on April 2010 – thirteen (13) months following the relevant request which seriously affected the progress of the embankments at GU 1N. Moreover, the Cadastral Service of Karditsa Prefecture received approval to intervene in the withdrawal of material and arrangement of the Onohonos' riverbed, in accordance with the approved Special Technical Implementation Study (STIS) while during the progress of the works, some residents appeared, who claimed that they own the area of the works without having proprietary titles which led to the disruption of the works.
- Letter from the Prefecture of Karditsa, which asks the modification of the approved studies at E65 Motorway and additional crossings, issues that lead

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to delays and increase the cost.

- Specific regulations regarding the design of KO34 area (CH.108+450) are still pending on behalf of EGNATIA S.A., given that the study of the basic design has been basically annulled since the relevant land and property register has been withdrawn.
- In the area of Raksa (CH. 118+000 ~ 122+000), the commencement of works for the relocation of the irrigation network, which impede the earthworks, is impossible due to the non-completion of the delivery of land. The situation is serious creating a negative time delay since there are no designs for its relocation, due to the non-response on behalf of the competent local services.
- The logging of the area 139+000 ~139+200 is still pending (abandoned military camp) due to on behalf of the unit.
- Delay due to failure to accomplish the revised delivery deadline of the site for sections (12NΔ-13NΔ-14NΔ-15NΔ) on 25/6/2009, 10/9/2009, 11/9/2009 & 28/6/2010 respectively. Delay in the entire completion of the toll station at Molos I/C due to the additional expropriation, although the toll stations have been delivered with appropriate traffic regulations.
- Delay due to the existence of worksite installations by third parties within the range of works occupancy (Agia Triada Toll Stations) at the section 12NΔ thus creating serious problems for the works until the sites are completely free. Furthermore, there is a delay in the construction of the ITS network at Roditsa I/C (14NΔ) due to the incomplete works at PATHE.
- Delays in the construction of tolls in G.U. 15S/W due to non-expropriations in the construction sites of Mavromantila and Ag. Paraskevi tolls. Possible delays in the progress of the works of SRD1 due to non-relocation of PPC network in CH. 10+270 and 12+160.

2.2 ENVIRONMENTAL REQUIREMENTS

The design, construction and operation of the project are in full compliance with the Approved Environmental Terms as well as with all the requirements that derive from the Concession Agreement (C.A) and the attached contractual documents (Design & Construction Agreement, Special Conditions of Contract,

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Technical Conditions of Contract, Project Design Regulation) as well as the applicable legislation.

Basic requirement for the construction of the project is the Law No. 3597/20.07.2007 (GG 3445A/25.07.2007), which includes the contractual issues, the current legislation, as detailed in the previous Environmental Management Reports (semi-annual and annual ones), as well as the conditions and restrictions arising from the individual permits and approvals, including STIS of the various individual projects, the approvals of amendments of the main road project, etc., for which the contractor of the Project is responsible.

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3. ENVIRONMENTAL MANAGEMENT OF THE PROJECT

3.1 ENVIRONMENTAL MONITORING & CONTROL PROGRAM

The "Environmental Monitoring & Control Program" is based on the environmental terms of the project and on the Concession Agreement and includes the following:

- Prioritisation of protective actions - measures that should be taken by the Constructional J/V according to the Environmental Terms and other contractual obligations.
- The designs, studies and technical reports that should be drawn up in the framework of construction and operation of the project and that involve several environmental issues.
- The implementation control process of the terms and actions by the competent authorities.

The purpose of the Environmental Monitoring & Control Program is to clearly determine the actions and measures required for the environmental management of the construction phase of the project and that derive from recording and assessing the environmental terms, other obligations or guidelines arising from the contractual documents and the applicable legislation.

The Environmental Monitoring & Control Program is currently at the submission phase to EYPE/YPEXODE.

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3.2 ENVIRONMENTAL MANAGEMENT SYSTEM – ENVIRONMENTAL TERMS COMPLIANCE CHECKLISTS

The "Environmental Terms Compliance Checklists" are drawn up based on the Environmental Monitoring & Control Program and the Environmental Management System. These checklists include the way and methodology of required actions in order to ensure the implementation of the Environmental Terms.

The responsible department for the environment in cooperation with the project engineers carry out regular inspections and complete the checklists by applying the "Environmental Monitoring & Control Program". Furthermore, they provide the necessary orders or guidelines that are based on the Environmental Monitoring & Control Program for every issue related to the environment.

The Environmental Management System, which is applied by the J/V, has been drawn up taking into consideration the requirements of ISO 14001:2004. It consists of the Manual, the Procedures, the Guidelines of the Works related to the environment and the observance of the project's environmental requirements. The manual, the procedures and the guidelines for environmental management is applied uniformly throughout the project and are currently in continuous progress in order to meet the project's needs.

3.3 MONTHLY, SEMI-ANNUAL AND ANNUAL PROGRESS REPORT FOR THE IMPLEMENTATION OF ENVIRONMENTAL TERMS

At the same time, in order to monitor the Program and inform the Environmental Department of the Independent Engineer on a monthly basis, the person responsible draws up monthly and annual progress reports for the implementation of the environmental terms in the form of a table. These monthly reports include:

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- Works or designs carried out regarding the implementation of the Environmental Terms and all possible variations on the Environmental Monitoring & Control Program.
- The relevant actions of the persons responsible (inspections, special reports, etc.).
- The results of the inspections and the conclusion of the monthly checklists
- A full photographic presentation of the environmental issues

In July of each year, a semi-annual progress report is being drawn up with respect to the implementation of the Environmental Terms in accordance with article 11.2.2., case (ii) of the Concession Agreement.

In January of each year, an annual progress report is being drawn up, pursuant to article 11.2.2 (iii) of the Concession Agreement, which includes the annual review of all issues described in the periodical reports.

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4. ENVIRONMENTAL ISSUES PROGRESS – WORKS CONSTRUCTION

The progress of the construction works is submitted by the joint venture Central Greece Motorway E65 to the Concessionaire via monthly reports of progress.

The above paragraphs constitute the documentation for the compliance of the environmental commitments regarding the construction works progress.

4.1 PERMITS - DESIGNS - APPROVALS

This section presents all requests submitted by the Constructional Joint Venture in order to obtain permits for the implementation of the project. Furthermore, the relevant designs that arise from the obligation to observe the contractual requirements and environmental terms of the project are presented.

4.1.1 Permits and approvals in accordance with the environmental terms of the project.

In the context of observing the environmental terms and other requirements based on the applicable legislation, Special Technical Implementation Studies (STIS) of the ancillary works are being prepared and submitted for approval and permit. The competent authority for this approval is EYPE/YPEXODE.

The following table (table 4.1.1-1) presents all relevant information on the submissions conducted to EYPE/YPEXODE.

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Table 4.1.1-1
Environmental permit for ancillary works

No.	Ancillary work	Area	Submission to EYPE (ref. no. EYPE)	EYPE's Decision	Comments (approval, re-submission-rejection, etc.)
1.	MATERIAL WITHDRAWAL FROM ONOHONO RIVER (BP5N1)	Municipality of Sofades, Prefecture of Karditsa	141388/25-6-2009	141388/04.08.2009	STIS approval
2.	BORROW PIT AT AGIA PARASKEVI, "KALAMAKI BR" (BP1N3)	Agia Paraskevi, Municipality of Lamia, Prefecture of Fthiotida	136998/05.03.2009	136998/28.07.2009	STIS approval
3.	WORKSITE AT LAMIA IN "AG. TRIFONAS" POSITION (MSS CH. 12+000) (IS1N1)	Stavros, Municipality of Lamia, Prefecture of Fthiotida.	136998/05.03.2009	136998/28.07.2009	STIS approval
4.	BORROW PIT / DISPOSAL SITE "Pyrgaki - Kofina" (BP/DS1N1)	Stavros, Municipality of Lamia, Prefecture of Fthiotida.	136998/05.03.2009	136998/28.07.2009	STIS approval The Regional Forest Service Directorate does not approve the intervention permit
5.	BORROW PIT "Platana - Rema" (BP1N2)	Lygaria, Municipality of Lamia, Prefecture of Fthiotida.	136998/05.03.2009	136998/28.07.2009	STIS approval
6.	BORROW PIT IN "MAGOULA" POSITION AT SPERHIOS RIVER	Among Municipality of Ypati and Lianokladi, Prefecture of	136998/05.03.2009	136998/28.07.2009	The position has been rejected by STIS

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No.	Ancillary work	Area	Submission to EYPE (ref. no. EYPE)	EYPE's Decision	Comments (approval, re-submission-rejection, etc.)
	(BP1N4)	Fthiotida			
7.	BORROW PIT IN "ASPROKAMPOS" POSITION AT GERAARIS STREAM(BP1N5)	Komprotades, Municipality of Ypati, Prefecture of Fthiotida.	136998/05.03.2009	136998/28.07.2009	STIS approval The location has been rejected by the Hellenic Public Real Estate Corporation (HPREC)
8.	BORROW PIT AT "AERODROMIO" AREA (BP6N1)	Kefalovryso, Municipality of Faloria, Prefecture of Trikala	140546/04.06.2009	140546/29.07.2009	STIS approval
9.	STIS Review Borrow Pit "AERODROMIO" (BP6N1)	Kefalovryso, Municipality of Faloria, Prefecture of Trikala	148761/18.12.2009	121188/29.01.2010	Approval of the revised STIS
10	Borrow Pit "Kioskia" (BP4N1)	Municipality of Tamassi, Prefecture of Karditsa, Anavra	143395/10-08-2009	143395/02-09-2009	STIS approval
11	Borrow Pit "Geladaria" (BP4N2)	Municipality of Tamassi, Prefecture of Karditsa, Anavra	145522/16-10-2009	145522/17-11-2009	STIS approval
12	Anavra Worksite "Kedrakos" position (IS5N1)	Municipality of Tamassi, Prefecture of Karditsa, Anavra	143394/10-08-2009	143394/02-09-2009	STIS approval
13	Agios Georgios Worksite "Voulgarolakka"	Municipality of Kampos, Agios Theodoros, Prefecture of	143394/10-08-2009	143394/02-09-2009	STIS approval

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No.	Ancillary work	Area	Submission to EYPE (ref. no. EYPE)	EYPE's Decision	Comments (approval, re-submission-rejection, etc.)
	position	Karditsa			
14	"GKOLNA" Worksite (BP5N4)	Municipality of Goriani, Prefecture of Grevena	121768/10-2-2010	----	The design was returned because of the decision of the Council of State for temporary suspension of the works in the 3rd JMD.
15	Borrow Pit in "Mavrogies" position (BP5N4)	Sikeona, Municipality of Filo, Prefecture of Karditsa	121768/10-2-2010 Resubmission 14076/16.06.2011 (J/V No.)	----	Expected to be approved
16	Borrow Pit in "Vrontaria" Position (BP6N2)	Fiki, Municipality of Pitalia, Prefecture of Trikala	7489/21.04.2010	127798/08.07.2010	STIS approval
17	Stone processing installation in the quarry materials – borrow pit in "Pyrgaki" Position (IS1N2)	Stavros, Municipality of Lamia, Prefecture of Fthiotida	144259/11.09.2009	144259/17.11.2009	STIS approval
18	Stone processing installation in the quarry materials – borrow pit in "Kalamaki Vr." Position (IS1N3)	Agia Paraskevi, Municipality of Lamia, Prefecture of Fthiotida	144259/11.09.2009	144259/17.11.2009	STIS approval
19	Stone processing installation in the worksite facilities of	Stavros, Municipality of Lamia, Prefecture of Fthiotida	144259/11.09.2009	144259/17.11.2009	STIS approval



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No.	Ancillary work	Area	Submission to EYPE (ref. no. EYPE)	EYPE's Decision	Comments (approval, re-submission-rejection, etc.)
	Lamia (IS1N4)				
20	Washing of aggregates with a sieve in the sand borrow pit in Gerakaris r. (IS1N5)	Kompotades, Municipality of Ypati, Prefecture of Fthiotida	144259/11.09.2009	144259/17.11.2009	Rejected due to refusal of the lease application by the Mortgage Service of Prefecture of Fthiotida
21	Worksite in Kalampaka MSS position (CH. 132+000) (IS9N1)	Municipality of Kalampaka, Prefecture of Trikala	125561/17.05.2010	199070/09.05.2011	Rejected by EYPE due to location within Natura 2000 area
22	Worksite in "Lampes" position (IS6N1)	Proastio, Municipality of Selana, Prefecture of Karditsa	126671/11.06.2010	195831/31.01.2011	STIS Approval
23	Worksite in "Samolaka" position (IS2N1)	Stirfaka, Municipality of Lianokladi, Prefecture of Fthiotida	126332/04.06.2010	127799/08.07.2010	STIS Approval
24	Borrow Pit "Ammoudes" (BP5N5)	Filia, Municipality of Sofades, Prefecture of Karditsa	9285/26.07.2010 (J/V prot. no.)	132626/22.11.2010	STIS approval
25	Borrow Pit "Haliades" (BP5N6)	Filia, Municipality of Sofades, Prefecture of Karditsa	9567/03.08.2010 (J/V prot. no.)	132626/22.11.2010	STIS approval
26	Worksite of Perivoli (IS3N1)	Perivoli, Municipality of Ksiniada, Prefecture of	9575/06.08.2010 (J/V prot. no.)		Expected to be approved

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No.	Ancillary work	Area	Submission to EYPE (ref. no. EYPE)	EYPE's Decision	Comments (approval, re-submission-rejection, etc.)
		Fthiotida			
27	Worksite (IS2N3) in "Ohiro" position (T2 tunnel exit area)	Moshokaria, Municipality of Lianokladi, Prefecture of Fthiotida	9442/02.09.2010 (J/V prot. no.)		Expected to be approved
28	Temporary deposit in "Fteres" position (DS2N1)	Moshokaria, Municipality of Lianokladi, Prefecture of Fthiotida	9442/02.09.2010 (J/V prot. no.)		Expected to be approved
29	Plant of asphalt production and 3A material mixer	Anavra, Municipality of Tamassi, Prefecture of Karditsa	9230/22.07.2010 (J/V decision no.)	----	Expected to be approved
30	Environmental licensing of drilling wells under the project "Landscape Planting - Irrigation and Rehabilitation for the CH. 56+000 – CH. 90+000 of the Central Greece Motorway (E65)".	CH. 56+000 – CH. 90+000	13323/01.04.2011 (J/V decision no.)		Submission of Environmental Impacts Pre-study

Within the second semester of 2011, additional relevant designs of more ancillary works such as disposal sites, worksites, borrow pits, etc. are expected to be submitted in order to receive environmental permit.

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Moreover, in line with the environmental terms of the project, all the respective permits and opinions are obtained by the competent authorities, such as Forest Services, Archaeological Services, Prefectural Administration Services, etc.

The Constructional Joint Venture submits the required requests to obtain relevant permits. The main competent services involved in the project are the following:

- Forest Service of Lamia
- Forest Service of Karditsa
- Forest Service of Trikala
- Forest Service of Kalambaka
- Forest Directorate of Grevena
- ΙΔ Service of Prehistorical and Classical Antiquities
- ΛΔ Service of Prehistorical and Classical Antiquities
- Λ Service of Prehistorical and Classical Antiquities
- 19th Service of Byzantine Antiquities
- 24th Service of Byzantine Antiquities
- 17th Service of Byzantine Antiquities
- Regional Section of Fthiotida
- Regional Section of Karditsa
- Regional Section of Trikala
- Regional Section of Grevena
- etc.

The following table (table 4.1.1-2) presents all requests submitted by the Constructional Joint Venture in order to obtain the relevant permits and opinions issued by the services in the framework of the project.

Table 4.1.1-2
Requests for permit by the relevant competent authorities (2011)

No	Service	Subject	Request	Response		Comments
			J/V Ref. No	J/V Ref. No	Service Ref. No	
1.	Ministry of Environment, Energy & Climate Change / Inspectorate of Mines of	Submission of statement for aggregates quarry / borrow pit exploitation in "Kalamaki Vryssi", Municipality of Lamia,	13643/29-04-11			



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No	Service	Subject	Request	Response		Comments
			J/V Ref. No	J/V Ref. No	Service Ref. No	
	Southern Greece	for 2010				
2.	Prefectural Administration of Fthiotida Directorate of Technical Services	Opinion for the rental of quarry area – borrow pit in “Fournia” location Municipality of Ksiniada	10252/21-09-10	12002/04-01-11	TY9173,10676/20-12-10	Opinion
3.	Forest Service of Lamia	Opinion for the lease of quarry area/borrow pit in “Fournia” location Municipality of Ksiniada	10252/21-09-10	12562/09-02-11	9333/22-12-10	Opinion
4.	Forest Service of Lamia	Submission of Characterization Certificate of quarry area / borrow pit in “Fournia” location, Municipality of Ksiniada	13174/22-03-11	Pending	Pending	Request for issuance of Characterization Certificate
5.	Prefectural Administration of Fthiotida Directorate of Technical Services	Opinion for the lease of quarry area / borrow pit in “Ag. Stefanos” location, Municipality of Ksiniada	10251/21-09-10	12003/04-01-11	TY9174,10686/20-12-10	Opinion
6.	Forest Service of Lamia	Opinion for the lease of quarry area / borrow pit in “Ag. Stefanos” location, Municipality of Ksiniada	10251/21-09-10	12562/09-02-11	9665/22-12-10	Issuance of Characterization Certificate is required
7.	Forest Service of Lamia	Request for issuance of Characterization Certificate of quarry area / borrow pit in “Ag. Stefanos” location, Municipality of Ksiniada	12569/10-02-11	Pending	Pending	Request for issuance of Characterization Certificate
8.	Forest Service of Lamia	Request for issuance of Characterization Certificate of temporary deposit of excavated material in “Fteres” location, Municipality of Lianokladi	13514/15-04-11	Pending	Pending	Request for issuance of Characterization Certificate

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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
9.	South Greece Mines Inspectorate	Call to defense regarding the borrow pit in the "Airport" location, Municipality of Faloria		12455/02-02-11	377/31-01-11	The annual statement of activity is requested
10.	South Greece Mines Inspectorate	J/V reply in the 377/31-01-11 of EMNE regarding the activity in the borrow pit in the "Airport" location, Municipality of Faloria	12525/04-02-11			J/V's reply in the 377/31-01-11 of EMNE
11.	Ministry of Environment, Energy and Climate Change / South Greece Mines Inspectorate	Submission of Activity Bulletin for exploitation of aggregates quarry / borrow pit in "Airport" location, Municipality of Faloria, for 2010	13627/28-04-11			
12.	Ministry of Environment, Energy and Climate Change / EYPE	STIS submission of worksite in "Lampes" location, Municipality of Proastio	8291/10-06-10	12607/14-02-11	195831/31-01-11	STIS Approval
13.	Decentralized Administration of Thessalia – Central Greece	Study of delimitation for Iona river, Municipality of Chasia & Kalampaka	10512/06-10-10	13734/10-05-11	3630/158712/Tu/04-05-11	Comments on the study
14.	Independent Engineer	Submission of hydrological study for Ionas river	13955/02-06-11			
15.	Municipal Water and Sewerage Company of Lamia	Cross-over of DEYAL Networks with E-65		12216/20-01-11	58/ε/10-01-11	Protection of water pipeline CH. 6+794 (region of Lamia – Athens Old National Road)
16.	Municipal Water and Sewerage Company of	Cross-over of DEYAL Networks with E-65		13246/28-03-11	753/3/14-03-11	Protection of water pipeline CH. 4+853



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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
	Lamia					
17.	PPC/ Directorate of Transport Projects	400 kV powerline of the System Trikala – Distomo complication with Central Greece Motorway which is under construction	6496/11-03-10	12866/28-02-11	20483/18-02-11	Complication with transportation line in section 28+500 up to 31+250 - necessary actions
18.	Ministry of Culture and Tourism / ΑΔ' Service of Prehistorical and Classical Antiquities (EPKA)	Information about the construction works in "Pareklissi or Ag. Eleni" location, Municipality of Mouzaki		13188/23-03-11	1101/23-03-11	Information requested on technical construction details in section 99+350 up to 99+351
19.	Local Organization for Land Improvement (TOEB) of Sellana	Delivery of irrigation pipeline	FA2349/13-04-11		117/14-04-11	
20.	Forest Service of Karditsa	Request for Decision of finality on Characterization Certificate for borrow pit	14001/7-6-2011	14096/20-06-2011	1866/6321/08-06-2011	Finality of Characterization Certificate
21.	Ministry of Culture and Tourism Directorate of Prehistorical and Classical Antiquities	Request for study of Sikeona archaeological site	12051/11-01-2011			
22.	Special Service of Environment (EYPE)	Transmission of Services' positive consultatory opinions for BP5N4 (Sikeona)	13531/15-04-2011			
23.	Special Service of Environment (EYPE)	Delivery of copies STIS BP5N4 (Sikeona)	13625/28-04-2011			

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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
24.	Special Service of Environment (EYPE)	Re-submission of STIS	14076/16-06-2011			
25.	Ministry of Environment – Directorate of quarries, marbles & aggregates	Submission of receipts deposit for consultants remuneration and public rights	14078/16-06-2011			
26.	Central Archaeological Council (KAS)	Positive Opinion of Central Archaeological Council (KAS) for the hierarchical action of the J/V for BP5N4 (Sikeona)			ΥΠΠΟΤ/ΓΔΑΠΚ/ ΑΡΧ/ Α1/Φ34/46449/2 011/ 31-5-10	
27.	Special Service of Environment (EYPE)	Return of STIS BP5N4 (Sikeona) for correction		13919/27-05-2011	199453/20-05-2011	
28.	YPEKA Directorate of Quarries, Marbles & Aggregates	Approval of STIS BP5N4 (Sikeona)		14182/04-0702011	2482/22-06-2011	
29.	Special Service of Environment (EYPE)	Return of STIS for worksite in GOLNA location		13316/1-4-11	124771/22-10-10	Due to temporary suspension of works based on Decision of the Council of State
30.	ΛΔ' Service of Prehistorical and Classical Antiquities	Commitment of lands of archaeological interest within the land occupation of Anavra region, Municipality of Tamassi, Karditsa		11977/03-01-2011	3782/20-12-2010	
31.	19th Service of Byzantine Antiquities	Site release for carrying out archaeological works in Krinitsa, Municipality of Paliokastro, Trikala		12077/12-01-2011	4299/10-1-2011	
32.	Municipal Water Supply and Drainage	Complication of the drainage network of the Municipality of	12181/18-01-2011			

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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
	Company of Kalampaka	Kalampaka in CH.135+700 - CH.136+500				
33.	Technical Service of Municipality of Kalampaka	Complication of the constructed stormwater pipeline in CH. 133+380	12244/21-01-2011			
34.	Forest Service of Kalampaka	Forest Service Update on the Temporary order of suspension of the EPO JMD 147014/18.11.2005	12356/28-01-2011			
35.	Traffic Department of Karditsa	Information about necessary traffic arrangements for the construction of the ΑΔ G018	12361/28-01-2011			
36.	OTE of Lamia	Information and request about actions regarding the transportation of the air network of OTE in the region of SRD1 side road	12370/28-01-2011			
37.	Fire Service of Lamia	Submission of studies regarding fire protection of the administration buildings in the frontal toll stations of Mavromantila	12444/02-02-2011			
38.	Region of Central Greece	Information and request	12456/02-02-2011			
39.	Region of Thessalia	Information and request	12457/02-02-2011	12865/28-02-2011		
40.	Local Organisation of Land Reclamation of Thessaliotida 6 th	Information and request for actions regarding the PUO complication	12458/02-02-2011	12746/21-02-2011	12862	



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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
	zone					
41.	Local Organisation of Land Reclamation of Thessaliotida	Information and request for actions regarding the PUO complication	12459/02-02-2011			
42.	PPC of Karditsa	Information and request for actions regarding the PUO complication	12460/02-02-2011			
43.	OTE S.A.	Information and request for actions regarding the PUO complication	12461/02-02-2011			
44.	OTE of Lamia	Information and request for actions regarding the PUO complication	12462/02-02-2011			
45.	PPC of Lamia	Information and request for actions regarding the PUO complication	12463/02-02-2011			
46.	Municipality of Kalampaka	Central Greece Motorway E-65 complication with constructed stormwater pipeline of the Municipality of Kalampaka in CH. 133+380		12471/03-02-2011	2241/31-1-2011	
47.	Region of Thessalia	Information and request for actions regarding the relocation of road light network	12579/11-02-2011	13014/11-03-2011		
48.	IA' Service of Prehistorical & Classical Antiquities	New data on the exact alignment of the E-65 motorway near a new location of archaeological interest		12608/14-02-2011	619/1-2-2011	



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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
		in Styrfaka				
49.	Directorate of Technical Services	License Extension of road intersection for the construction of structures G24 and G25	12698/17-02-2011	12863/28-02-2011		
50.	Ministry of Environment, Energy & Climate Change	Submission of 4 th Report regarding the fauna monitoring program for MAY – JUNE- JULY 2010	12740/21-02-2011			
51.	Region of Thessalia General Police Directorate	Traffic Arrangements (Positive Opinion)		13159/21-03-2011	2501/3/51-α'/31-1-2011	
52.	Ministry of Environment, Energy & Climate Change	Environmental licensing of the drilling wells under the scope of the project of Planting - Irrigation and Landscape Restoration for the section ch.56+000-ch.90+000 of the Central Greece Motorway	13323/04-04-2011			
53.	Decentralized administration of Thessalia - Central Greece	Issue of certificate of finality for the worksite in "Samolaka" location (IS2N1)		13356/05-04-2011	1510/29-3-2011	
54.	Region of Thessalia	Modification of vertical marking in the I/C Delta of Agii Theodori of the E65 motorway (Replacement of informational sign)		13446/11-04-2011	44952/793/5-4-2011	
55.	Forest Service of Lamia	Request for characterization of land for the temporary storage of excavated materials in the location of "Ochyro"	13515/15-04-2011			



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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
		(IS2N3)				
56.	Ministry of Environment, Energy & Climate Change	Submission of annual activity bulletin for the exploitation of the borrow pit in the location of "Geladaria" (BP4N2) for 2010	13626/28-04-2011			
57.	Ministry of Environment, Energy & Climate Change	Submission of annual activity bulletin for the exploitation of the borrow pit in the location of "Kioskia" (BP4N1) for 2010	13628/28-04-2011			
58.	Forest Service of Kalampaka	Request for return of the STIS of borrow pit in "Isada" location (BP5N4)	13808/17-05-2011			
59.	Region of Thessalia	Request for extension of the licensing of temporary traffic arrangements for the construction of the Underpass G037	13960/02-06-2011			
60.	Ministry of Environment, Energy & Climate Change	Submission of the 5 th report of the fauna monitoring program for AUGUST – SEPTEMBER – NOVEMBER – DECEMBER 2010 and JANUARY 2011	14004/07-06-2011			
61.	Ministry of Environment, Energy & Climate Change	Special Technical Implementation Study of the worksite near the Wastewater Treatment Plant of Kalampaka (rejection)		14005/07-06-2011	199070/9-5-2011	
62.	Directorate of Technical Services	Request for license extension of the road intersection for the construction of	14134/24-06-2011			

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S/N	Service	Subject	Request	Response		Comments
			J/V Ref. No.	J/V Ref. No.	Service Ref. No.	
		Underpasses 024 & G025				

4.1.2 Project Environmental Designs

The contractual scope of the Constructional Joint Venture is to prepare the relevant construction and other designs for the implementation of the project. Furthermore, the environmental terms of the project referred to the relevant hydraulic and landscaping designs should be carried out. In addition, environmental studies to grant permits for the modifications that arise from the finalization of the works have been assigned. The designs are prepared by the Construction Joint Venture and are submitted to the Concessionaire in order to promote them for approval to the Owner of the Project (Egnatia Odos SA) and the department of YPEKA, i.e. the Special Environment Agency (EYPE). The environmental studies are presented in the following table (table 4.1.2-1).

Table 4.1.2-1

Joint Ministerial Decision / Road Work Designs

No.	Decision Protocol No.	Decision Title / Project Section	Expiration
1.	Joint Ministerial Decision 144504/18.11.2005	"Central Greece (E65) Road Axis / Makrihori - Lamia"	18/11/2015
2.	Joint Ministerial Decision 145521/18.11.2005	"Central Greece (E65) Road Axis / Makrihori - Kalambaka"	18/11/2015
3.	Joint Ministerial Decision	"Central Greece (E65) Road Axis / Kalambaka - Egnatia Odos & Agia Paraskevi I/C" for its	18/11/2015



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No.	Decision Protocol No.	Decision Title / Project Section	Expiration
	147014/18.11.2005	connection with Egnatia Odos".	
4.	Joint Ministerial Decision 103681/05.05.2006	"Connecting road of the Smokovo I/C with the existing road network".	05/05/2016
5.	Joint Ministerial Decision 146113/12.07.2005	Skarfia - Thermopiles at the section of Skarfia - Lamia of the PATHE Motorway	12/07/2015
6.	Joint Ministerial Decision 126696/06.06.2007	Amendment of the Joint Ministerial Decision 146113/12.07.2005	06/06/2017
7.	122881/08.03.2010 ΕΥΠΕ/ΥΠΕΚΑ	Environmental licensing of Agia Triada and Molos I/C toll stations of PATHE motorway	06/06/2017
8.	Joint Ministerial Decision 131550/04.05.2003	"Optimization of the National Road to a PATHE motorway, Skarfia - Lamia section, subsection from the beginning of the Thermopiles Interchange to Nea Kiti of Sperchios river".	04/05/2013
9.	121668/08.02.2010 ΕΥΠΕ/ΥΠΕΚΑ	Environmental licensing of the toll station in Thermopiles I/C of PATHE motorway	04/05/2013
10.	Joint Ministerial Decision 146109/30.09.2005	"Optimization of the National Road to a PATHE motorway, section from Nea Kiti of Sperchios river to Roditsa Interchange".	30/09/2015
11.	Joint Ministerial Decision 130665/02.05.2003	"Optimization of the National Road Athens - Thessaloniki to a motorway that will serve Patra - Athens - Thessaloniki - Evzoni (PATHE), Lamia - Raches section, subsection at CH.3+500 to CH.12+000"	02/05/2013
12.	KYA 195214/11.01.2011	Amendment of the 130665/02.05.2003	02/05/2013

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No.	Decision Protocol No.	Decision Title / Project Section	Expiration
13.	Joint Ministerial Decision 100198/30.05.2006	"Overall Bypass at Stylida - Karavomylos"	30/05/2016
14.	121667/08.02.2010 ΕΥΠΕ/ΥΠΕΚΑ	Environmental licensing of the toll stations of Agia Marina – Stylida ICs and Stylida– Karavomylos I/C of PATHE motorway	30/05/2016

Table 4.1.2-2

Joint Ministerial Decision / Road Work Designs submitted by the Construction J/V

No	Design Title	Submission J/V Ref. No	Decision of Approval	Observations	Expiration Date
1.	Report for the determination of environmental permit procedures of the modification project of Central Greece Road Axis (E-65) in Lamia – Makrihori section (CH. 0+000 – CH. 14+500) (Supporting documentation of art.13 of JMD with no 11014/703/Φ104/2003 KYA)	6484/10.03.2010	----	----	----
		14111/22.06.2011	----	Resubmission	----
2.	Report for the determination of environmental permit procedures of the modification project of Central Greece Road Axis (E-65) in Makrihori	12005/04.01.2011	----	Submission	----
		14129/23.06.2011	----	Resubmission	----



CENTRAL GREECE MOTORWAY (E-65)

No	Design Title	Submission J/V Ref. No	Decision of Approval	Observations	Expiration Date
	– Kalampaka section (CH. 14+500 – CH. 85+800) (Supporting documentation of art.13 of JMD with no 11014/703/Φ104/2003 KYA)				
3.	Additional Environmental Impact Assessment for the improvement of CH. 47+000 – CH. 56+000 (of Smokovo semi section)	12015/05.01.2011	----	Submission	----
4.	Report for the definition of procedures of environmental licensing for the Central Greece (E-65) in section of Makrihori – Kalampaka (CH. 85+800 – CH. 137+550) (File under Article 13 of JMD 11014/703/Φ104/2003)	3113/23.07.2009	----	The design was submitted by EOSA with protocol no A248145/04.03.2010 The design has been given back by EYPE with protocol no 122785/26.04.2010	----
		3786/21.09.2009	----		
		4796/27.11.2009	----		
		5097/14.12.2009	----		
		6005/11.02.2010	----		
		12006/04.01.2011	----	Resubmission	----
		14130/23.06.2011	----	Resubmission	----
5.	Environmental Impact Assessment for the relocation of Kalampaka MSS (CH. 132+000) to a new location near Trikala (CH. 117+000)	11990/04.01.2011	----	Submission	----
		----	----	Return of the design by EOSA for resubmission (A282383/26.01.2011)	
		13178/22.03.2011	----	Resubmission	----



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No	Design Title	Submission J/V Ref. No	Decision of Approval	Observations	Expiration Date
6.	Environmental Impact Assessment for the Cut & Cover construction in CH. 137+000 with recoverable materials	12854/28.02.2011	----	Submission	----
				Return of the design by EOSA for resubmission (A287258/17.03.2011)	----
		13726/09.05.2011	----	Resubmission	----
7.	Environmental Impact Assessment for the Cut & Cover construction in CH. 138+400 with recoverable materials	12854/28.02.2011	----	Submission	----
				Negative response EOSA (A287258/17.03.2011) due to the fact that the said project belongs to the JMD 147014/18.11.2005 which is suspended in the interim order of the Council of State	
		13726/09.05.2011	----	Resubmission	----
8.	Additional Environmental Impact Assessment (EIA) for the connecting road from Anavra to Thavmakos (A' Section) of length 13,5 km. in replacement of the connecting road Smokovo – Monastiri, of 9 km. approximate length	12016/05.01.2011	----	Submission	----
	Study for the Environmental Licensing of the Construction and Operation of the toll stations in Athens – Thessaloniki N.R., in the	3907/28.09.2009	122881/ 08.03.2010 EYPE / YPEKA	Approved	12/07/2015

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No	Design Title	Submission J/V Ref. No	Decision of Approval	Observations	Expiration Date
	subsection Skarfia – Thermopiles of Skarfia – Lamia section, in Agia Triada and Molos I/C locations. (File pursuant to article 13 of the JMD 11014/703/Φ104/2003)				
10.	Study for the Environmental Licensing of the Construction and Operation of the toll stations in Athens – Thessaloniki N.R., in the subsection of Thermopiles I/C beginning – Nea Kiti of Sperchios of Skarfia – Lamia section, in Thermopiles I/C location (File pursuant to article 13 of the JMD 11014/703/Φ104/2003)	4049/08.10.2009	121668/08.02.2010 EYPE / YPEKA	Approved	04/05/2013
11.	Study for the Environmental Licensing of the Construction and Operation of the toll stations in Athens – Thessaloniki N.R., in the subsection Roditsa I/C end – Agia Marina I/C beginning of Lamia – Raches section, in Agia Paraskevi and Mavromantila I/C. (File pursuant to article 13 of the JMD 11014/703/Φ104/2003)	4049/08.10.2009	JMD 195214/11.01.2011	Approved	02.05.2013
12.	Study for the Environmental Licensing of the Construction	4049/08.10.2009	121667/08.02.2010 EYPE / YPEKA	Approved	30/05/2016



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No	Design Title	Submission J/V Ref. No	Decision of Approval	Observations	Expiration Date
	<p>and Operation of the toll stations in Athens – Thessaloniki N.R., in the subsection of Agia Marina I/C beginning, Stylida –Raches I/C of Skarfia - Raches section, in the locations of Agia Marina I/C, Stylida and Stylida I/C – Karavomilos.</p> <p>(File pursuant to article 13 of the JMD 11014/703/Φ104/2003)</p>				

4.1.3 Special Designs

In the context of the implementation of the environmental terms and rational management of the environment, the following special designs have been prepared during the first semester of 2011.

- Final Design of Landscaping configuration, Irrigation and Environment Rehabilitation for the section of the Motorway from CH. 43+200 to CH.57+550
- Final Design of Landscaping configuration and irrigation of the surrounding area of the buildings in Sofades MSS
- Risk Assessment Study of the reservoir of Smokovo

4.2 ANTIQUITIES

The Constructional Joint Venture is in direct communication with the competent archaeological services. Based on the Concession Agreement and the

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Design/Construction Agreement, the J/V is responsible for performing trial archaeological cuts following the competent authority's instructions.

The following table (table 4.2-1) presents in detail the up-to 25/6/2011 situation performed in the reserved areas.

(view Table) Areas blocked due to Archaeology

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ΠΙΝΑΚΑΣ ΔΕΣΜΕΥΜΕΝΩΝ ΠΕΡΙΟΧΩΝ ΑΠΟ ΤΗΝ ΑΡΧΑΙΟΛΟΓΙΑ / AREAS BLOCKED DUE TO ARCHAEOLOGY					
A/A	Αρχή/Start	Τέλος/Finish	Δεσμεύθηκε/Blocked on	Αποδόθηκε/Free on	Παρατηρήσεις / Remarks
1N.2	14+200	14+540	23/6/2010		Με επιστολή της 24ης ΕΒΑ, αρ. πρωτ. 3373 / 23-06-2010, ζητήθηκε διακοπή εργασιών από την Χ.Θ. 14+200 - 14+540 λόγω ανεύρεσης αρχαιοτήτων. The 24th Arch. Service asked for stop of works in ch. 14+200-14+540 due to findings through letter 3373 / 23-06-2010
	14+200		7/3/2009		Διακοπή αρχαιολογικών εργασιών μετά της 06/12/2010 στην Χ.Θ. 14+200 λόγω λήξης των συμβάσεων του αντιστοίχου προσωπικού. Επανεκκίνηση αρχαιολογικών ανασκαφών στη θέση 14+200 – 14+540 από της 14/03/2011. Suspension of archaeological works after 06/12/2010 due to expiration of archaeological personnel's contracts. Recommencement of archaeological excavations at 14+200 – 14+540 after 14/03/2011
2N.1	25+954	26+250	3/6/2010		Με επιστολή της 14 ΕΠ&ΚΑ, αρ. πρωτ. 3774 / 03-06-2010, ζητήθηκε διακοπή εργασιών από την Χ.Θ. 25+954 - 26+250 λόγω ανεύρεσης αρχαιοτήτων. The 14th Arch. Service asked for stop of works in ch. 25+954 - 26+250 due to findings through letter 3774 / 03-06-2010.
4N	55+670	55+770	28/8/2010		Έχει δεσμευτεί το τμήμα από Χ.Θ 55+670-55+770. Επιφάνεια περικούς= 4868 m ² /Still blocked section ch. 55+670-55+770 Section Area=4868 m2
	56+020	56+180	29/10/2010		Παραμένει Δεσμευμένο το τμήμα από Χ.Θ 556+020-56+180. Still blocked section ch. 556+020-56+180
5N	63+319	64+915	20/9/2009		ΔΕΣΜΕΥΣΗ ΠΕΡΙΟΧΗΣ ΑΠΟ ΛΑ ΕΦΟΡΙΑ ΠΡΟΚΛΑΣΙΚΩΝ & ΚΛΑΣΙΚΩΝ ΑΡΧΑΙΟΤΗΤΩΝ ΣΤΗ Χ.Θ. 63+940 - 64+915 (από 24/9/09) - ΑΠΟΔΕΣΜΕΥΣΗ ΤΙΜΗΜΑΤΟΣ ΜΕ ΕΓΓΡΑΦΟ/ΑΡ. ΠΡΩΤ. 2751) ΑΠΟ ΛΑ ΕΦΟΡΙΑ ΠΡΟΚΛΑΣΙΚΩΝ & ΚΛΑΣΙΚΩΝ ΑΡΧΑΙΟΤΗΤΩΝ ΣΤΗ Χ.Θ. 64+120 - 64+280 (από 19/08/10).
	67+896,50	68+140	2/11/2009		Β)ΔΕΣΜΕΥΣΗ ΠΕΡΙΟΧΗΣ ΑΠΟ ΛΑ ΕΦΟΡΙΑ ΠΡΟΚΛΑΣΙΚΩΝ & ΚΛΑΣΙΚΩΝ ΑΡΧΑΙΟΤΗΤΩΝ ΣΤΗ Χ.Θ. 63+319 - 63+399, Χ.Θ. 64+100 - 64+290 & Χ.Θ. 64+320 - 64+540(ΑΡ. ΠΡΩΤ. 3899/1-10-09)
	68+507,15	68+623,46	4/10/2009		ΔΕΣΜΕΥΣΗ ΠΕΡΙΟΧΗΣ ΑΠΟ ΛΑ ΕΦΟΡΙΑ ΠΡΟΚΛΑΣΙΚΩΝ & ΚΛΑΣΙΚΩΝ ΑΡΧΑΙΟΤΗΤΩΝ ΣΤΗ Χ.Θ. 67+900 - 68+140 & Χ.Θ 68+510-68+621(ΑΡ. ΠΡΩΤ. 4841/27-11-09)
	73+925,00	73+950,00	19/3/2010		/ Still Blocked (ΠΕΡΙΟΧΗ / AREA B.C. H015)
	78+191,00	78+210,00	8/12/2009		Παραμένει Δεσμευμένο / Still Blocked
6N.2	95+391,74	95+457,87	1/10/2009		Παραμένει Δεσμευμένο / Still Blocked
7N.1	99+350,22	99+371,03	22/10/2009		Παραμένει Δεσμευμένο / Still Blocked
8N	116+660	117+260	10/6/2010		Το τμήμα/section 116+660-116+870 & 116+980-117+260 αποδεσμεύτηκε/unblocked στις/ον 26-08-2010.
	113+340	113+440	5/7/2010		Παραμένει Δεσμευμένο το τμήμα/Still blocked section 116+870-116+980.
10N					Παραμένει Δεσμευμένο / Still Blocked
	136+580	136+630	21/7/2010		Παραμένει Δεσμευμένο / Still Blocked



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4.3 ENVIRONMENTAL MONITORING

4.3.1 Waste Management

All types of waste are being managed based on the requirements of the Greek legislation for the environment and the environmental terms of the project. For the construction of the project, worksites manage waste in accordance with the directives for environmental management, which will be monitored by the Department for the Environment of the Joint Venture, until the completion of the Design - Construction Period.

The following table (table 4.3.1-1) presents the method of waste management which derives from the construction works and other activities.

Table 4.3.1-1:
Waste Disposal Table

Waste / Material Type	Origin	Collection & Storage Method	Managing Agency	Actions
Waste Lubricating Oils - Mineral Oils (ALE)	Project machinery & motor-powered equipment	In barrels within the worksites	Licensed Operator for Alternative Waste Lubricating Oils Management (ELTEPE)	Agreement with ELTEPE
Batteries - Accumulators	Project machinery & equipment	In wooden pallets located at special areas	Licensed Operator for Alternative Management (SYDESIS S.A.)	Agreement with SYDESYS S.A.



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Waste / Material Type	Origin	Collection & Storage Method	Managing Agency	Actions
Vehicle tires	Project vehicles	In safe open areas within the worksite	Licensed Operator for Alternative Management (EKOELASTIKA S.A.)	Agreement with EKOELASTIKA S.A.
Metallic scrap	Project Construction	In safe open areas within the worksite	Any licensed metal collector	Transportation where scrap is produced
Wooden pallets	Procurement of materials for the construction of the project	In open areas within the worksite	Any pallet trader / manufacturer	Transportation
Solid hazardous waste	Equipment maintenance, project construction	In safe special areas within the worksites	Any licensed collector of solid hazardous waste	Agreement with the body for alternative hazardous waste management
Liquid hazardous waste	Equipment maintenance, project construction, material excess	In barrels within the worksites	Any licensed collector of liquid hazardous waste	Agreement with the body for alternative hazardous waste management
Electrical & Electronic Equipment (AHHE)	Worksites, Lighting maintenance	In predefined areas within the worksites	Licensed Operator for Alternative Management (APPLIANCES RECYCLING S.A.)	Agreement with APPLIANCES RECYCLING S.A.
Municipal solid waste	Worksites, offices	In municipal litter bins	The Municipal Authorities	Agreement or cooperation



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Waste / Material Type	Origin	Collection & Storage Method	Managing Agency	Actions
Other solid waste (paper)	Worksites, trial laboratories	In litter bins within the worksites	Any licensed collector of solid non-hazardous waste	Application to Municipalities Working with P.A.DY.TH. SA (Environmental Development of Western Thessaly SA)
Liquid waste	Site Offices	Waterproof cesspits	Any licensed subcontractor	Waterproof cesspits
Liquid waste	Asphalt mix & concrete manufacturing unit	Oil-Dirt collector - settlement tank	Any licensed collector of liquid non-hazardous waste	Agreement with subcontractor

The quantities of waste, which are being ecologically managed within the first semester of 2011 in the framework of the project's construction, shall be presented in the following table (Table 4.3.1-2). It is noted that a part of the produced waste is processed via permanent and legitimate facilities that take part in the construction of the project and that comply with the applicable legislation on waste disposal. Finally, it has to be noted that, due to the reduction of the pace of the works and their suspension from 02/2011, the quantities of waste produced have also been reduced, while - in many cases - facilities and sites of collection and temporary storage of waste (tanks, sedimentation tanks, biological treatment plants of compact type, etc.) have been removed.

Table 4.3.1-2:

Waste Disposal Table

Waste / Material Type	EKA Code	Method of management (quantities in kilos, c.m. pieces, etc.)				Observations
		Recycling	Temporary	Temporary	Permanent	



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		/regeneration	storing	deposit	Disposal/A vailability	
Vehicle tires	16 01 03		Storing on wooden pallets in a specially designed area within worksites			Temporary storing of 162 pieces
Batteries - Accumulators	16 06 01		Storing on wooden pallets in a specially designed area within worksites		221Kg	Temporary storing of 96 (from road signage) and 6 (from mechanicall y-operated) pieces
Waste engine oils, turbine and hydraulic systems	13 01 10, 13 01 11, 13 01 13, 13 01 13, 13 03 07, 13 03 08, 13 03 09, 13 03 10	---	Temporary storing in barrels in specially designed areas within the worksites	---	3.070 Kg	---



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Procedure for receiving used oils from the managing body

(Worksite of Karditsa/Agii Theodori)

4.3.2 Air Pollution

A parameter control plan is applied in order to reduce impact on the community, on the natural environment, etc.

According to the Environmental Impact Assessment (EIA) of the road works, no excess of dust emission limit is expected greater than 20m from the works at all the length of the motorway under construction and worksite areas. However, all necessary measures to reduce dust emission are taken, such as water springing, filter bags etc.

Finally, it has to be noted that, due to the reduction of the construction pace and the suspension of the works (02/2011), the production of gaseous pollutants was significantly reduced, up to zero.

4.3.3 Vibrations

A parameter monitoring plan is under development in order to reduce impact on the community, on traffic, on public utility networks, etc.

So far, and taking into account that the construction works have not progressed, there are no relevant measurements. Up to date, there are no complaints - reminders from the vibrations resulted by the construction of the project.

4.3.4 Noise

The Construction Joint Venture monitors the noise emitted during the entire construction process, in order to ensure compliance with the applicable noise levels provided by the law and in the event of exceeding the limits all required measures are taken.



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By applying our noise emitting monitoring program to a distance of 200m from the point of each construction work, it is possible to compare it with the daily limit of energy noise level (**Leq**), which should not exceed 65 dB(A).

During the period (January - June 2011) of this report, all the construction work have been suspended and were limited to completion of works and settlement of outstanding issues: for the safety of ERGOSE adjacent project (CH. 43+000 – CH. 48+000) for the restoration of the river beds, the restoration of the local traffic. Due to the fact that the points of the construction works were limited and the works were of low intensity, the noise monitoring was limited to few locations.

To record noise during the construction stage, measures were taken during the period from 01/2011 to 04-2011. For this specific period, the sites to which measurements were performed are the following:

- Construction works of T2 exit
- Karditsa I/C restoration works of the existing roads in Karditsa I/C
- Digging works of T3 Phase A'
- Under-pass G006 construction works in Ch. 71+900

The specific measurements feature sampling of noise emissions during the construction works.

The above mentioned measurements record the noise emitted during the operation of the machines at the worksites.

Measurement instruments

For the execution of the noise emission measurements the following instruments were used:

- CASTLE type 2 Integrating precision Echo meter, model GA 216 I, in compliance to IEC61672-1-2002 specifications. Echo meter calibrator CASTLE GA 601.
- Type I Integrating precision Echo meter, in compliance to IEC (1979) and 804 (1985) Type 1, ANSI S1.4-1983 & Draft S 1.43, 6.9.92, Type 1S, and BS 5969:1981 Type 1. Bruel & Kjaer Precision Integrating Sound Level

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Meter Type 2236. Measurements: MaxL, MinL, Peak, SPL, L eq, L N (e.g.L1, L10, L90), SEL, IEL, L EPd. Echometer Calibrator. Lutron SC -64

Noise indices

The aim of noise measurement is to record noise emissions from the construction works in conjunction with the possible points of increased noise, in order to take all noise protection measures required. For the specific aim, at every measurement the Leq noise indices were recorded: Equivalent constant sound level (in compliance to IEC 651) in dB(A).

General characteristics of sound measurements

The time period of the sampling noise measurements was 7-10 min; that is the time required to fully record the noise incident.

The sampling measurements were taken in the perimeter of each work spot and at a distance of 200m (location A1-A4) and 400m (location B1-B4) approximately, or at selected points to which the closest sensitive receiver is located at, during the operation of various types of machines. In some cases, the range of the sample measurements is of some tens of metres. The purpose of these measurements was to record the acoustic environment that includes noise caused by the construction and noise caused by other sources, which may affect adversely the adjacent to the worksite areas and the structure faces there.

Results of the sampling worksites noise emission measurements

During the noise emission measurements smooth atmosphere conditions were observed, whereas no other source of noise was detected with the exception of the usual ambient noise and the worksite sources, except for the worksite of the Karditsa I/C, close to the National Road from Karditsa to Athens.

The average atmosphere conditions during the noise measurements were the following:

- Temperature from 10 to 28° C
- Exposure to sunlight
- Lull - Weak winds



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The results of the measurements are presented in the following tables per section and structure face. The control of the acoustic environment and of the noise emitted by the construction works was limited (few positions) since the works are under suspension from February 2011.

Section S1 : Lamia – Makrihori (CH. 0+000 – CH. 85+800)

CH. 28+550 – CH. 43+200

T2 exit - CH. 30+000									
LOCATION	COORDINATES		DATE	TIME	DURATION (min)	Leq (dB)	L95 (dB)	L10 (dB)	L50 (dB)
	D	Y							
A1	350778,88	4319168,24	19.01.2011	12:29	10:00	66.4	60.5	68.0	64.5

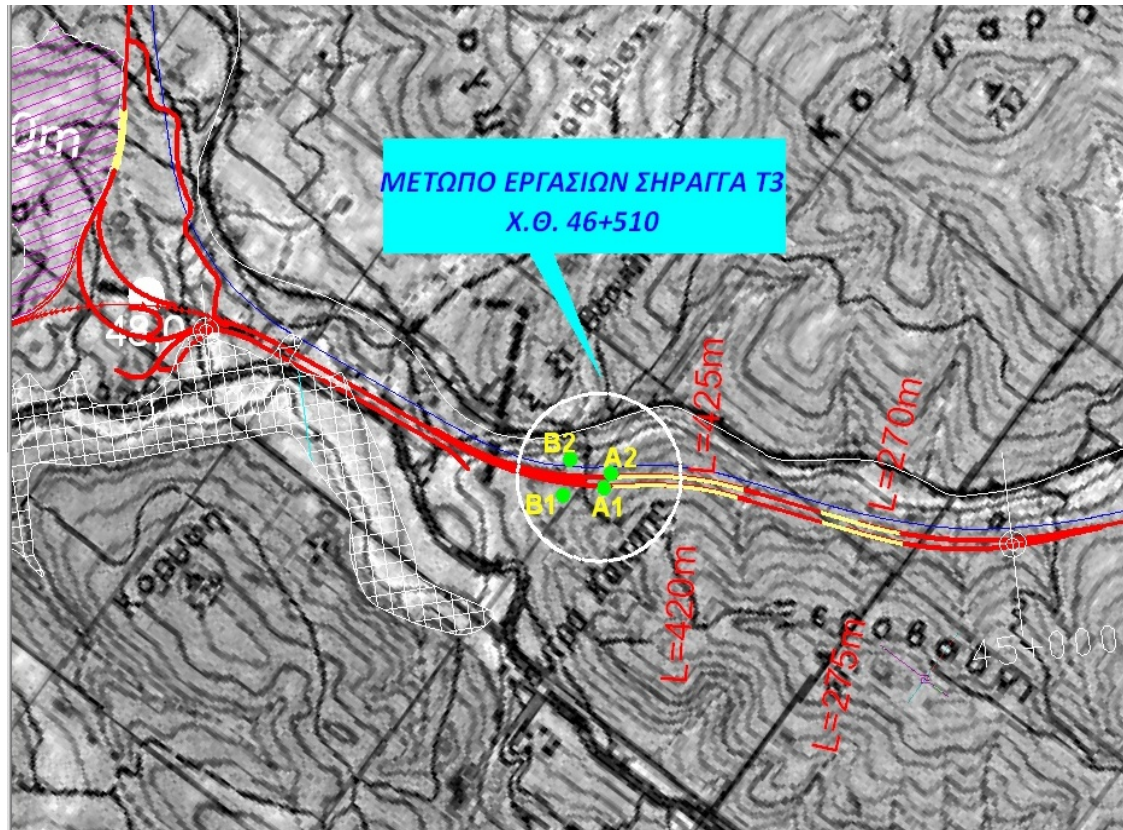
- The location related to point A1 is located within the intervention site, at a distance of approximately 15m from the excavation front of the T2 and with the activities in full development.

CH. 43+200 – CH. 60+500

TUNNEL T3 - CH. 46+510			
MAP POINT	COORDINATES		RESULT (dB)
	X	Y	
A1	341087	4331431	65,2
A2	341120	4331438	69,7
B1	340976	4331532	64,3
B2	341085	4331579	62,5

(MAP)

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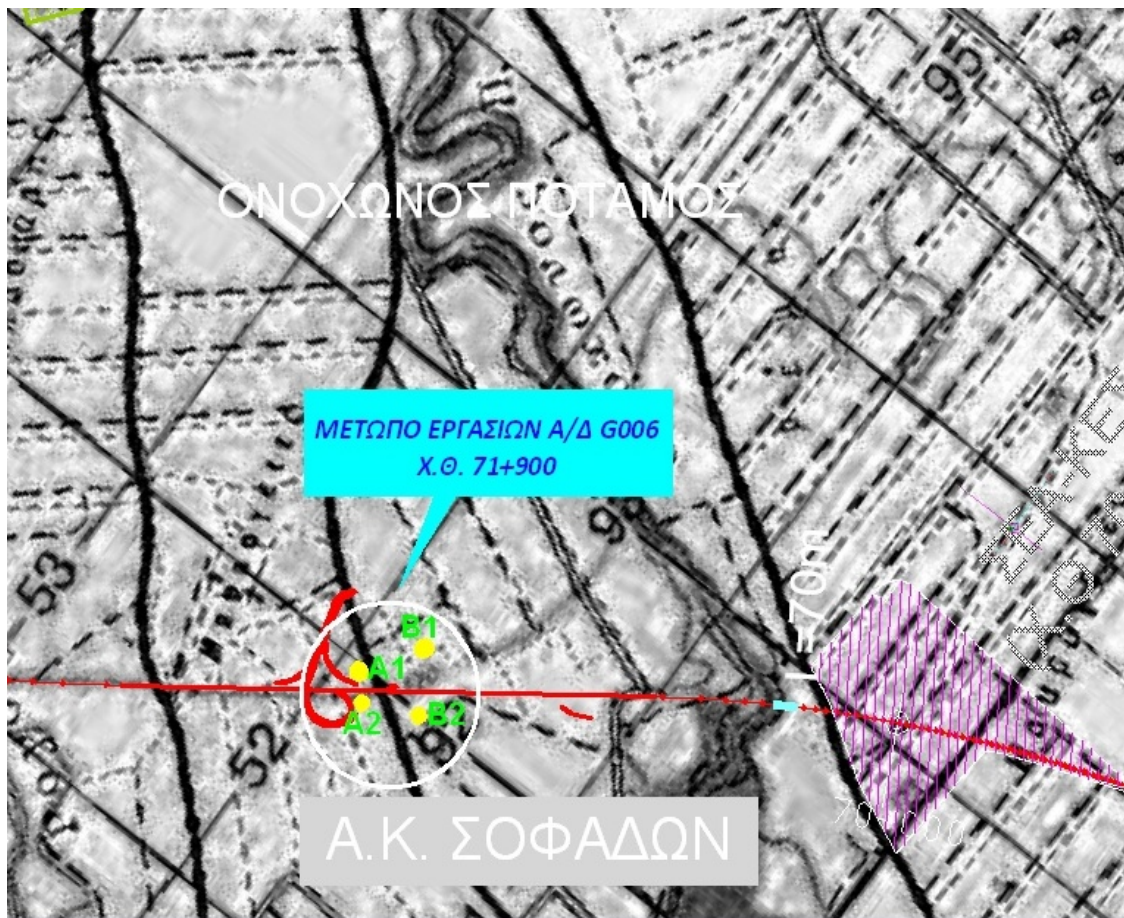
*A1 and A2 points refer to the tunnel construction front and they are very close to the works front (2m approx)

*B1 and B2 points are about 100m. far from the works front

■ In this particular bridge site, there are no disturbance sources.

O/P G006 - CH. 71+900			
MAP POINT	COORDINATES		RESULT (dB)
	X	Y	
A1	333144	4352708	64,9
A2	333062	4352627	65,7
B1	333348	4352552	60,3
B2	333154	4352435	60,9

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*A1 and A2 points refer to the tunnel construction front and they are very close to the works front (2m approx)

*B1 and B2 points are about 100m. far from the works front

┐ In this particular structure face there are not possible disturbance sites.

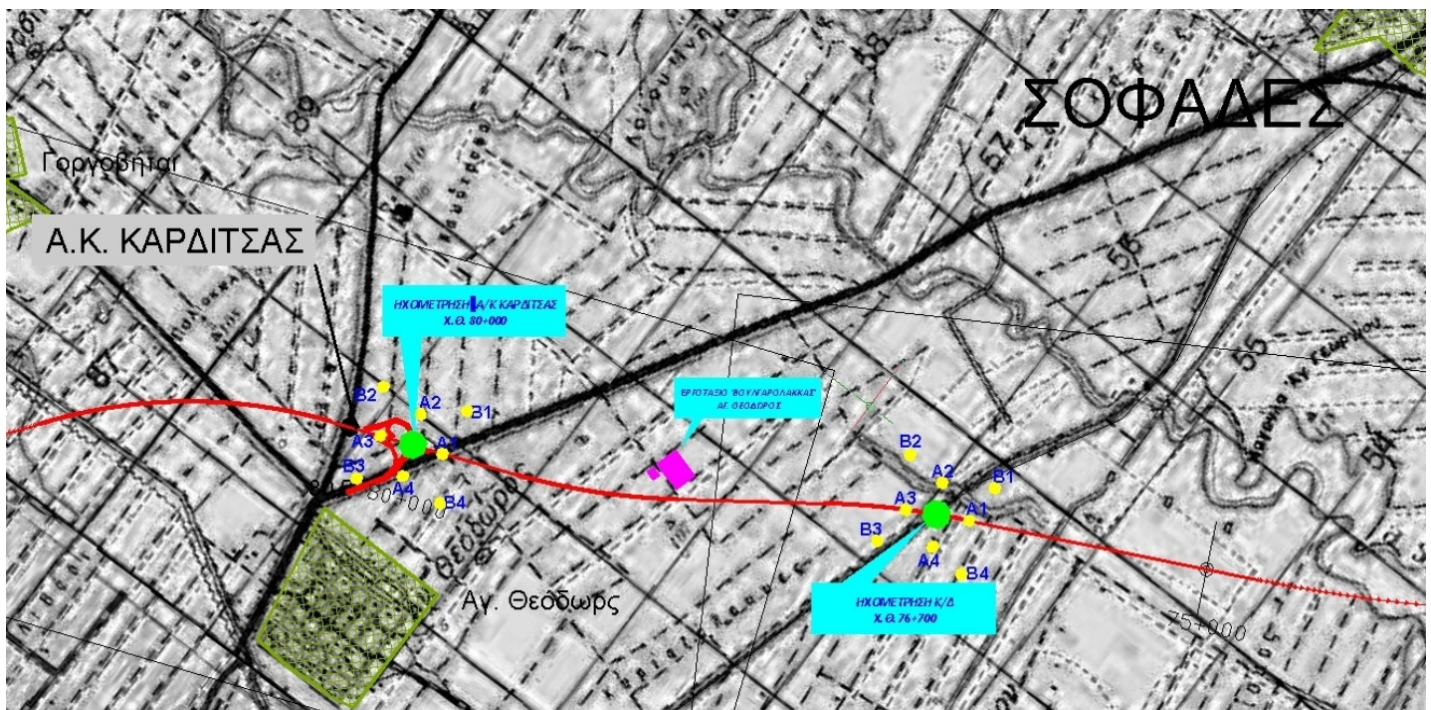
KARDITSA I/C- CH. 80+000			
MAP POINT	COORDINATES		RESULT (dB)
	X	Y	
A1	329288,49	4359458,72	65,2
A2	329405,36	4359716,29	64,5
A3	329147,79	4359833,16	64,2
A4	329030,92	4359575,6	64,2

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KARDITSA I/C - CH. 80+000			
MAP POINT	COORDINATES		RESULT (dB)
	X	Y	
B1	329588,78	4359495,52	61,3
B2	329402,26	4360000,85	61,9
B3	328847,5	4359796,35	58,6
B4	329033,81	4359290,94	60,4

- In this particular worksite, the results of the measurements are affected to a large extent by the traffic noise due to the fact that it is adjacent to the National Road Karditsa - Athens.



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Conclusions

According to the results of the above mentioned measurements, the noise emitted due to various construction works doesn't affect any area close to the works, given that all measurements performed fall within the applicable limits provided by the standing legislative framework, as well as from the Environmental Terms of the project.

The noise measurements will continue throughout the entire construction phase, in order for all required noise protection measures to be taken.

Up to date, there are no complaints - nuisances from the air pollutants resulted by the construction of the project.

Noise Protection Measures

In compliance with the Environmental Terms of the project, the Construction Joint Venture will take additional measures against the noise produced. The specific measures relate to the limitation of nuisance caused to the fauna of Sperchios river area. Namely, the additional measures are:

- The superposition of movable noise barriers at the perimeter of the points of noise-emitting works, (e.g. positioning of pegs)
- The limiting of use of percussion drills, peg positioning equipment, as well as the permit to use explosive materials.
- The determination of movement-specific paths of the vehicles required at the worksite.
- The acceleration of the completion of the works.

4.3.5 Water resources

All measures related to the prevention of pollution - burden to the waters through methods of good worksite practice and their monitoring, under the Program of Environmental Monitoring and Control, are taken. For the specific purpose, holding tanks connected to oil removers have been developed at various worksites aiming to the monitoring of the perimeter at the source of pollution (runoff tanks). PH measurements at the exit of the tank and at its



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confluence to the natural recipient showed that the PH of the waters of the natural recipient remains stable.

At the protection of the water resources framework, specialized risk assessment studies for the treatment of accidental pollution and the avoidance of pollution of ecologically sensitive wetlands of:

- Sperchios river
- Kalentzi river
- Pinios river
- Reservoir of Smokovo

with oils or hazardous substances. During the first semester of 2011 a relevant study has been drawn up for the basin of Smokovos reservoir.

Also, in the protection of the water resources framework during the development of the project phase, a series of measures are taken, featuring the operation of oil removers, settling tanks, biological cleaning, chemical toilets, etc.

PH measurements at the exit of the tanks and its confluence to the natural recipients indicated that the PH of the waters of the natural recipients remains stable.

Furthermore, the use of hazardous substances is limited to the minimum required, as is the case with other substances that may alter the qualitative characteristics of the water sources.

4.3.6 Natural Environment

During the construction, the Construction J/V applies a special monitoring program for wildlife under the Environmental Terms of the Project. The results of the monitoring program are submitted quarterly to the Division of Environmental Planning of YPEKA. In the current semester, the following reports of the program's results have been submitted and they were referring to the periods of:

- May – June – July 2010
- August – September – October – November – December 2010 & January 2011.

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It is noted that the monitoring program includes:

- A) The preparation of a new program by the J/V – E-65 (Contractor: NGO Callisto) during 2009 – 2010, for E-65 from CH. 43+000 – CH. 60+000 and
- B) Update of the proposals which had been expressed for E-65 from CH. 20+000 to CH. 47+000 approximately, in the framework of the “Monitoring Program of the wolf and the big mammals”, drawn up on 2005 - 2006 by ERGOSE for the project of the New rail line between Lianokladi RS - Domokos RS (Contractor: D. Argyropoulos, SSE EPE, GAMMA4 EPE and G. Giannatos with Callisto NGO as a special partner), due to the proximity of the two projects and their synergistic consequences. The update of the proposals for CH. 20+000 to CH. 43+000 was based on the data of ERGOSE program (2005 - 2006) as well on the new data (works and methods of field, results – analysis, literature reviews) resulted by the preparation of the E-65 J/V (2009 - 2010) program. Also, the monitoring program takes into consideration the data resulted by the preparation of corresponding programs in the broader area. Particularly in the north part of the area of the project, a relevant monitoring program of the wildlife has been developed (first phase) under Egnatia Odos SA responsibility. It has to be noted that the works in the north part of the project area didn't start yet, since the section is under suspension following the temporary order on behalf of the Council of State. The ultimate goal of the above is the most comprehensive handling of the effects caused by the large infrastructure projects in the ecosystem (fauna) of the project area. Two most recognized non-governmental organizations, Arcturus and Callisto are also involved in the overall effort. The construction J/V has suspended the aforementioned programs, as part of the suspension of the works.