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AUTHORIZATION OF THE ASSESSMENT

OF THE IMPACTS OF THE EXPORT OF

YUNUS EMRE POWER PLANT

ON THE ENVIRONMENT IN THE FINAL DESTINATION COUNTRY - TURKEY

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Introduction

The subject of the authorization is EIA Report "Yunus Emre Power Plant (Mining Areas, Limestone Areas and Ash Storage Areas Providing Fuel to the Plant are included)" (further referred to as the assessment), elaborated by the ÇINAR MÜHENDISLIK MÜŞAVIRLIK VE PROJECT HIZMETLERI LTD. ŞTI. Company in September 2008. The authorization is based on the contract for work concluded between the companies Ferrit s.r.o. (client) and Regionální centrum EIA s.r.o. (contractor) on 18.8. 2009, registered under No. 29011 by the contractor.

According to the information obtained from the client, the Turkish customer – the Adularya Company – has been preparing the project in question for more than 3 years. The selection of suitable suppliers and optimum funding of the project formed a significant part of the preparation. During the preparation, the company obtained all necessary licenses, permissions and assessments. The documents were intended for the suggested power plant output of **2x135 MW** (calculations of return of investments, estimated investment costs, power consumption calculation, **assessments including EIA**, supporting documents for the obtaining of licenses and permissions).

In the final decision procedure, the company BTG Slovakia, a.s. was selected as the EPC contractor for the power plant and the mutual contract (based upon previous technical pre-contract negotiations) determined the power output of **2x145 MW** to be the most suitable output of a steam turbine for the project in question.

The difference between the power output of 2x135 MW, mentioned in the EIA assessment, and the power output of 2x145 MW, representing the actual parameters of the planned power plant, is not essential. We also do not expect any significant change in the influence on individual components of the environment. If this expectation is not confirmed in the course of further preparation of the project, we recommend elaborating a new assessment of environmental effects based upon the current power plant output, consumption of coal and other raw materials. This recommendation results mainly from today's level of air pollution in the assessed area, which is close to limit values.

The purpose of the authorization is to assess the accordance of the assessment with the requirements of the EGAP General Manager's Directive No. 130/2002, determining the evaluation procedure for the influence of export on the environment. If any discrepancies are found, the authorization should suggest a procedure for the necessary completion of the assessment, whose positive conclusion is a prerequisite for the conclusion of an insurance contract for the export being assessed.

The assessment has been elaborated in compliance with the regulations of the World Bank and the environment protection regulations applicable in the final destination country.

I. Basic characteristics of the project

The project assessed concerns the **building of the Yunus Emre coal-fired power plant with a power output of 2x145 MW,** whose main parts will include the following**:**

- **technology of fluidized combustion of coal**
- **steam generator**
- **cooling system**
- **chemical water treatment**
- **coal mine delivering fuel**
- **fly ash deposition area and**

- **auxiliary operations for fuel preparation, limestone preparation, water treatment, fly ash removal, and control systems.**

The planned operation time of the power plant equipment is 8000 hours/year. The estimated service life of the equipment is 35 years. A power plant with a power output of 290 electrical MW, i.e. 715 thermal MW, will supply 2088 GWh/year on average.

The approximate consumption of coal from local resources will be 311.7 t/hour; the consumption of limestone will be about 163.44 t/hour. The average calorific value of the coal used is 2400 kcal/kg.

The building of a new coal-fired power plant is motivated by Turkey's economic and social development goals. These also include every year's doubling of electricity production. As a country with quickly developing industry, what Turkey needs the most today is permanently available, high-quality, safe and economical energy. This is why the Yunus Emre power plant, which will use local coal deposits, is planned.

This chapter evaluates the completeness and correctness of the assessment as regards the information recommended in points 2. and 3. of document "Annex II Environmental Impact Assessment Report" (OECD, 2007). The submitted "EIA Report" contains this information in "CHAPTER 1. PROJECT DEFINITION AND PURPOSE".

Evaluation:

The assessment submitted contains the required information and complies with current legislation and recommended procedures.

II. Information on inputs in terms of the environment

This chapter evaluates the completeness and correctness of the assessment as regards the information recommended in point 3. of document "Annex II Environmental Impact Assessment Report" (OECD, 2007). The submitted assessment contains this information in "CHAPTER IV: DESIGNATION OF THE AREA WHICH WILL BE AFFECTED BY THE PROJECT AND CLARIFICATION OF ENVIRONMENTAL PROPERTIES IN THIS AREA".

Land

The following table lists the planned area size requirements of the main equipment complexes and building objects. The objects will be located on agricultural land. Forest land will not be affected by the construction. The planned project area does not include protected or sensitive areas as delimitated by current legislation.

Table 1 – Land requirements

	Land required in m^2
Yunus Emre Power Plant	181,310
Fly ash deposit area	249,550
Artificial lake	521,000
Excavated soil stockpile	620,700
Total	**1,572,560**

Evaluation:

The table lists land requirements data. The assessment contains further detailed information on allocation of land in the assessed area, its use, crop plants, etc. The level of details and the quality of contained information are fully sufficient for the assessment of the expected influences.

Water

During the construction period, water will be used for the spraying of surfaces to reduce dustiness and also as drinking water for workers preparing the area and building the power plant including all related buildings.

800 people will work at the construction of the power plant; the average water consumption will be 150 l/person.

800x150 = 120,000 l = 120 m^3/day.

For spraying of surfaces - ca. 50 m^3/day.

200 people will work at the preparation and construction of the coal mine and artificial water reservoir, i.e. 30 m^3/day.

During the **operation period**, water will be used for sanitary purposes for 1,300 employees,

i.e. 195 m^3/day.
The equipment requirements (cooling water and water for steam production) will be 600 m^3/hour

Water for the employees will be supplied from existing or new wells. Water for spraying will be taken from the waste water treatment plant and water for the equipment will be taken mostly from the existing Sariyar Hasan Polatkan Dam; less than one third will be supplied from underground resources.

Evaluation:

The assessment contains a calculation of expected water consumption during the preparation and construction periods (chapter V.1.5.). Water consumption during operation of the plant is analyzed in detail in chapter V.2.5.

According to the description of local hydrological (the nearness of big dams on rivers) and hydrogeological conditions, no problems with the covering of the required consumption are expected (the average flow rate of the Sakarya River at the Sariyar Hasan Polatkan Dam reaches several tens of m^3/s, which is more than 2 decimal points higher than the expected water consumption).

Rock environment and natural resources

Considerable mining volumes and transfers of earth materials and construction materials are connected with the construction of the objects in question.

Table 2 – Projected balance of earthwork

Building object name	**Excavated earth volume in m^3**
Yunus Emre Power Plant	200,000
Belt conveyors for coal	2,286
Cooling water pipes	22,500
Fly ash deposit area	249,550

Artificial lake	12,000,000
Total	**12,474,336**

The annual coal consumption requirement – 2,493,600 t – will be extracted from the underground mine and transported to the power plant on a belt conveyor.

Limestone at a volume of 163.44 t/hour, i.e. 1,307,520 t/year, will be produced in 5 quarries located 4-6 km away from the power plant. It will be transported in canvas trucks.

Water and light fuel oil (auxiliary fuel) are listed as auxiliary raw materials.

Construction materials (such as sand, cement, iron, etc.) necessary for the construction of individual objects are not described in the assessment.

Evaluation:

The assessment contains a sufficiently detailed description of the issues of mining and transport of earth from excavations. There is also a calculation of expected secondary emissions (raised dust) from individual operations.

The amount and method of transport of construction materials should be specified in the next stage of preparation.

III. Information on outputs into the environment

This chapter evaluates the completeness and correctness of the assessment as regards the information recommended in points 3. and 5. of document "Annex II Environmental Impact Assessment Report" (OECD, 2007). The submitted assessment contains this information in chapter "IV.2.6. IDENTIFICATION OF AREAS CURRENT POLLUTION CHARGE" and chapter "V.: EFFECTS OF THE PROJECT ON THE AREA DEFINED IN CHAPTER IV AND CAUTIONS TO BE TAKEN".

In the preparation stage, the impacts of the project will consist only in the occupancy of land and related social influences and effects on the ecosystems; no outputs into the environment are expected.

Type and amount of solid waste

The daily amount of municipal waste produced by workers in the **construction stage** is estimated at approximately 1.34 kg/working day. This will make about 1340 kg/day with the planned number of 1000 people. All waste produced should be recycled or reused.

Repairs and maintenance of vehicles will be performed in service centers. Disposal of waste contamined by oil materials will be done in authorized facilities.

In **operation**, 2 types of fly ash will originate during coal combustion. Flying ash will form about 70 %, whereas the remaining 30 % will be formed by bottom ash. This corresponds to approx. 51 t/hour of flying ash and 21 t/hour of bottom ash.

Sediments from the waste water cleaning plant will be treated and stored with 65 % water content as required by law.

Recyclable waste (paper, plastic, etc.) and non-recyclable waste (food leftovers, organic waste) from the operation will be collected in separate sealed containers and handed over to certified companies or disposed of at a dumping place.

Packages classified as dangerous waste will be also handed over to a certified company for disposal and transported in approved vehicles.

Evaluation:

The assessment contains a detailed description of the expected types of waste and their disposal methods. The suggested procedures comply with current environment protection laws. The assessment does not contain the information on the amounts of some types of waste. We suppose them to be specified in the next project preparation stage.

Emissions into water

The information on the composition and draining of municipal waste water **in the construction stage** are listed in chapter V.1.5.; quality-related parameters are listed in a synoptic table.

The information on the amount of waste water from all equipment complexes as well as other objects **during operation** are listed in chapter V.2.7. in the necessary scope and quality. There are data related to both sanitary and equipment waste water. The data are sorted for the thermal power plant and for the mine.

Mine water will be treated in a sludge basin and further used for the cooling of bad ash/bottom ash or mixed with the remaining drained waste water. Rinse water from the cleaning of the internal parts of water distribution pipes will be cleaned and checked for quality and then used for sprinklers and spraying or drained together with other waste water. From waste water from the production of demineralised water the contained salts will be precipitated, the water will be neutralized and then drained together with other waste water. Oiled water from equipment maintenance will be led to an oil separator, checked for quality, and then drained together with other waste water. The Bük River is suggested to be the target water body for all drained waste water.

The quality of waste water drained into target water bodies will be monitored and it will satisfy the emission limits according to the Regulation on Prevention of Water Pollution Table 21.1 Discharge Standards (Turkish national legislation), which is not significantly different from similar emission limits valid in the EU countries.

Evaluation:

Generally, it can be said that the information about the production and draining of waste water contained in the EIA assessment are satisfactory for the evaluation of expected influences on the environment.

Emissions into air

Emissions into air (mass flows) **in the construction stage** are specified in the assessment for suspended particles released during the following activities:

excavation work in the area of construction of the plant	0.12 kg/hour
transport of excavated earth from the construction area	1.00 kg/hour
excavation work for the coal conveyor	0.01 kg/hour
construction of the cooling water feeder	0.26 kg/hour
ground shaping for the fly ash deposit area	0.86 kg/hour

transport of excavated earth from the fly ash deposit area	5.15 kg/hour
preparation for coal mining – loading and unloading of earth	0.37 kg/hour
preparation for coal mining – transport of earth	0.42 kg/hour
preparation for coal mining – shaping of the stockpile	0.79 kg/hour
water reservoir construction – excavation and loading of earth	52.61 kg/hour
water reservoir construction – transport of earth	45.50 kg/hour
water reservoir construction – unloading of earth	15.03 kg/hour
water reservoir construction – storage of earth on the stockpile	0.01 kg/hour

For the operation stage, the assessment lists emissions from motors of loaders containing reservoirs of raw materials, from backup electric generators, from the combustion process in the power plant, from the fly ash and coal storage areas in the power plant premises, from the mining, loading, transport, unloading, and treatment of limestone. Mass flows from combustion processes (main operational air emissions) were specified based on current local emission limits which correspond to the European legislation in the IPPC area. They are documented in the following table.

Table 3 – Mass flows from combustion processes

Pollutant	**Mass flow (kg/hour)**
SO_2	202.05
NO_x (expressed as NO_2)	202.05
PM	30.30
CO	202.05
HCl	30.30
HF	3.03

Evaluation:

The estimation of the amount of emission is satisfactory. The information contained in the assessment is sufficient for the evaluation of the effects on air pollution.

Emissions of noise and vibration

Noise load connected with the project in question is analyzed in sufficient detail and all necessary model calculations for both the **construction and operation stage** are included in "Acoustic report" (Appendix No. 18 of the Assessment, divided into parts 18/1 – Coal-fired power plant and 18/2 Limestone quarry). The worst possible (theoretical) scenario for the construction stage is also assessed – all noise sources are in operation in one place at one time.

The assessment of influences on the environment also included a measuring of the existing background. A total of 9 measuring points were selected. The permissible noise level was exceeded in one case only.

18/1 – Coal-fired power plant

According to the calculations including the worst possible scenario (which is impossible to occur in practice), no noise limit values are expected to be exceeded during construction work. The noise level sinks below the limit value of 70 dB as close as 200 m from the sources at the construction site.

For the evaluation of expected noise intensity during operation, measured noise values of individual noise and vibration sources were used. The nearest residential zone is in the village of Koyunagli,

which is about 1500 m away from the site. According to calculations, the noise level in this residential area should not exceed 42.2 dBA, which will not cause any inconvenience in the area.

18/2 Limestone quarry

The quarry will be operated only in the day time. The limit value of 70 dB will be fulfilled at a distance of 300 m. The nearest residential zone - Beyköy Village - is about 3500 m away. Therefore, no inconvenience caused to local residents due to noise from limestone mining is expected.

Evaluation:

It can be expected, mainly due to the distance of residential areas from individual noise sources, that noise and vibrations during construction and operation of the equipment will not reach such values that would have any significant adverse effects on human health or well-being. A number of sufficiently efficient measures are planned for noise elimination.

IV. Information on the current condition of the environment in the area of the project

The information evaluated in this chapter corresponds to point 4. "Annex II Environmental Impact Assessment Report" (OECD, 2007). The assessment contains the information in "CHAPTER II: LOCATION OF THE PROJECT AREA" and "CHAPTER IV: DESIGNATION OF THE AREA WHICH WILL BE AFFECTED BY THE PROJECT AND CLARIFICATION OF ENVIRONMENTAL PROPERTIES IN THIS AREA".

Geographic conditions

The assessed area for the building of a coal-fired power plant is located in the central part of Turkey, west from the capital, Ankara. Exact coordinates of the lots for individual complexes – power plant, coal mine, limestone quarry – are listed in chapter II.

Distances from the nearest residential areas are analyzed in great detail. The information is supplemented with maps and photographs of the localities.

Pedological and geological conditions

They are described in great detail and documented with graphic appendixes and detailed tables. A total of 20 pages include all information necessary for the assessment of the suitability of the construction of the complexes and of possible environmental impacts. The chapter also contains information regarding the risk of earthquake in the assessed area. Detailed studies form an appendix to the assessment.

Hydrogeological conditions

They are described in chapter IV.2.3. The table lists underground water levels (3-16 m under ground level). The hydrogeological properties of individual geological units are described in terms of the assessed area as well as the whole district.

Hydrological conditions

The project area is located in the Sakarya basin, which is significant for Turkey as regards water content. The most important currently used surface water sources in the vicinity of the area include the Bük River, Sakarya and the Saryar Hasan Polatkan Dam. The assessment contains documentation of analyses of the quality of surface water in the Saryar Hasan Polatkan Dam, which is suggested as the main supply water source. The water is strongly alkaline and strongly eutrophicated (increased concentration of nitrogen substances and phosphorus), with a slightly raised content of sulphates and phenols.

The current underground and surface water reserves are sufficient for the project.

Climate and air quality

Records of the Regional Weather Station from the years 1975-2006 were used to describe the climatic conditions. The description includes the characteristics of local climate, temperatures during the year, rainfall, humidity, atmospheric pressure, etc. Data from the wind rose are listed in the form of tables and synoptic diagrams and the occurrence of days with inversion weather is described.

Noise and vibration

In order to evaluate noise background, measuring of the current conditions was performed in 9 selected points. The results of the measurement are listed in table IV.2.16.5.1. and they show that no exceeding of current limits is expected, except for one point (G8). The construction site is in sufficient distance from the nearest residential areas.

The measurement of vibrations did not show any exceeding of limit values according to TCVN 7210: 2002 in any of the monitored points.

Mineral resources and natural resources

In chapter IV.2.13, individual resources of mineral raw materials and solid fuels in the province of Eskisehir are described. Listed are the name of the deposit, richness of the metal, raw material etc., and the estimated reserve in tonnes.

Fauna and flora

Chapter IV.2.12. lists a detailed analysis of the flora and fauna in the project area. A specialized study was processed in terms of EIA; its findings are presented on more than 20 pages of the assessment.

Evaluation of part III as a whole:

The individual chapters have been elaborated in great detail and with high quality. They provide the information necessary for further evaluation. We do not have any remarks on this part.

V. Evaluation of environmental impacts

The information evaluated in this chapter correspond to point 5. “Annex II Environmental Impact Assessment Report” (OECD, 2007). The assessment contains the information in “CHAPTER V: EFFECTS OF THE PROJECT ON THE AREA DEFINED IN CHAPTER IV AND CAUTIONS TO BE TAKEN”.

Impacts on soil

The planned occupancy of land by the main equipment complexes and building objects is one of the significant negative impacts of the project. The objects will be located on agricultural land. Forest land will not be affected by the construction. The planned project area does not include protected or sensitive areas as delimitated by current legislation. Some moderation measures are suggested to eliminate the above-mentioned impacts.

Table 4 – Land requirement

	Land required in m^2
Yunus Emre Power Plant	181,310
Fly ash deposit area	249,550
Artificial lake	521,000
Excavated soil stockpile	620,700
Total	**1,572,560**

Impacts on water

The impacts on underground and surface water and the measures for their limitation are briefly described in chapter V.2.22. Special attention is given to the risk of increased water acidity caused by acid rains in the vicinity of the thermal plant. Based on the evaluation of surface water analyses, the sensitivity of surface water to acidification is expected to be of little importance.

Similarly, no significant impacts are expected on underground water. If there is any mine water, the waste water will be used for the spraying of the fly ash deposit area.

The Bük River is suggested to be the target water body for all cleaned waste water. It cannot be seen from the assessment if it is a river with all-year surface flow. Mentioned is only a flow value of 40 l/s, which, however, was obtained in a single measurement on 20 April 2008. It is also stated that, similarly to other rivers in the locality, the flow rate is strongly dependent on rainfall and related overland flow. The solution would not be suitable if the flow in the stream bed was under the surface only for a certain period of the year (a possibility of sediments from residual impurities – incrustation of inorganic salts; a possibility of bacterial contamination and bad smell caused by residual contamination of waste water). We recommend for the next preparation stage to declare the year-round flow capacity of the stream bed at the point of the planned drainage of waste water, or to suggest draining using soakage.

Impacts on air

The amount of emissions is defined in a satisfactory way. The results of modelling show significant effects on the air during construction due to suspended particles, especially during the construction of the water reservoir. The results of the modelling of dustiness are probably over-valuated as the modelling did not take into account the spraying of excavated earth, which is considered a necessary measure for the construction period. Nevertheless, this approach is correct as it observes the precaution principle (modelling of the worst possible scenario). It will be possible to efficiently reduce actual dust emissions if service water is provided for the purpose.

The impacts on the air **during operation**, based on the modelling performed in terms of the assessment, can be designated as significant but acceptable due to the location of the project.

The height of the chimney was determined using nomograms. The originally suggested height of 50 m was changed to 180 m in order to reduce impacts on the air. We appreciate this approach as the original height of 50 m according to nomograms is definitely insufficient for the project. The usual heights of chimneys for similar objects in the EU countries are about 200 m. However, the method for determining the height of 180 m is not documented in the assessment; the difference between a 50 m and a 180 m chimney should be documented with a model calculation of dispersion in the atmosphere.

The immission situation for both the construction and the operation period was evaluated using mathematical model ISCST3 in a model area of 18x18 km. Dust fall was also evaluated. The methods used ensure sufficient significance of results, necessary for the evaluation of immission impacts of the project. The expected immission concentrations do not exceed the immission limits valid in Turkey. According to the model calculation, the values during the construction period may reach up to twice the 24-hour concentration limits. However, with regard to the above-mentioned great overvaluation of the emissions, we do not expect any exceeding of limit values if reasonable measures are taken for the reduction of dustiness (spraying of surfaces). The limits are determined for total suspended particles PM; in the EU countries, the PM_{10} value is limited. If the estimated PM_{10} share in PM during earthwork is about 40-60%, the limit of 100 ug/m^3 PM in the final destination country is approximately equal to the level used in the EU.

The impacts of the project during the construction period are therefore acceptable.

For the purpose of evaluation of the operation's impacts on the immission situation, immission limits are defined as "Long Term" (LTBL) and "Short Term" (STBL) values, i.e. as an arithmetic mean of all measured values and the 95th percentile of the measured values. Listed are both the currently valid transition values of the limits and the target values valid from 1 January 2019. The target immission limits are the same as or similar to the limit concentrations valid in the EU countries. They are documented by the following table.

Table 5 – Target immission limits

	Transition period (today)		**From 1 January 2019**	
Pollutant	**Immission limit STBL ($\mu g/m^3$)**	**Immission limit LTBL ($\mu g/m^3$)**	**Immission limit STBL ($\mu g/m^3$)**	**Immission limit LTBL ($\mu g/m^3$)**
SO_2	400	150	125	20
NO_x (expressed as NO_2)	300	100	200	40
PM	300	150	50	40
CO	30000	10000	10000	-

It is not evident from the assessment why there are not identical immission limit values for dust for the construction and operation periods. During the operation of the power plant, the target 24-hour concentration limits will be exceeded; however, the number of exceedings per year will be smaller than the permissible number defined by current legislation (a maximum of 35 exceedings per year is allowed, whereas the model calculation shows 27 exceedings per year).

With regard to the suggested method of reducing emissions, the share of PM_{10} in PM will be between 95 - 100 %. **An important insufficiency** of the assessment is the fact that background immission concentrations have not been taken into account, even if the current dust immission concentrations are significant (see the assessment, Table IV.2.16.1.2.). With the mentioned high immission contribution, which is alone near the limit value, it can be expected that **the target immission limits defined for PM will be exceeded in the most affected area after the power plant starts its operation. Because of this fact, dust emission reduction equipment must be intensified in further stages of project preparation.** The updated dispersion study with the current level of dustiness in the area included in the calculation should be used as a supporting document for the designing of the dust reduction level.

Since the designed equipment uses coal combustion, the dispersion study must be supplemented with heavy metals, especially those toxicologically significant (As, Cd, Hg, Ni, Zn). Background values must be also taken into account, as was the case with dust. We recommend adding this in further project preparation stages.

Impacts on noise condition, vibration

The assessment of expected noise impacts was performed in compliance with the requirements of current Turkish legislation. The technical means used are also fully satisfactory.

It can be expected, mainly due to the distance of residential areas from individual noise sources, that noise and vibrations during construction and operation of the equipment will not reach limit values. A number of efficient measures are planned for noise elimination. Based on all performed measurements, modelling, and experience with similar noise sources, the impacts of noise and vibrations in the project are not expected to be significant.

Impacts on residents

The assessment contains information on the influences of expected risky and dangerous activities on human health (V.2.26). Emissions in the air are supposed to be the factor with the most significant health effects. SO_2 and NO_x have been identified as the most important air pollution parameters. The results of the dispersion study show that the pollution values caused by the operation of the plant will not exceed their respective limit values. However, as previously mentioned in the air impacts chapter, the model did not include the existing background.

We recommend conducting an evaluation of health risks for affected residents resulting from air pollution and noise, e.g. using the US EPA methods. We also recommend including the updated dispersion study among the supporting documents for evaluation.

VI. Definite final evaluation of acceptability or non-acceptability of the project's environmental impact

Table 6 – Final evaluation

Environment component	Evaluation	Recommendation
Soil	conditionally satisfactory	Implement the measures suggested in the assessment; minimize permanent land occupancy
Water	conditionally satisfactory	depending on the all-year flow rate of the Bük River; suggest a suitable waste water drainage method, e.g. using soakage
Air	conditionally satisfactory	update the dispersion study to include the current pollution level in the calculation. Since the designed equipment uses coal combustion, the dispersion study must be supplemented with heavy metals, especially those toxicologically significant (As, Cd, Hg, Ni, Zn).
Noise and vibration	conditionally satisfactory	If necessary, eliminate the above-limit values measured in point G8 – we recommend supplementing the solution suggested in the EIA assessment with a form of suggestion of a measure.
Residents	conditionally satisfactory	use e.g. the US EPA methodology for objective evaluation of health risks; use the updated dispersion study as an input.
General evaluation	**conditionally satisfactory**	**Implement the suggested measures**

If the above-mentioned conditions and recommendations are fulfilled, the project of the Yunus Emre Power Plant including all related objects and equipment is acceptable as regards its environmental impacts.

VII. Assessment authorization elaborated by

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VIII. Date of elaboration

October 2009

IX. Signature of person who elaborated the assessment