



# **ANNEX C**

Environmental, Health, Safety And Social (EHSS) Legislation Review





# Summary of Environmental, Health and Safety and Labor Legislation in Turkey that are applicable to the Project

Act, Regulation, Order (date and ref)

Brief summary of scope / key articles and relevance to the Project

Relevant permit requirements or other actions

#### **ENVIRONMENT**

#### **GENERAL**

# Environmental Law (No. 2872)

(Official Gazette Date/Number: 16.08.1983/18132;last amended on 08.07.2009)

This is the framework law for environmental legislation (and penalties).

Article 8. Prohibition on Pollution: It is forbidden to discharge, store, carry and transfer any type of waste contrary to defined standards and methods given in relevant regulations and in a way that causes harm to the environment. When there is a possibility of pollution, the concerned parties are liable to prevent pollution. If pollution occurs, the concerned parties are liable to eliminate pollution and to take necessary measures to remove or minimize the effects of pollution.

Article 10. Environmental Impact Assessment: The institutions, businesses and enterprises, which may cause environmental problems as a result of the activities they are planning to perform, are obliged to prepare a Project Introduction File and if required an Environmental Impact Assessment Report. For projects subject to EIA, no permit, approval, incentive, license to build or operate may be given for the proposed project and the investments cannot commence and be tendered unless an "EIA positive" or "EIA is not necessary" decision is received.

Article 11. Permitting, Treatment and Disposal: The enterprises, facilities, and the residential units, which are not deemed to be suitable for direct or indirect disposal of waste material that they produce as a result of their production, consumption and service operations to the receiving environment, are obliged to dispose of their waste and subject it to treatment as per the standards and methods determined in the regulations and obtain the required permissions as such. The producers of waste are responsible for taking the necessary measures to minimize the amount of waste they create by using appropriate technologies and methods. Waste that cannot be recovered shall be disposed of by using the appropriate methods that are determined in the relevant regulations.

The institutions, businesses and enterprises whose activities may have adverse effects on the environment, should prepare emergency response plans related to any accidents that may occur as a result of their activities, in order to control and minimize the adverse effects of the accidents.

Article 20. Administrative Fines: Article 20 defines the penalties of administrative nature related to different environmental violations related to air emissions, waste, noise, discharges, etc.

e) Any party that starts construction or operation before completing the EIA process shall be charged with an administrative fine of 2 percent of the project value. In these situations, the investor is obliged to reinstate the area to its previous condition. Any party that acts contrary to the commitment letter given during the EIA process shall be charged with an administrative fine of 16,929 Turkish Liras for each violation.

Article 26. Fines of Judicial Nature: Any party that supplies wrong or misleading information and acts against the liability defined in article 12 shall receive imprisonment ranging from six months to one year.

# Relevant permits as per the applicable regulations

(i.e. EIA, Environmental Permit (discharge, air, noise- if necessary), Temporary Waste Storage Area Permit)





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Article 28. Polluter's Responsibility: Polluters of the environment and those who cause damage to the environment are responsible, regardless of degree of fault, for the damage arising from the pollution and destruction they cause. The polluter shall be required to pay compensation for the resulting damage according to the general provisions. The claims made for the indemnification of the environmental damages shall lapse after five years from the date that the damaged party learns of the damage and the obligation to indemnify.	
Environmental Impact Assessment Regulation (Date/Number: 25.11.2014/29186; The previous Official Gazette Date/Number:	Pursuant to the regulation, depending on the type of the project, its capacity, or the location of the activity, an EIA or a Project Description File may be required. Based on classification of projects according to the potentially expected environmental impacts, the projects listed in Annex-I of the regulation are directly subject to prepare a full EIA Report and they should first apply to Ministry of Environment and Urban Planning (MEUP) with an EIA Application File. The projects listed in Annex-II should prepare a Project Description File and are subject to screening by MEUP to derive a decision whether or not a full EIA is needed. <i>EIA status of the Project components are given below:</i>	or Not Required Certificate or Exemption Letter
03.10.2013/28784)	Underground Hard Coal Mine within Amasra B field: According to the official letter of Bartin Provincial Directorate of Environment and Forestry (changed as Bartin Provincial Directorate of Environment and Urban Planning) dated 15.07.2008, underground Hard Coal Mine Project (within Amasra B field) was exempted from the Turkish EIA Regulation valid at the time (EIA Regulation published in the Official Gazette dated 16.12.2003 and numbered 25318) based on the condition that the Project has obtained its operation licence before 07.02.1993 (enactment date of the first EIA Regulation in Turkey) as described in the Temporary Article 3 of the mentioned regulation.	
	<b>Reclamation Area and Quay:</b> Reclamation Area and Quay Project was assessed according to the Turkish EIA Regulation (Official Gazette Date/Number: 17.07.2008/26939) under Annex-1 article 10-b(9-b): Commercial ports, jetties and quays where marine vessels over 1,350 dead weight tonnes (DWT) can dock). The Final EIA Report for the Project was submittied to the MEUP in April 2013 and is currently under approval process.	
	Coal Washing Plants: Coal Washing Plants were assessed according to the Turkish EIA Regulation (Official Gazette: 03.10.2013/28784) under Annex-2, Article 55(now Article 49)-Mining Projects e) Ore processing plants, f) Ore enrichment plants and/or related waste facilities (that are not listed under Annex-1); and Annex-2, Article 57-Coal Processing Plants(now Article 50): c) Coal Washing Plants. A Project Information File (PIF) was submitted to the Bartin Provincial Directorate of Environment and Urban Planning in January 2014 and is currently undder evaluation process.	
Environmental Audit Regulation (Official Gazette Date/Number: 21.11.2008/27061; last amended on 16.08.2011)	This regulation defines procedures and principles of environmental inspection for businesses and activities. The regulation further imposes qualifications and obligations of inspection officers, environmental management unit/environmental employee and authorized firms for environmental services.  Article 5. Facilities or activities subject to audit requirements: All kinds of pollution sources and violations covered by the provisions of the Environment Law No. 2872 and related legislation in the land and sea areas within the borders of the Turkey are subject to audits.  Article 6. Obligations of facilities or activities subject to audit requirements: (i) To have measurement and analysis required	Yearly environmental audit by environmental officer or Environmental Management Unit or authorized consulting company Notification to the





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	under the relevant legislation conducted by Ministry or Ministry authorized laboratories, (ii) to provide personnel and equipment of all kinds during the audit; to enable the environmental inspection officers to enter areas of facilities or activities and ensure their security, (iii) to cover the costs of measurement and analysis when the environmental inspection officer deems necessary or in case of appeals, (iv) to provide the information and documents required under environmental legislation timely and in full during the audit,(v) to notify the governorship within one month in case of signing a contract for purchasing environmental consulting services from an consulting firm authorized to provide environmental management services,(vi) to notify the governorship within one month in the case of cancellation of the contract with the authorized consulting firm, (vii) In the case of cancellation of the contract with the authorized consulting firm, or establish an environmental management unit, or employ an environmental official within two months.	governorship regarding purchasing environmental consulting service from an authorized consulting company
	Article 7. Self-monitoring of facilities and activities and internal audits: Self-monitoring of facilities and activities and internal audits shall be conducted by the environmental management unit or the environmental officer (must be authorized by the MEUP). Facilities and activities that do not establish an environmental management unit or employ environmental officer shall acquire services from companies authorized by MEUP.	
Regulation on Environmental Officers and Environmental	The regulation defines the environmental officials' qualifications, responsibilities and the documenting and the principles and procedures about granting a certificate of competency to environmental consulting firms.	Employ an environmental officer or establish
Consulting Firms (Official Gazette Date/Number: 21.11.2013/28828; last amended on 06.05.2014)	Article 5. Criteria for Environmental Officer Employment and Environmental Management Unit Establishment: Facilities or activities listed in Annex-1 of the "Regulation on Permits and Licenses to be obtained pursuant to the Environmental Law" shall establish an environmental management unit or obtain environmental management service from environmental consulting firms.	Environmental Management Unit or acquire services from an authorized consulting
	Facilities listed in Annex-2 of the "Regulation on Permits and Licenses to be obtained pursuant to the Environmental Law" shall permanently employ at least one environmental officer or obtain environmental management service from environmental consulting firms or establish an environmental management unit.	company
Regulation on Environmental Permits and Licenses (Official Gazette Date/Number: 10.09.2014/29115)	The purpose of this regulation is to determine the permitting and license liabilities of the activities and facilities listed in the annexes of the regulation, the responsibilities of the competent authorities, the environmental management units and competent environmental representatives working at the facilities, the facility owners and the environmental consultancy firms that take part in works related to permitting and licenses.	Temporary Operation Permit and Environmental Permit, as necessary (i.e. for noise, air emissions,
, .	The regulation classifies the facilities into two groups according to their environmental impacts: Annex-1 includes facilities that have a high pollution impact on the environment; Annex-2 includes facilities that have a pollution impact on the environment. The facilities that are included in the lists should get an integrated environmental permit in accordance with this regulation (Annex-1 facilities from MEUP, Annex-2 facilities from Provincial Directorate of Environment and Urban Planning (PDEUP)). Environmental permit is defined as at least one of the permits for emissions, discharge, noise control, deep sea discharge or hazardous materials discharge.	diashawas barawdays

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Pursuant to article 8 of the regulation, a Temporary Operation Permit is issued for a period of one year while the requirements





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## Brief summary of scope / key articles and relevance to the Project

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for the integrated Environmental Permit are completed. According to article 9, facilities listed in Annex-1 and Annex-2 are required to complete the application process for the Environmental Permit within six months following the receipt of the temporary operation permit. If the processes cannot be completed, temporary operation is repealed.

Those activities and facilities in Annex-1 and Annex-2 marked with (\*) are exempted from noise provisions of the Environmental Permit.

In case of having more than one facility at the same address, permitting processes are carried out in an intergrated manner and finalized in the name of the enterprise.

Pursuant to article 13, those facilities that are not included in the Annex-1 and Annex-2 shall also meet the limit values defined in regulations.

#### Article 17.

Prerequisites of an Environmental Permit (Annex-3C) include an Emissions Measurement Report, Acoustic Report and Wastewater and/or Hazardous Materials Wastewater Discharge Technical Information List.

The following activities/facilities listed under Annex-1 and Annex-2 of the regulation are relevant/potentially relevant to the Project components.

#### Hard Coal Mine:

Annex-2, 2.18- Mines falling under Group I, Group IV, and Group V according to the Mining Law, with a capacity of 200 ton/day and above.

#### Waste Management:

Annex-1, 8.1- Waste temporary storage, recycle and disposal facility (Exemption regarding environmental permission on air emission is not granted for all waste recycle and waste incineration and mixed incineration facilities. Also, exemption regarding environmental permission on the basis of environmental noise is not granted for waste batteries and accumulators and end life waste tires)

#### **Reclamation Area and Quay:**

Annex-2, 10.6 Ports

Annex-2, Item 8.3 Waste recepton facilities that is collecting wastes generated from ships and storing residuals.

#### **Coal Washing Plant:**

Annex-2, 2.20 Coal and/or ore preparation and/or enrichment facilities

#### **Concrete Plant:**

Annex-2, Item 2.13- Facilities that produce concrete, mortar or road materials using cement with a production capacity of  $10 \text{ m}^3$ /hour or above, including the areas where these materials are mixed in their dry form)

#### **Methane Recovery Facility:**

Annex 2, Item 1.1.2- Facilities with thermal power 2 MW and above; and less than 100 MW installations using gaseous fuel.

#### WATER





# Brief summary of scope / key articles and relevance to the Project

# Relevant permit requirements or other

#### **Water Pollution Control** Regulation

(Official Gazette Date/Number: 31.12.2004/25687; last amended on 30.11.2012)

## **Administrative Procedure** Communiqué of Regulation on **Water Pollution Control**

(Official Gazette Date/Number: 10.10.2009/27372; last amended on 12.05.2010)

## **Technical Procedure Communique of Wastewater Treatment Plants**

(Official Gazette Date/Number: 20.03.2010/27527)

The purpose of this Regulation is to set the legal and technical principles to be followed in the control of water pollution, in order to protect the ground and surface waters and to prevent water pollution. The regulation provides quality criteria for surface, marine and ground waters, rules and principles for water pollution control, industry specific discharge (effluent) standards, and the principles for discharging wastewater into the surroundings, the sea or the sewer system.

Article 16. It is prohibited to discharge wastewaters into sources used for abstraction of drinking and potable water even if they are treated. Discharge of any waste into these sources is forbidden.

Articles 17 through 20 define the principles for pollution control in the water basins that provide potable and service water, water resources and identify measures to be taken in absolute, short distance, medium distance and long distance protection zones. Absolute protection zones (300 m wide strip from the maximum water level of the drinking and utility water reservoir) are strictly prohibited for any kind of construction activities. In short (700 m wide strip after absolute protection zone ) and medium distance (1 km wide strip after short distance protection zone) protection zones, construction of roads and associated facilities to be constructed per the zoning plans are permitted, with the exception of rest areas, gas stations and similar in short distance protection zones and gas stations in medium distance protection zones. Within in the short distance protection zones storage of any solid wastes and excavation activities are forbidden.

According to the 1/25.000 scaled Bartın and Bartın Coastal Region Sub-Regional Planning Zone Environmental Plan, there are absolute and short distance protection areas within the Project Site.

Article 23. It is forbidden to discharge excavated soils, debris, sludge and similar waste to seas and coastal waters.

According to Article 25, (a) Discharge of all kinds of wastewaters to sewer system (where there is one) is a right and obligation, and (c) Natural persons or legal entities that create wastewater are liable to cover the expenses of using the sewer system, and/or treatment facilities. (e) For industrial wastewaters to be connected directly to the sewer system or to be discharged into the sewer system via transportation with tankers or similar vehicles; they (i) shall not do any harm to the structure and operation of the sewer system, (ii) shall not pose any health concerns to their personnel or the population in the area, (iii) shall not adversely affect the operation and efficiency of the treatment plant that their sewer system is connected to, (iv) shall not include substances that are not suitable for biological treatment operations, (v) shall not render difficult to dispose or use the sludge or similar residues generated as a result of wastewater treatment operations or shall not cause these wastes to acquire pollutant characteristics (vi) shall maintain wastewater disposal protocol with relevant wastewater management authority at least five years.

Pursant to Article 27, criteria for the discharges of the wastewaters to the receiving environment is given in Table 21 of the Water Pollution Control Regulation.

Pursuant to article 37, an environmental permit must be obtained from MEUP or PDEUP for the direct discharge of any domestic and/or industrial wastewaters and site run-off where this is discharged from a point source into receiving waters. The lists in "Regulation on Permits and Licenses to be obtained pursuant to the Environmental Law" should be followed to identify the activities that require permit.

actions

Wastewater discharge permit (within the scope of the "Environmental Permit") - required if wastewaters are discharged into receiving environments)

Wastewater connection **permit** (for connection to sewer system)

Wastewater disposal protocol with relevant wastewater management authority (for treated industrial wastewater discharges to sewage system, if any)

Project Approval (for wastewater treatment plants)

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	Pursuant to article 44, in a city and/or industrial area, connection to the sewer system is subject to a Wastewater Connection Permit to be issued by the wastewater infrastructure management. The Wastewater Connection Permit is a permission granted by the administration in return for a written document for domestic wastewaters; and for the industrial and combined wastewaters after compliance with the conditions set forth in the quality control permit certificate.	
	Article 45: Limitations for Sewer System Connection: (i) If the sewage is collected through a discrete system, stormwater and other drainage water cannot be connected to the sewer system (ii) For permitting, wastewater amount and characteristics in combined and discrete systems are determined in dry (rain-free) weathers (iii) Industrial wastewaters cannot be diluted with unpolluted waters and discharged to the sewer system for the purpose of eliminating the pre-treatment necessity (iv) Domestic wastewaters can be connected to the sewer system with the permission of the Municipality, regardless of whether there is end treatment for the sewer system (v) The decision of whether small industrial wastewater sources can be directly connected to sewer systems that do not flow into a treatment plant or connected with restrictions by complying with the standards given in Table 25 in this regulation, shall be made by the Local Environment Board by considering the total pollution load and the receiving environment features.	
	Pursuant to Article 53, wastewater treatment plants to be constructed for the facilities are required to be approved by the Ministy.	
	The Administrative Procedure Communiqué of Regulation on Water Pollution Control sets forth the procedures to be followed by facilities to obtain a Wastewater Discharge Permit (within the scope of the Integrated Environmental Permit), and the sampling frequency for industrial and wastewater effluents.	
	The Technical Procedure Communique of Wastewater Treatment Plants aims to regulate technical procedures and applications of the wastewater treatment processes.	
Regulation on Control of Pollution Caused by Hazardous Substances in Aquatic Environment	This Regulation includes the technical and administrative basis regarding the determination of hazardous substances in surface waters, estuary waters and regional waters; organization of pollution reduction programs; prevention and monitoring of pollution; creating an inventory of hazardous substances discharged into water; determination of discharge standards and quality criteria.	Environmental Permit (if the wastewaters containing hazardous substances are discharged into receiving
(Official Gazette Date/Number: 26.11.2005/26005; last amended on 30.03.2010)	Pursuant to Article 5 of the Regulation, Environmental Permit is required for each hazardous substance to be discharged into receiving environment. Discharge concentrations of the hazardous substances shall not exceed limits stated in this Regulation.	environment)
Law on Groundwater (No. 167) (Official Gazette Date/Number: 23.12.1960/10688; last amended on 01.03.2013)	The legal framework for groundwater usage is defined by this law. Permits should be received from the State Hydraulic Works (DSI) for groundwater exploration, and construction and operation of wells to be utilized by facilities for groundwater extraction purposes. Water wells will be used for potable and service water purposes.	Well utilization permit (for water abstraction from water wells)





Act, Regulation, Order
(date and ref)

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#### AIR

### **Industrial Sourced Air Pollution Control Regulation**

(Official Gazette Date/Number: 03.07.2009/27277; last amended on 10.11.2012)

The regulation regulates, with its annexes, the rules, principles and emission (fume, smoke, dust, gas, vapor and aerosol) limits that industrial and energy generation facilities shall follow.

Pursuant to article 5, an Environmental Permit is obligatory for the establishment and operation of the facilities and activities that generate air emissions and fall under the scope of "the Regulation on Permits and Licenses to be Obtained Pursuant to the Environmental Law." An Emissions Measurement Report must be included in the electronic Environmental Permit application file and is valid for a period of 2 years.

Pursuant to Article 6, the air quality limits to be complied within the impact area are included in Annex-2 of the regulation "Air Quality and Calculation of Contribution to Air Pollution". Pursuant to the regulation, Contribution to Air Pollution value of proposed facilities is calculated for the pollutants with mass flow rates exceeding the limit values given in Annex-2 Table 2.1 of the regulation. The air quality limits to be complied with in the impact area are included in Annex-2 Table 2.2 of the regulation. If air quality limits stated in Annex-2 are exceeded in the region in which the enterprise to be established, operator shall apply the action plan prepared by the governorship.

Pursuant to Article 8, a letter of conformity regarding emissions must be obtained from the Provincial Directorate which involves prior inspection of the facility in order to ensure that the provisions of the Regulation are met (including measures taken at the facility and physical conditions, excluding measurements and analysis results).

Pursuant to Article 14, the activities/facilities subject to environmental permit or emission permit or environmental permit and license shall conduct confirmation measurement and report every two years

Pursuant to Article 24, the Emissions Measurement Report must conform to the format provided in Annex-11 of the regulation.

Annex-1 provides the "Regulation Principles and Limits for All Facilities". If there is no emission limit for the facilities subject to the emission permit, it is obligatory to comply with the emission limits stated in Annex-1.

Measures set out in Annex-1 must be taken in order to prevent dust emissions from temporary storage of bulk material in open areas (i.e. excavated soils, cement for concrete production, and coal/ore etc.):

- placing wind-barriers
- covering the top of conveyors and other carriers.
- loading and unloading without spreading dust
- covering dusty materials with canvas or with materials that have particle sizes greater than 10 mm
- maintaining top layers at a moisture content of 10%.

Measures set out in Annex-1 must be taken in order to prevent dust emissions:

Relevant measures such as establishment of pressurized pulverized water and non-toxic chemical dust suppression systems should be taken to comply with stated dust limits. Water spraying systems should simultaneously be started with the production and should be applied as long as the activity continue. Chemical dust removal systems shall not be

**Governor Detection Report** (via site visit)

Air emissions permit (within the scope of the "Environmental Permit") may be required for ancillary facilities such as concrete plant)

**Emissions Measurement Report** (may be required for ancillary facilities such as concrete plant)

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	<ul> <li>harmful for the environment and human health.</li> <li>Cleaning of the dust filters (if any) are conducted in closed areas or the filters are moisten before they are cleaned.</li> <li>Machines used in the productions which process materials having grain size below 1 mm should be operated in closed areas to prevent fugitive dust. Dust generated from these operations are collected and passed through dust separation systems. Conveyance of this-sizes materials are conducted using closed systems if their surface does not involve a moisture content of 10%.</li> </ul>	
	Dust emisson limits including "special dust" limits provided in Annex 1 must also be considered for the operation of the concrete plant.	
	Annex-2 states the principles in calculation of air pollution contribution and air quality measurements. Emission determination issues and requirements for monitoring of emissions are set out in Annex-3 of the regulation.	
	Stack heights and gas velocities are determined in accordance with Annex-4.	
	Annex-7 sets out emission limits for inorganic and organic dusts, inorganic and organic vapors and gases, carcinogenic substances.	
	Annex 12 provides guidelines for "Calculation of Non-Stack (Fugitive) Emissions Mass Flow Rate".	
Air Quality Assessment and Management Regulation	The purpose of this regulation is to determine and build the air quality targets, to assess the air quality, to protect the current condition where the air quality is good and to improve it where needed.	
(Official Gazette Date/Number: 06.06.2008/26898; last amended on 05.05.2009)	The regulation sets limits for ambient air quality parameters in Annex I and Annex IA.	
Regulation on Control of Exhaust Gas Emissions and	The regulation determines the required principles and procedures to ensure reduction of exhaust gas pollutants and their control by monitoring, in order to preserve the environment from pollution caused by motor vehicles in traffic.	Exhaust measurement stamp and Exhaust emission certificate for the vehicles (if needed)
Gasoline and Diesel Oil Quality (Official Gazette Date/Number: 30.11.2013/28837)	According to Article 9, an "exhaust emission measurement stamp" and an "exhaust emission emission certificate" are issued by the MEUP to the owners of vehicles with compliant exhaust measurement results. Exhaust measurement stamps and certificates may not be issued to any vehicles which have not undergone exhaust gas testing or to those which do not meet emission limits.	
Heating-Related Air Pollution Control Regulation	The purpose of this regulation is to control and reduce the adverse effects of the air pollutants on air quality, emitted from residences, public and commercial premises, heating plants of industries etc. and released into the air in the form of fumes,	
(Official Gazette Date/Number: 13.01.2005/25699; last amended on 27.01.2010)	smoke, dust, gas, vapor and aerosol. The regulation comprises the features and operation rules of heating plants, the quality criteria of solid, liquid and gas fuels to be used in heating plants; and corresponding emission levels to be complied with, depending on thermal power of installations.	
SOIL		





# Brief summary of scope / key articles and relevance to the Project

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## **Regulation on Soil Pollution Control and Point-Source Contaminated Sites**

(Official Gazette Date/Number: 08.06.2010/27605; last amended on 11.07.2013)

Note: All articles (except articles 1, 2, 3, 4, 5, 6, 35, 40, 41 and 42) of this regulation will enter into force in 08.06.2015

The regulation defines the principles and procedures to prevent the contamination of soil, to determine the sites and sectors where pollution exists or is likely to exist, and to remediate and monitor contaminated soil and sites in line with the sustainable development goals.

According to article 6, it is fundamental to prevent soil pollution at its source. It is forbidden to dispose of any kind of waste that can cause harm to the soil directly or indirectly, by discharging into the receiving environment or storing waste in a way that is contrary to the standards and methods defined in Environmental Law and relevant regulations. It forbids the mixing of contaminated soil with clean soil.

Pursuant to article 8, the regulation requires all existing and prospective industries which are included in Annex-2 Table 2 of the regulation to declare a Preliminary Operation Information Sheet to the Provincial Directorate of the Ministry of Environment and Urban Planning. The Provincial Directorate shall include all the declared industrial sites in a "Potentially Contaminated Sites List". According to article 10, the Provincial Directorate will then make an assessment of the sites with respect to the Evaluation Criteria given in Annex-4. If at least one of the criteria is valid for the subject site, it is characterized as a "Suspicious Site" and added to the "Suspicious Site List".

#### Annex-4 "Evaluation Criteria":

- 1. Presence of hazardous chemicals within the operation site and based on storage type for any hazardous chemical: (a) Regarding storage: (i) Lack of ground isolation, or (ii) Use of open space without a drainage system. (b) Aboveground tanks: (i) Lack of leakage control, or (ii) Lack of leakage control in pipes, or (iii) Lack of ground insulation. (c) Underground tanks: (i) Tank is single wall, or (ii) Tank is 10 years old and older, or (iii) Lack of leakage control, or (iv) Lack of leakage control in pipes, or (v) Lack of corrosion protection or cathodic protection.
- 2. Occurrence of industrial accidents within the operation site.
- 3. Temporary storage of hazardous wastes within the operation site, and: (a) Any of the stored wastes is marked as (A) in Annex IV Waste List of the "Regulation Concerning General Principles of Waste Management", or (b) Absence of impermeable layer in the hazardous waste temporary storage area, or (c) Absence of drainage system around the hazardous waste temporary storage area.
- 4. Presence of a treatment plant for the industrial wastewater generated during the operation, and: (a) Temporary storage of treatment sludge within the operation site, or (b) Discharge of treated wastewater to land.

# Relevant permit

**Preliminary Activity Information Sheet** (Note: This requirement will enter into force on 08.06.2015)

#### WASTE

# **Regulation on General Principles of Waste** Management

(Official Gazette Date/Number: 05.07.2008/26927; last

This regulation is intended to establish general principles concerning management of wastes from their production to disposal. In this scope, the regulation covers prohibition on importing hazardous wastes, creation of waste management plans, obligation to obtain licenses, keeping records, issue of liability insurance and disposal costs. Annex-2 of the regulation includes definitions and characteristics of hazardous wastes and Annex-4 includes a list of wastes consistent with European Union (EU) identifying hazardous and non-hazardous wastes. This regulation does not cover radioactive wastes.

Hazardous waste financial liability insurance

Notification to the MEUP





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amended on 05.07.2008)	Article 6. Prohibition of Pollution: Recycling, disposal of wastes in any place other than the permitted facilities or to land, sea, lakes, rivers and other receiving environments, polluting the environment by filling and storing is prohibited.	
	Article 11. Obligation of Record Keeping: Waste-generating facilities and businesses together with the persons, institutions and organizations who perform the disposal and recycling of the wastes specified in Annex-2A and Annex-2B, are liable to keep records of the type of waste and the waste code specified in Annex-4, waste quantity, waste source, disposal facility, transportation type and the processes that the waste is subjected according to the methods specified in Annex-2A and Annex-2B, maintain the records for at least 5 years, send them to the Ministry at intervals specified by the Ministry and provide them to the Ministry for review and audit.	
	Article 12. Obligation of Liability Insurance: Those who are engaged in the activities of hazardous waste collection, transportation, temporary and interim storage, recycling, reuse and disposal, are obliged to hold liability insurance according to the principals specified in this regulation against any accidents that may occur or damages to the third parties and the environment. Those facilities who do not comply with the obligation of having liability insurance shall not be permitted to undertake such activities.	
	Article 18. Audit: (i) Waste generating facilities and businesses are audited by the MEUP periodically (ii) The persons, organizations and institutions subject to audits are required to provide the information and documents required by the MEUP, provide the costs of the analyses and measurements and show all the ease during audit.	
Regulation on Control of Excavated Soil, Construction and Demolition Wastes	The Regulation defines the management of excavated soils and wastes from works of demolition or construction activities.  Article 9. Obligations of Excavation Soil and Construction/Demolition Waste Generators: Excavation soil and	Waste transportation and acceptance certificate
(Official Gazette Date/Number: 18.03.2004/25406; last amended on 26.03.2010)	construction/demolition waste producers shall: (i) Ensure the minimization and management of the adverse effects of wastes on the environment and human health in accordance with the provisions of this regulation (ii) Obtain the necessary permits and approvals during the stages of generation of waste, transportation and storage (iii) Collect the wastes separately, recycle and store during their operations. Wastes should not contain any hazardous, dangerous and foreign matters (iv) Obtain "Waste Transportation and Acceptance Certificate" for waste transportation and storage before the commencement of operation (if the amount of waste exceeds 2 tonnes) (v) Not dispose the wastes anywhere except for recycling and landfill sites permitted by the municipality or local administrative authority (vi) Meet all the expenses required for the management of wastes (vii) Compensate and remediate the pollution as a result of an accident that may happen during waste generation, transportation and landfilling.	
	Article 14. Precautions to be taken during excavation work: Excavators are required to take the precautions to reduce dust emissions, noise and visual impacts and enclose the activity area. The amount of soil to be generated during the excavation procedure shall be planned to be equal to filling volumes and the usage of excavation soil primarily in the activity area shall be ensured. Operators who have at least 2,000 square meters area of land apart from the construction site, can store the excavation soil in this area temporarily for reuse.	
	Article 22. Hazardous Waste Collection and Disposal: Asbestos, paint, fluorescent, mercury, acid and similar hazardous wastes that are present in construction/demolition wastes shall be collected separately from other wastes and disposed in accordance	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	with the provisions of the Hazardous Waste Control Regulation.  Article 23. Waste Transportation and Acceptance Certificate: The generators of excavation soil and construction/demolition wastes are responsible of transporting/having them transported to appropriately permitted landfill sites with transportation vehicles having the necessary transportation permissions. Generators of excavation soil and construction/demolition waste above 2 tonnes shall apply to municipalities if within the municipal boundaries, to related district municipalities if within the metropolitan municipality boundaries, to the greatest local administrative authority if outside the municipal boundaries, and obtain a "Waste Transportation and Acceptance Certificate".	
Regulation on Waste Reception from Vessels and Control of Waste	The purpose of this Regulation is to determine principles and procedures regarding the waste reception vessels and establishment and operation of the waste reception facilities to protect marine environment and to prevent release of wastes generated from vessels (within the sea areas under the jurisdiction of Turkey) to the sea.	Exemption document (for not to construct waste reception facility)
(Official Gazette Date/Number: 26.12.2004/25682; last	This Regulation covers the ships in sea areas under the jurisdiction of Turkey, the waste reception facilities required to be established in the ports located within these areas, and waste reception ships.	. , ,,
amended on 18.03.2010)	Pursuant to the Article 5 of the Regulation, it is forbidden to directly and/or indirectly release of the ship-sourced wastes to the sea environment to prevent marine pollution. Private and legal persons who responsible for giving the ship-generated wastes to waste reception facilities and waste reception ships; and temporary storage and disposal of the wastes shall take necessary measures to protect environment and human health.	
	Article 7. Exemptions and alternative implementations: When the implementation of the provisions of this regulation are considered as impossible or unnecessary by port authorities, they can apply to the MEUP to obtain an exemption. The Port authorities should provide necessary information requested by the MEUP, information on alternative practices to comply with the provisions of MARPOL 73/78 and explanations on why it is impossible or unnecessary to construct a Waste Reception Facility within the Port.	
Medical Waste Control Regulation (Official Gazette Date/Number: 22.07.2005/25883; last amended on 21.03.2014)	Includes the principals regarding the collection of the medical wastes generated from operational activities of health institutions indicated in the Annex-1, and the temporary storage, transportation and disposal of medical wastes indicated in the Annex-2 of the regulation.	Yearly medical waste notification/declaration to the MEUP
	Article 5. General principles: (i) Direct or indirect disposal of the medical wastes to the receiving environment is prohibited (ii) Minimization of the medical, hazardous and domestic wastes at source is essential (iii) Medical wastes shall not be mixed with hazardous and domestic wastes (iv) Separate collection, transportation and disposal of the medical wastes at source is essential (v) Medical waste producers, transporters and disposers are responsible for the hazards arising from environmental pollution and deterioration (vi) Medical waste producers are obliged to cover expenses for waste disposal (v) Works within the scope of the medical waste management shall be carried out by the relevant trained personnel. The personnel shall be regularly trained and medically checked.	Waste receipt document
	Article 8. Obligations of the medical waste producers: Medical waste producers are obliged to (i) establish a system for waste minimization at source (ii) prepare and apply an internal unit waste management plan involving information relevant to separate	





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collection, transportation and temporary storage of the wastes and measures to be taken in case of an incident (iii) separately collect medical, hazardous and domestic wastes and packaging wastes at source (iv) use bags and containers technically specified in this regulation for medical and sharps wastes (v) separately transfer medical and domestic wastes with the vehicles allocated for this work (vi) construct temporary waste storage area or provide container, and for the outpatient units, to transfer the wastes to closest temporary waste storage/container or give the wastes to waste collection vehicle (v) provide periodic training for the personnel employed for medical waste management (vii) provide special clothing for the personnel employed for medical waste management (viii) cover expenses required for collection, transportation and disposal of the medical wastes (viii) regularly record the information regarding the amounts of the medical wastes and submit them to the Governorship by year-end, to maintain this information at least three years and to hold open for the review of the Ministry when requested.

Article 13. Medical wastes are separately collected at source by relevant health personnel especially doctors, nurses, midwives, vets, dentists, laboratory technical personnel when they are being produced. Collecting equipment is kept ready in the nearest location of the waste source. Medical wastes shall not be mixed with domestic, packaging and hazardous wastes.

Red plastic bags with "INTERNATIONAL BIOHAZARD (Uluslararası Biyotehlike)" sign and "ATTENTION! MEDICAL WASTE (Dikkat! Tıbbi Atık)" label on each two sides are used in the collection of the medical wastes. Sharp medical wastes are separately collected from other medical wastes in red plastic bags or boxes or containers made of laminated cardboards with the "INTERNATIONAL BIOHAZARD" sign and "ATTENTION! SHARP MEDICAL WASTE (Dikkat! Kesici ve Delici Tıbbi Atık)" label.

Article 17. Collection of medical wastes produced in small amounts: Medical wastes generated from the units indicated in c clause of Annex-1, are separately collected from the other wastes using the proper bags and containers defined in Article 13 and temporarily stored as defined in the Article 22.

Article 22. Temporary storage of the medical wastes produced in small amounts: Medical wastes generated from the units indicated in c clause of the Annex-1 are transferred to closest temporary storage facility or containers with the vehicles defined in article 16. If there is no opportunity, medical wastes are collected with the medical waste collection and transfer vehicles of relevant municipality. Wastes are kept safely and if necessary put in a second waste bag. Wastes shall not put out unless medical waste collection vehicle comes, mixed with domestic wastes and put in the same container with domestic wastes.

These health institutions are obliged to make an agreement with closest health institution which have temporary storage facility or container or relevant municipality and submit the agreement to the governorship before they obtain work permit.

Article 23. Financial obligation in waste disposal: Medical waste producers are obliged to cover expenses for collection, transportation and disposal of the medical wastes.

Article 25. Transportation of medical wastes: Metropolitan municipalities in metropolises; and municipalities, persons and organizations delegated by munucilapalities in other sites are responsible for transportation of the medical wastes from temporary storage units indicated in c clause of Annex-1 to disposal areas.

Article 27. Medical waste transportation rules: It is obligated to use National Waste Transportation Form during the transportation of medical wastes from temporary storages to disposal areas. It is not obligated to use National Waste Transportation Form for the wastes generated from the units stated in c clause of Annex-1. However, it is obligated to use Waste





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Receipt Document during the collection of the medical wastes from units.

Article 30. Waste receipt document: Waste receipt document is used for legally proving that the wastes are given to the transporter by the unit and transferred to the disposal area by the transporter. It is obligatory that the all relevant parties provide this document when auditors request. The document are maintained at least one year and kept available for the authorities.

#### Hazardous Waste Control Regulation

(Official Gazette Date/Number: 14.03.2005/25755; last amended on 05.11.2013)

The regulation lays down the principles and procedures for production, collection, temporary storage, transportation, exportation, recycling and disposal of hazardous wastes. The Regulation also provides design criteria and standards for hazardous waste management, and hazardous waste storage and treatment facilities.

Article 9. Liabilities of Waste Generators: (i) Take precautions to minimize waste generation (ii) Ensure the waste management with the provisions of this Regulation to minimize the harmful effects of wastes on human health and the environment. Hazardous waste producers shall prepare a three-year Waste Management Plan and receive approval from the Provincial Environmental Directorate (iii) Obtain a permit from Provincial Environmental Directorate for temporary onsite storage of wastes above 1,000 kg/month at their facilities in accordance with the provisions of this Regulation, provided that wastes are transferred to licensed facilities every six months and subject to audit every six months (iv) Keep records of the wastes generated; perform appropriate packing and labeling as required by the recycling or disposal facility holding an environment license, in line with international standards (v) Authenticate the non-hazardousness of the wastes that are claimed to be not carrying the features specified in Annex-III B and marked as (M) in Annex-IV of the Regulation on General Principles of Waste Management through analysis performed by laboratories of institutions/entities that are authorized by the Ministry and/or internationally accredited entities (vi) Cover the expenses incurred for the determination of the characteristics of waste (vii) Fill in the waste declaration form every year until the end of the month of March of the following year using the web-based program of the Ministry, Facilities producing hazardous wastes are responsible for submitting annual hazardous waste declaration forms to the relevant Provincial Environmental Directorate for the preceding year by the end of March through the web based system of MEUP, indicating the amount of hazardous wastes produced at their site (printing out and keeping the copy of it for 5 years) (viii) In the case of undertaking waste storage and disposal out of the facility, fill the transportation form with the information given in (Annex-9 A-B) and comply with the required procedure (ix) Comply with the existing international standards regarding waste transportation (x) Send the hauler to another facility or ensure that the waste is returned and provide its disposal if the waste disposal facility does not accept the waste (xi) Establish waste disposal facilities together with the municipalities or real and legal entities collectively to dispose the wastes within the direction of the principles specified in this Regulation and contribute to necessary expenses (xii) Dispose or have disposed the wastes in line with the principles specified in this Regulation using its own resources or at a licensed waste disposal facility by covering necessary expenses or at a waste disposal facility to be established collectively with municipalities or real and legal entities (xiii) Keep the wastes temporarily in containers which are secure, leakproof, safe and compliant with internationally accepted standards, and placed in a concrete area within the facility far from plants and buildings, to label the containers as hazardous waste, to state the quantity of storage material and date of storage on containers, to transfer wastes to another container having the same properties in the event of container damage, to ensure that the containers are always closed, to temporarily store the wastes in such a way as to prevent chemical reactions (xiv)

Hazardous waste management plan

Temporary storage area permit (if necessary)

Yearly hazardous waste notification to the MEUP (Waste Declaration Form)





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A generator who generates up to 1000 kilograms of waste per month may temporarily store wastes on his land without a permit from the governorship for a maximum period of 180 days, on the condition that the waste quantity does not exceed 6000 kilograms. In such case, to commission at least one person to take measures in conditions of danger and to notify this person's contact information to the governorship (xv) Make wastes harmless by taking necessary precautions through physical, chemical or biological processes prior to sending them to disposal facilities according to provisions specified in this Regulation, transport or provide appropriate transportation to disposal facilities that have environment license if any residual waste occurs (xvi) Take precautions for health and safety of workers who are responsible for collecting, transportation and temporary storage of wastes within the facility (xvii) Restore the incident place within a month and cover all the expenses in case of waste spilling by accident or deliberately or similar in order to prevent the environmental pollution (xviii) Notify the governor's office in case of waste spilling by accident or deliberately or similar, present a report containing information regarding the date of accident, the place of accident, the type and quantity of waste, the reason for the accident, the waste disposal method and the rehabilitation of accident location to the governor's office (xix) At the stage of obtaining construction and operating licenses for their activities, provide documentation for disposal of hazardous wastes in accordance with the provisions specified in this Regulation.

Regulation on Sanitary Landfills (Official Gazette Date/Number: 26.03.2010/27533; last amended on 11.03.2015) The purpose of the regulation is to regulate accounting policies and technical and administrative issues regarding i)prevention of environmental pollutions by minimizing the adverse impact of potential leachate and landfill gases on soil, air, ground and surface water, ii) construction of proper technical design of containment systems (e.g. landfill barriers -liners) and sanitary landfills according to the waste type, iii) waste receiving processes in sanitary landfilling, iv) control and maintenance processes during operation, closure and post-closure of sanitary landfill facilities, v) prevention of any risks associated with environment and human health including greenhouse effect during operation, closure and post-closure process, vi) rehabilitation, closure and post-closure maintenance processes of existing sanitary landfills during the disposal process.

Article 5. Sanitary landfills are classified as follows;

I.Class: Facilities having proper containment system for hazardous waste landfilling

II.Class: Facilities having proper containment system for municipal and non-hazardous waste

III. Class: Facilities having proper containment system for inert waste

Article 6. Disposal facility shall be equipped with proper measures to decrease potential adverse impacts to a minimum level; such as prevention of odor and dust dispersion, spread of wastes such as paper, plastic bags and thin plastic materials via wind-drift, traffic and noise density, aerosol formations and stratification resulting from landfill gases. The structure shall be designed to ensure good stability not to cause damage and landslides from construction activities. Every lot and waste cells in the sanitary landfill shall be designed to ease maneuvering of heavy vehicles and the minimum slope of each cell shall be 1/3. The sanitary landfills shall be fenced properly and control mechanisms shall be developed to prevent any waste disposal activities without permission.

Article 7. Appropriate location and design criteria of sanitary landfill shall be selected to prevent soil, surface water and groundwater contamination. The design of the I. and II. Class Sanitary Landfills are done according to site characteristics and meteorological conditions to provide proper leachate collection system, prevent the penetration of surface waters into landfills

Sanitary Landfill Licence

Landfill gas and leachate monitoring (included in licence)

Declaration of measurements and analysis results in line with the monitoring and control plan to MEUP (periods included in licence)





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	Consulting & Straigheering Inc.
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	and groundwater contamination and appropriate leachate treatment in line with the Water Pollution Control Regulation No: 25687.
	Article 10. Unpretreated waste is not accepted to sanitary landfills except inert wastes that having no potential to be recycled or technically processed. Waste sampling and analysis methods stated in Annex-1 of this regulation shall be undertaken to determine the waste categories of which falls under the landfill classifications.
	I. Class Sanitary Landfills;
	a)only hazardous wastes classified under Annex-2 of the regulation
	II.Class Sanitary Landfills;
	b)Municipal wastes, non-hazardous wastes categorized under Annex-2 of this regulation,
	c) Wastes showing similar characteristics with the non-hazardous wastes given in sub-section b (above) and wastes falling under the II. Class Sanitary Landfill criteria given in Annex-2 of this regulation and non-reactive wastes like solid/rigid and vitrified waste and stable hazardous wastes.
	d) Non-reactive and stable hazardous wastes shall be disposed of separate lots and waste cell in order to prevent direct contact with other wastes.
	Article 11. License shall be obtained from Ministry upon the permission from a municipality where the sanitary landfill is proposed to be located.
	Article 19. Main waste characteristics shall be determined in line with the criteria, analysis and processes listed under Annex-1 of the regulation.

Non-hazardous waste management plan

Non-hazardous Waste Declaration Form (as of 01.01.2015)

# Communiqué on Recycling of Certain Non-hazardous Wastes (Official Gazette Date/Number: 17.06.2011/27967; last amended on 01.10.2013)

the relevant regulations.

This Communiqué regulates minimization, collection, separation, temporary storage, recycling, and reuse of the certain non-hazardous wastes, constitution of recycling facilities etc. The Communique covers certain non-hazardous wastes listed in Annex-4 of Regulation on General Principles of Waste Management. Non-hazardous wastes listed in Annex-2 of this communique are out of scope.

Article 24. Groundwater quality shall be monitored through the measurements from at least one location in groundwater upstream and two location in downstream. Measurements shall be applied at least three location to represent a reference point for future sampling before sanitary landfill enter into operation. Gorundwater level shall be measured in every 6 months. Groundwater quality monitoring regarding sampling, frequency of analysis, analysis parameters shall be determined in line with

Pursuant to Article 5 of the Regulation, recycling of non-hazardous wastes in unlicensed facilities is forbidden.

Pursuant to Article 8, a 3-year Non-Hazardous Waste Management Plan shall be prepared and approval from the Provincial Environmental Directorate shall be received. As of 01.01.2015, annual non-hazardous waste declaration forms shall be submitted for the preceding year by the end of March, through the web-based system of MEUP and the records/prints maintained at least 5 years.





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	According to the Article 10, non-hazardous waste can be temporary stored in the facility for maximum one year provided that all required measures are taken (drainage system, screen, collection systems etc.).	
Waste Oil Control Regulation (Official Gazette Date/Number: 30.07.2008/26952; last	The purpose of the Waste Oil Control Regulation is to provide standards for storage, transportation and disposal of waste oils and to prevent their discharge into the receiving environment. Under the regulation, waste oils are categorized into three categories and can be managed as defined below:	Annual waste oil declaration to the MEUP (Waste Oil Declaration
amended on 30.03.2010)	<ul> <li>The generation of Category I waste oils must be minimized and Category I waste oils must be disposed of by recycling (refining or regeneration) at oil recovery facilities holding a license from the MoEU.</li> <li>Category II waste oils must be disposed of by use as a secondary fuel in facilities holding a license from the MoEU.</li> <li>Category III waste oils are not appropriate for refining and regeneration, and pose a risk to human health and environmental features if used as fuel, and therefore must be returned to harmless products by incineration in hazardous waste incineration facilities.</li> </ul>	Form)
	Article 9 - Waste oil producers are liable to take all the necessary measures to minimize waste oil generation, to analyze waste oils (or have them analyzed) and temporarily store them separately depending on their categories, not to mix different category waste oils or with PCBs and any other hazardous wastes, to have waste oils transferred to disposal facilities that hold an environmental license by licensed transporters, to keep records in line with article 26 of the regulation and to fill the waste oil declaration form given in Annex 2 and send it to the MoEU by the end of February of the succeeding year.	
	Pursuant to article 22 of the Regulation; wastes that are not appropriate for recycling, Category III wastes that need to be disposed of in hazardous waste incineration facilities, hazardous wastes that are generated in recovery operations and materials contaminated with these wastes, and bottom sludges of waste oil storage tanks must be disposed of in facilities that hold an environmental license.	
Solid Waste Control Regulation (Official Gazette Date/Number:	The Solid Waste Control Regulation lays down the principles and procedures for production, collection, temporary storage, recycling, and disposal of solid wastes. The regulation provides information on landfilling, composting and incineration of solid wastes.	
14.03.1991/20814; last amended on 26.03.2010)	Household wastes, organic wastes from green areas, large-volume solid wastes, non-hazardous industrial and commercial wastes having nature of household wastes and wastewater treatment plant sludge (not falling in hazardous waste class) are regarded as solid wastes. It is forbidden to dump solid wastes into seas, lakes and similar receiving media and in streets, forests and places that may cause adverse effects on the environment. Solid wastes shall be kept in closed containers and disposed of in licensed disposal facilities. Producers of solid wastes are liable not to mix any hazardous wastes into the solid wastes and must participate in works related to recovery of solid wastes.	
Packaging Waste Control	The regulation governs collection, recycling, and disposal of packaging waste.	
<b>Regulation</b> (Official Gazette Date/Number: 24.07.2007/26562; last	Producers of packaging wastes are liable to collect packaging waste separately at their source and give the packaging waste free of charge to the municipal system. It is forbidden to dispose of packaging wastes, directly or indirectly, by discharging them into	





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amended on 24.08.2011)	receiving bodies and storing them in landfills.	
Regulation on Control of Waste Batteries and Accumulators	The purpose of the regulation is to control the disposal of batteries and accumulators. The regulation defines the labeling and marking, reducing the amount of hazardous materials in manufacturing process and collection, transportation and disposal of waste batteries separate from other domestic wastes.	
(Official Gazette Date/Number: 31.08.2004/25569; last amended on 30.03.2010)	The facilities are required to dispose of the batteries and accumulators in accordance with certified collectors and disposal facilities.	
Regulation on Control of End	Article 5. The principles related to end-of-life tire management include the following;	
of Life Tires (Official Gazette Date/Number: 10.11.2013/28817;)	(i) End-of-life tire producer, after replacing the vehicle tires, shall deliver the tires to an authorized hauler or the tire distribution and sale companies (ii) End-of-life tires shall be delivered to the authorized haulers free of charge. Unauthorized institutions or individuals are prohibited from transportation.	
Regulation on Control of Waste Vegetable Oils	Regulates storage of waste vegetable oils and their transfer to waste oil recycling facilities by licensed haulers.	
(Official Gazette Date/Number: 19.04.2005/25791;last amended on 05.11.2013)		
Regulation on Mining Waste (Draft Status- Official Number:	This regulation lays down the management of principles and procedures regarding the wastes generated from mine exploration, extraction, mine preparation/processing or storage in a manner to prevent any harm to both human and environmental health.	
TSR/TCR99.987)	Article 3: This regulation is intended to be prepared pursuant to Articles 3,8,11 12 13 in Environmental Law (Official Gazette Date/Number: 9.08.1983/2872 and Articles 2, 8, and 9 in Statutory Decree on Organizations and Functions of MEUP.	
This Regulation will enter into force once year after the date of published	Article 5 Item specifies (i) Selection and implementation of best available techniques under the management of mining waste considering the principles of sustainable development. (ii) Recycling and disposal of mining waste by unauthorized person, agency and organization (instead of licensed disposal and recycling facility) is prohibited. (iii) Mining wastes shall not be codisposed with the other wastes which may create potential reaction and generated out of mining activities.(iv) Prioritization of the implementation of waste drying/dewatering processes for the purpose of increasing the lifetime of tailing dams and rehabilitation and closing procedures of mining waste disposal sites within short period of time.	
	Article 8: The operator is responsible to (i) submit Waste Management Plan to include mining waste minimization, processing, recycling and reuse as a raw material for off-site purposes in accordance with the procedures listed in Annex-1 as a attached file of the EIA and Project Description Report to Ministry or Provincial Directory. (ii) characterize mining waste in accordance with Annex-3 and classify disposal sites where mining wastes are disposed. (iii) prepare emergency action plan (iv) prepare the application project for mining waste disposal site in accordance with principles and procedures listed in Annex 7. (v) prepare construction auditing to mining waste disposal facility in accordance with the application project deemed allowable by ministry	





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and reporting process for construction auditing according to the principles and procedures designated by ministry. (vi) obtain permitting and license liabilities for mining waste disposal/ recycling facility in according with the Regulation on Environmental Permits and Licenses (Official Gazette Date/Number: 10.09.2014/29115). (vii) keeping the records of previous year data and entering the data to programme related to inventory of mining waste disposal facility until the end of March. (viii) Setting financial assurance for mining waste disposal facility. ix) submit a report regarding the site rehabilitation and restoration to provincial directorate pursuant to Annex-4C of this regulation. x)employ an environmental employee. xi) provide training for the employee and contribute to the technical development.

Article 10. Classification of mining waste disposal facilities (Category A and B) to be performed by authorized agencies and institutions in accordance with the criterias listed in Annex-5. Ministry and provincial directorates authorities to have category B disposal facility as Category A in accordance with the risk analysis.

Article 11. Characterization of rock permability and infiltrability of the project site shall be done by geological, hydrogeological, geochemical and engineering geology works. The mining disposal site basement and lateral surface shall have an impermeable layer to prevent ground water contamination from leachate formation. The layer can be built artificially unless it already exist

naturally. In addition to the impermeable liner system, leachate collection, drainage and treatment system (if required) shall be constructed in order to prevent potential soil and groundwater contamination risks associated with leachate formation and maintain continuity of facility after closure in the long term. Stiplling Tailings Sulphur including and acid producing tailings/spoils to be disposed with appropriate incline of slope and berm systems and rehabilated after disposal by means of preventing the contact with water and air, having notralization capacity or techniques required for treatment of leachate. The discharge of leachate to receiving environment is subject to Water Pollution Control Regulation (Official Gazette Date/Number: 31.12.2004/25687). Impermeable liner materials shall be according to the national and international standards.

Article 12 The stability and settlement risks of in the closure phase of mining waste disposal facility or final construction shall be presented with the engineering studies in the application project and evaluated by the Ministry. Required precautions shall be taken to prevent the potential risks in facilities which expected to have a gas generation.

Article 13 Emergency Action Plan take part in the Waste Management Plan. Internal Emergency Action Plan covers risks that may occur inside the facility shall also prepared in accordance with the criterias listed in Annex-2.

Article 14. A Waste management plan (including the management of mining wastes) will be prepared pursuant to Annex-1 together with the required EIA report and project description.

Article 15. Application projects of facilities confirmed at the end of the EIA process to be prepared pursuant to Annex-7 and submitted for the Ministry's approval. Construction auditing are made in accordance with the procedure and principles given by the Ministry. Auditing reports of the mining waste disposal facilities are presented to Ministry. Certificate of approval will be prepared by the Ministry if the facility constructed in accordance with the plan. Operator will apply to environmental permits and license for mining waste disposal together with the documents concerning collateral and certificate of approval within the scope of the Regulation on Environmental Permits and Licenses.

Article 16. Operator shall conduct environmental monitoring; operation, closure and after closure in specified periods as a





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requirement of the environment permitting/licence. Sampling, frequency of analysis and parameters to be analyzed regarding surface water and ground water quality shall be determined and performed pursuant to Regulation on Surface Water Quality Management and Protection of Groundwater Against Pollution and Deterioration during the EIA process. Required monitoring devices shall have been determined by operators during EIA process in the facilities expected to create gas and dust particles formation and legitimatized by Ministry.

Annex-1. Waste Management Plan;

Annex- 2. Internal Emergency Action Plan

Annex-3. Mining Waste Characterization

Annex-5. Mining Waste Disposal Classification Criterias

Facility are classified according to the three criterias given in below;

1. Risks Associated with Waste Disposal Facility Integrity:

Category A: High loss of lives, Serious Danger to Human Health, Serious Damage to Environment

Catergory B: Low loss of lives, Non-serious Danger to Human Health, Non-serious Damage to Environment

If spoil dumpsite pose risk associated with the landslides and people having close proximity to those areas, the spoil dumpsite areas are regarded as serious risk category. The potential risks regarding the human health shall be determined according to the following factors;

- Facility size and characteristics
- Waste amount and characteristics
- Waste pile slope
- Potential leachate generation
- Ground features
- Topograph
- Proximity to water reservoirs, sturctures and buildings
- 2. The Amount of Existing Hazardous Wastes in Disposal Facility:

If the facility has hazardous waste components above the threshold limit value (based on dry weight basis), the following statements given in Annex-5:

Expected amount of Hazardous Waste generated from enrichment process; (A)

Total amount of waste which are expected to be generated from enrichment process; (B)

If the A/B ratio exceeds 50%, facility classified as Category A

If A/B ratio is under 5%, facility can not be classified as Category A in terms of the waste amount

If A/B is ranked between 5% and 50%, its classified as both Category A and B according to the results of site-specific risk





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assessment upon the affects of hazardous waste

3. The Potential of Chemical and Pharmaceuticals in Disposal Facility

General principles for the determination of existing chemical levels in a facility are stated in Annex-5.

Annex-7. İmplementation Project Format. including the following some of those statements. Consulting firms, EIA licensed firms or national engineering and architecture firms shall prepare application projects on mining waste disposal facility. The following statements shall take part in the application project regarding the waste disposal facility which is planned to construct;

- Hydrogeological report and hydrological report
- hydraulics report and margin of safety calculation
- Geological geotechnical report
- Static-reinforced concrete report
- Earthquake risk analysis report
- Technical Specifications

In addition to the above mentioned statements, detail drawings shall be made for the following items stated in Annex-7;

Facility unit, slope of basement, filling plan, disposal site filling stages, surface water collection (drainage plan), leachate generation (amount), leachate drainage plan, road transportation to waste disposal site, waste hauling route, berms in waste disposal site, geomembrane details, observation wells to detect leakage shall be displayed.

#### **ENVIRONMENTAL NOISE**

# Regulation on the Assessment and Management of Environmental Noise

(Official Gazette Date/ Number: 04.06.2010/27601; last amended on 27.04.2011) The regulation establishes standards for acceptable levels of noise and vibration during the day and at night in different environments (residential, commercial, industrial, etc), limits on increases in noise levels and standards for construction sites. The regulation also covers principles and criteria for buildings exposed to vibration.

Article 8: (i) Facilities listed in Annex-1/ Annex-2 of the "Regulation on Permits and Licenses to be obtained pursuant to the Environmental Law" which are subject to an integrated Environmental Permit, with the exception of those indicated with "\*" are required to prepare an Acoustic Report for noise evaluation pursuant to this regulation (ii) Facilities not listed in Annex-1/ Annex-2 of the "Regulation on Permits and Licenses to be obtained pursuant to the Environmental Law" are required to prepare an Environmental Noise Level Assessment Report upon any request of relevant authority.

Article 21. Noise limits for waterways: Limits for environmental noise releasing from the water vehicles in ports shall not exceed Lday: 65 dBA, Levening: 60 dBA and Lnight: 55dBA.

Article 22: Environmental noise levels from facilities shall not exceed the limits given in Table 4 of Annex 7 of the regulation.

Article 23: Environmental noise levels from activities at construction sites shall not exceed the limits given in Table 5 of Annex-7. Construction activities that are inside or close to residential areas shall not be carried out in evening and night times. For projects that are identified as public benefit including urban main roads, construction activities that would interrupt traffic

Acoustic Report (for the facilities listed in Annex-1/ Annex-2 of the "Regulation on Permits and Licenses to be obtained pursuant to the Environmental Law")

Environmental noise level assessment report (if requested by relevant authority for the facilities not listed in Annex-1/Annex-2 of the "Regulation on Permits and Licenses to be obtained pursuant to the





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	during the daytime can be carried out in the evening and at night provided that (i) the limit values of 5dB(A) below the daytime	Environmental Law")
	limits are met in the evening and 10 dB(A) below at night (ii) a permit is obtained from the relevant authority taking into account the opinion of the Provincial Directorate of Environment and Urbanization.	<b>Noise permit</b> (within the scope of the
	Article 25: Vibration levels at very sensitive and sensitive areas, which will be created by blasting operations of mining or quarry or similar activities shall not exceed the levels given in Table 6 of Annex 7.	"Environmental Permit")
	Vibration levels at very sensitive and sensitive areas, which will be created by activities such as driving piles during construction and by heavy construction machines, shall not exceed the levels given in Table 7 of Annex 7.	
CHEMICAL CONTROL		
Regulation on Road Transportation of Hazardous Materials (by Ministry of Transport, Maritime and	The regulation defines the transportation conditions for hazardous materials (packaging and signing of hazardous materials, vehicle properties etc.) by road and responsibilities, rights, provisions and working conditions of the senders, receivers, loaders, unloaders, packaging parties, transporters and drivers. This regulation is prepared in accordance with the provisions of the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR).	Transportation Authority Certificate (relevant hauler should hold this permit)
Communication) (Official Gazette Date/Number: 24.10.2013/28801; last amended on 27.08.2014)	Under the regulation, entities that transport hazardous materials are required to hold one of the authority certificates C1, C2, K1, K2, L1, L2, M1, M2, M3, N1, N2, R1, R2.	
Regulation on Chemical Inventory and Control	Provides guidelines for chemical inventory to be registered and submitted to the MEUP for chemicals that are imported, produced or exported from site operations.	
(Official Gazette date/number:	The chemicals produced or imported more than 1 ton and above in a year shall be registered to the MEUP.	
26.12.2008/27092; last amended on 23.05.2010)	The chemicals listed under Annex-1 of the regulation are excluded from the registration provisions.	
Regulation on Ozone Layer Depleting Substances (Official Gazette Date/Number:	Provides guidelines on decreasing the use of ozone layer depleting substances in line with the Montreal Protocol. Pursuant to article 14, the use of any substances listed in Article 5 of the regulation is prohibited, with the exception of laboratory and obligatory uses.	
12.11.2008/27052; last amended on 12.11.2008)	Article 17 (Leakage control) requires that the controlled substances contained in refrigeration, air-conditioning, heat pump equipment, equipment containing solvents or fire protection systems and fire extinguishers shall be recovered by the end user for recycling or reclamation, during the maintenance of equipment or before the dismantling or disposal of equipment.	
	According to article 18 (Periodic Control of Fixed Equipment), as of 1/1/2012, it is required by the end-user to annually conduct and document inspections of fixed equipment containing more than 3 kg of controlled substances.	
	Periodic control of air-conditioning and cooling equipment to be used by the project and if necessary, recovery and proper handling of refrigerants during dismantling of equipment.	





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NATURE CONSERVATION and BI	ODIVERSITY	
Forest Law No. 6831 (Official Gazette Date and Number: 08.09.1956/9402)	Regulates the protection of forests. Pursuant to Article 16 of the Law, permission for mine exploration, mining operation and construction of the facilities required for mining activities within the state-owned forests are given by Ministry of Environment and Forestry (New Ministry of Forest and Water). After completion of mining activities, forest areas should be rehabilitated.	Permission for mining activities Rehabilitation Project
	In accordance with article 17 of the Law, forest areas can be used by real persons and legal entities for installations which are for the public benefit after obtaining a permit from Ministry of Forestry and Water Works, and the period of the permit cannot exceed 49 years.	
Regulation on the Application of the 16 <sup>th</sup> article of the Forest Law	The Purpose of the Regulation on the Application of the 16th article of the Forest Law is to determine principles and procedures regarding the permissions and/or consents to be given pursuant to Article 16 of Forest Law and rehabilitations of these areas.	
(Official Gazette Date and Number: 30.09.2010/27715; last amended on 07.07.2012)		
Regulation on the Application of the 17 <sup>th</sup> and 18 <sup>th</sup> articles of the Forest Law	The aim of the Regulation is to regulate processes regarding the permissions to be given pursuant to Article 17 <sup>th</sup> and 18 <sup>th</sup> of Forest Law.	
(Official Gazette Date/Number: 15.09.2011/28055)		
Regulation Concerning	Defines the principles for exploitation of trees by owners in areas not regarded as forests under the Forestry Law No. 6831.	Permit for removal of tree
Exploitation of Trees and Shrubs in Areas not Regarded as Forests (Official Gazette Date/Number: 03.08.2012/28373;	Pursuant to article 4, those who wish to remove trees located in areas not regarded as forests per Article 1 of the Law on Forests No. 6831, should make an application to the Forestry Administration indicating address, location, surface area, feature and adjacent neighbours of the immovable asset and numbers and species of the trees and shrubs within the asset, purpose of the removal, and the information whether this asset is previously subject to the removal permission or not.  Article 9 of the regulation specifies limitations and exemptions based on certain issues such as species and locations of the trees.	
Regulation on the Protection of Wetlands (Official Gazette Date and number: 04.04.2014/28962)	The purpose of the Regulation is to determine the protection, management and development of Wetlands located within the land border and continental shelf of Turkey and provide corporation and coordination between commissioned organizations and institutions. The provisions of this regulations are not implemented for wadi (dry creek). The regulation involves the protection of wetlands and related habitats and sustainable utilization of wetland areas by preserving the ecological characterization to hand down the next generations. Other than that, the regulation involves the constitution of National Particular Wetland Commissions and the procedures and principles of this commissions. It is not allowed to discharge any untreated domestic wastewater and industrial wastewater to the wetlands, waters feeding the wetlands or dry creeks that have a connection to the	Wetland Operation Permi (for Annex-2 activities)





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	wetlands. It is not allowed to dump garbage, debris, excavation material, sludges of dredging and process wastes into the wetland areas. Except for the activities defined in the regulation, it is not allowed to have any activity within the absolute protection area, wetland area and ecological interaction area. For activities that are to be built in the buffer zone, the regulation classifies the activities into 2 groups. Annex 1 lists the activities that are not allowed to be built in the buffer zone and Annex 2 lists the activities that can be built upon receipt of a permit from Ministry of Forestry and Water.	
CULTURAL HERITAGE		
Law on Preservation of the Cultural and Natural Assets	The law defines the movable and immovable cultural and natural assets to be protected, arranges the related actions to be taken, determines the establishment and duties of the organization that will take implementation decisions.	Contact museum directorate in case of a
No. 2863	Article 3. Definitions:	chance find during
(Official Gazette Date/Number: 23.07.1983/18113; last amended on 11.10.2013)	<b>Cultural Assets</b> : All movable and immovable assets on the surface, underground or underwater regarding science, culture, religion and fine arts that belong to prehistoric and historic area or which have scientific or cultural genuine qualifications that belong to prehistoric and historic areas.	construction
	<b>Natural Assets:</b> Valuables from geological, prehistoric and historic era, on surface, underground or under water, of which the preservation is essential due to their unique features and beauty.	
	Article 4 defines the Notification Liability: Any individual who finds movable or immovable cultural and natural assets, who are aware of, or acknowledge that cultural and natural assets exist within their land they own or utilize should notify, at the latest within three days, the nearest museum management or mukhtars in villages or public officials in other locations.	
PORTS / COASTAL AND MARINE	ENVIRONMENT	
Ports Law (Law No: 618)	This law regulates general responsibilities, duties and restrictions with regard to port operations.	
(Official Gazette Date/Number: 20.04.1925/95, last amended	Article 1: The Government is responsible for the administration, cleaning, deepening and widening of ports, for the placing of buoys and their maintenance in good shape, and all the other activities related to ports.	

on 29.07.2008)

Article 2: All ships entering and abandoning Turkish ports are to comply with the provisions of statutes to be prepared and published by the Government concerning the act of approaching their anchorage area to piers, the loading and unloading of commercial property, the locations and period within which they can load and unload flammable material and the period of time they can remain in ports and the safety and security precautions they have to take, depending on the requirements of every port and technical necessities that may arise.

Article 4: No pier, quay, slip, boathouse, repair yard, factory, café, shop or public sea baths can be constructed on sea shores without permission from the harbor master. No ballast, garbage, waste, rusty material or similar material can be thrown into the sea in areas prohibited by the harbor master.

Article 7: The owners, captains and agencies of ships sunk in a manner hindering the safety of navigation and voyage in ports, are responsible for the removal of the ships and their property completely at the time short time period to be determined by the

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harbor master. The mentioned period of time shall be notified to those responsible either by announcements to be made in newspapers or, via the notary to which they are registered.

The above-mentioned period may be extended by the State Ministry in Charge of the Economy if it is deemed necessary or if there exists, a legal conflict concerning the ownership of the ship and its property, by an objection to be made by those related to the conflict.

The harbor masters are authorized to remove or destroy ships and their property which have not been removed by the owner, captain or agency within the period of time determined. For those ships and property which are not destroyed but removed by the harbor administrations, the ship owners shall be called to pay for the costs of removal and collect the wreck by means of a newspaper announcement. Ships and their property which are not collected and for which removal costs have not been paid within 15 days of the announcement shall be sold by financial officers the upon the application of harbor administrations. Their value shall be confiscated by the treasury. If the market value exceeds the cost of removal, the exceeding amount shall be paid to the owners by the treasury, upon their application.

For state owned wrecks and their property, no newspaper announcement is necessary. They shall be removed by harbor administrations and submitted to financial officers. Those which are not in a position to be removed are destroyed.

Article 8: The Government is authorized for the establishment of a joint- stock company for every port which possesses stocks for the arrangement of loading, and unloading, water and coal distribution activities by utilization a portion of its capital from its budget. For the Port of Istanbul, the establishment of such a firm is compulsory until the end of 1926.

Ship owners performing the above-mentioned activities, shall enjoy the right of being primarily considered for stocks in the amounting to the value of their ships. However, if they fail to exercise this right within 6 months of the establishment of the abovementioned companies, this right ceases to exist. Companies shall are under the obligation of giving priority to workers of the said ships. The value of the said ships is determined by a delegation of five people composed of one member of the chamber of maritime commerce, the commerce officer, harbor master and ship owners.

Article 9: Ship owners carrying humans, animals, sand, timber etc. from one coast to another within the borders of the municipality or ship owners transferring passengers or passenger cargo to ships, can work freely.

Article 10: The transportation tariffs of maritime vehicles within municipality borders shall be arranged and determined once in every 6 months by a commission composed of the Maritime Commerce Director or the harbour master, one member from the chamber of commerce and municipality, and if their exists, a member of the maritime chamber of commerce and a member of the company assembly administration and of the commerce director of the region. The mentioned arrangement shall be confirmed by the Ministry of Commerce.

Article 12: Port officers shall prepare reports concerning ship owners and members of companies which act contrary to this Act and the statutes mentioned in article 2, and shall submit them to the harbor master.

Article 14: Decisions rendered in the presence of the defendant are definite. Decisions rendered in absentia are subject to objection. The period of appeal is three days, not including holidays, after the decision has been notified to the defendant or a





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	member of his/her crew or a member of his family.	
	Article 17: The pilots with which ships or seafarers shall employ have to be registered at the at port administrations.	
Coastal Law (Law No: 3621) (Official Gazette Date/Number: 17.04.1990/20495; Last	This Law sets forth the principles for protection of the marine, natural and artificial lakes and river coasts and the shore buffer zones by considering their natural and cultural characteristics and for their utilization towards the public interest and access for the benefit of society.	
amended on 08.02.2008)	Article 5. Determination of the shore edge line is an obligation for planning and implementation on shore and shoreline. Structures to be constructed on coastline can only be closed to the shore edge line up to 50 meters.	
	Article 6. On the coasts, subject to an approved zoning implementation plan, infrastructural and other facilities which aim either shore protection or utilization of the coast for the public interest and buildings and facilities such as shipyards or fish farming facilities which cannot be located inland due to the nature of the activity can be built. No excavation which modifies the coast is permitted. Sand, gravel and similar materials shall not be taken or carried away.	
	Article 7. Gaining land through reclamation and drainage which are subject to zoning plan, can be carried out along sea, lake and river coasts only in cases where the public interest is served and under the provision that sufficient attention and care are given to ecological characteristics.	
	Pursuant to Article 15 of the law, it is prohibited to dump waste such as debris, soil, garbage, into the coastal environment. Those who dispose of waste in such a manner will be penalized based on the type of waste and its damaging effect on the environment.	
Regulation on the Implementation of Coastal	Article 5 of the implementation regulation prohibits the discharge of waste into the coast and states that the provisions of Water Pollution Control Regulation will apply.	
Law (Official Gazette Date/Number: 03.08.1990/20594)	Pursuant to article 12 of the regulation, planning and the construction on coast shall not start before the preparation and the approval of development plan with a scale of 1/1000 (i.e. zoning implementation plan).	
Regulation on Principles and Procedures for Granting Operation Permits for Coastal	The regulation sets forth the requirements to obtain an operation permit for coastal facilities from the Undersecreteriat for Maritime Affairs, as well as the related procedures. Pursuant to the regulation, in order to operate a coastal facility in Turkey, an entity should either carry a permanent or a temporary operation license.	Operation permit for coastal facilities
Facilities	Port may be granted a temporary operation permit for a period of 6 months to 1 year, for the following case: To allow for the	
Official Gazette Date/Number: 18.02.2007/26438; last amended on 01.07.2009)	completion of the 1/1000 scaled development plan by the Privatization High Council and other activities that are within the jurisdiction of General Directorate for the Construction of Railways, Seaports and Airports, for coastal facilities that are built before the enforcement date of the Coastal Law (Law No:3621), that are operated by public bodies and are within the scope of privatization.	
Law on the Response in case of Emergencies and	The aim of the law is to establish a general national system and framework to respond to accidental pollution of marine environment by oil and other harmful substances. This law defines (i) principles concerning response and preparedness for	





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Compensation for Losses by Oil and Other Harmful Substances in Pollution of Marine Environments (Law No. 5312)	eliminating the risk of pollution, or for reducing, containing, or eliminating pollution in emergency incidences stemming from ships or operations of coastal facilities,(ii) principles for determining and compensating for damages resulting from an incident, (iii) principles concerning fulfillment of international commitments, and (iv) powers, duties, and responsibilities of the officials of institutions, organizations, ships, and facilities as stipulated in the law, along with those of any (other) persons subject to the law.	
(Official Gazette Date/Number: 11.03.2005/25752)	Pursuant to the law; owners, operators, captains, directors, lessees, possessor and guarantors of the coastal facilities are liable to comply with all necessary requirements envisaged in the international law for the safety of lives, navigation, goods and environment.	
	Coastal facilities should take financial liability insurance against the damages within the scope of this Law. Coastal facilities that fail to comply with the requirement to take insurance are not allowed to operate. "Coastal facilities" is defined as "Facilities engage in activities which may cause sea pollution with petroleum and other dangerous elements at the coast or zones near the coast including open sea facilities and pipelines" in Article 3 of the Law No. 5312.	
	Pursuant to article 4, the MoEU is in charge of preparation of emergency response plans, implementation of emergency response plans in coastal areas, determining kind and impact of pollution, assessment of damage to environment and rehabilitation of the areas affected by post-incident pollution. The Undersecreteriat of Maritime Affairs is responsible for implementing emergency response plans to prevent pollution of the sea as caused by marine vehicles, matters of preparedness and intervention in case of pollution, and matters of compensation for damage and notification of guarantees of financial liability. The powers, duties, and responsibilities pertaining to public order and law enforcement shall belong to Coast Guard Command.	
Implementing Regulation of Law No. 5312 on the Response in case of	This regulation lays down provisions for implementation of the Law No. 5312. Pursuant to the regulation, response, preparedness and planning will be ensured through the following instruments: (i) National Emergency Response Plan (ii) Regional Emergency Response Plan (iii) Vessel Emergency Response Plan (iv) Coastal Facility Emergency Response Plan	Coastal Facility Emergency Response Plan
Emergencies and Compensation for Losses by Oil and Other Harmful Substances in Pollution of Marine Environments (Official Gazette Date/Number:	Pursuant to article 23, the Coastal Facility Emergency Response Plan must be prepared by institutions which comply with criteria provided in Annex-1B and in the format specified in Annex-1C of the regulation. The Coastal Facility Emergency Response Plan describes necessary preparedness and response activities for all levels of incidents that can be caused by the coastal facility. It identifies procedures and actions to be applied in case of an emergency according to the intervention levels and includes lists of necessary personnel, material and equipment for response to an incident, determined based on the risk assessment to be performed in accordance with annex-1a.	
21.10.2006/26326)	In accordance with this regulation, coastal facilities must prepare emergency response plans for all levels defined in the regulation as follows: Level 1 includes incidents that may cause small scale pollution at the coastal facility or as a result of the operational activities at the vessels. These incidents can be controlled by the own capabilities of the coastal facilities or the vessels; Level 2 includes medium scale incidents that the capability of the coastal facility or the vessel is not sufficient to control and regional capabilities are required; and Level 3 includes large scale incidents resulting from serious accidents that occur at the seas and/or coastal facilities.	





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	Equipment to be used at the coastal facilities for emergency response should have nationally and internationally accepted standards. In order to ensure compliance of the equipments with each other, equipment standardization is required.	
	With respect to vessels carrying petroleum or other harmful materials, the subject regulation lays down the forms to be filled in and submitted to the Undersecretariat of Maritime Affairs prior to arrival or immediately after departing from ports.	
Regulation on Notifications Pursuant to SOLAS and MARPOL Agreements (Official Gazette Date/Number: 11.08.2006/26256)	The regulation sets forth principles and procedures for reporting, communication and notification activities within the scope of Solas (International Convention for the Safety of Life at Sea, dated 1974) and Marpol (International Convention for the Prevention of Pollution from Ships dated 1973 as amended by the 1978 protocol) agreements. The Regulation aims to prevent marine pollution sourced from ships, to provide safety of life and property. The Regulation covers Turkish Flagged Ships.	
Aquatic Products Law (Law	The purpose of this law is to determine the principles for the protection, production and control of aquaculture.	
No: 1380) (Official Gazette Date/Number: 04.04.1971/13799; last amended on 11.06.2010)	Aquaculture is defined as plants, animals and their eggs that exist in seas and inland waters. Pursuant to article 20 of the law, it is prohibited to dump substances that are detrimental to the health of aquaculture, to the health of people who produce or consume aquaculture and to the production tools such as equipments and tools, into inland waters and production areas and their vicinity in seas. It is also prohibited to establish facilities that will discharge waste in these areas. The substances which are prohibited to be discharged are indicated in the relevant regulation. The responsible government unit is the Ministry of Agriculture and Rural Affairs (new The Ministry of Food, Agriculture and Livestock).	
Aquatic Products Regulation	The regulation lists the substances prohibited to be discharged.	
(Official Gazette Date/Number: 10.03.1995/22223; last amended on 10.03.2010)	According to Article 11 of the Regulation, the substances which are prohibited to be discharged and allowable waste discharge values are listed in Annex-5 of the regulation.	
MINING		
Mining Law (Law No. 3213)	The Law provides a framework for the regulation of mining activities and required permissions.	<b>Exploration License</b>
(Official Gazzette Date/Number:	Pursuant to Article 2 of the Mining Law, mines are classified into six groups and according to the Law, coal is classified under Group IV.	Pre-exploration activity report
15.06.1985/18785; last amended on 21.07.2012)	According to Article 7 (Permits in mining activities), The Ministry of Energy and Natural Resources is authorized to prohibit mining activities on certain types of lands by taking into consideration the region, type of the mine, environmental impact and other similar aspects, provided that vested rights are protected and the opinions of the relevant authorities are obtained.	Exploration activity repor Detailed exploration activity reports
	Mining activities are permitted in forest areas and wildlife development areas, subject to the relevant provisions of the applicable laws (i.e Forest Law).	Operation Project Operating License
	Mine extraction and operation activities and infrastructure facilities which are scientifically and technically proven not to damage the environment and human health, are permitted within the 1000-2000 m wide strip from maximum water level of a	Yearly Notification to General Directorate





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drinking and utility water reservoir, on condition that no blasting is done via gallery method and no wastewater is directly discharged into the receiving environment without treatment (provided that vested rights are protected). Within the protected zone beyond 2000 m, mine extraction and any kind of facility found appropriate to be performed according to the EIA report, can be constructed. However, limits specified in relevant regulation should be met during the activity for discharges into the receiving environment.

Mine Engineer (Technical Supervisor)

Mining activities that are detected to be detrimental to the health of environment and persons shall be suspended until required preventions are activated.

Article 16. (Firs application and licensing) Group IV Mining activities are obtained an exploration license.

Article 17. (Exploration) After having exploration license, a pre-exploration activity report shall be submitted until the end of first exploration year (pre-exploration year). Otherwise, the license is canceled. After submission of pre-exploration activity report, Group IV Mining activities are gained right to general exploration for next two years. Another general exploration activity report shall be submitted until the end of general exploration period. Otherwise, the license is canceled. After submission of general exploration activity report, detailed exploration period begins (four years) and detailed exploration activity reports are expected for each year.

Article 24. (Operating License and Operation) After completing all necessary exploration activity reports, operating license is given for the activity provided that a operation project prepared by at least one mine engineer is submitted.

According to Article 29, operations shall be implemented according to relevant provisions of law. All mining activities shall be stopped in case of determination of dangerous conditions that risks security of life and property.

Every year, until end of April, licence holder is obligated to send papers below to General Directorate;

Technical papers about previous year, sales information form, Operation information form, Prospecting informations (if practiced).

Article 31. (Technical Supervising) Mining operations shall be carried out under supervising of mining engineer. Underground mining facilities and open pit mining activities with at least 15 employee are obligated to employ least one permanently working mine engineer.

# Mining Activities Implementation Regulation

(Official Gazzette Date/Number 06.11.2010/27751; Last amended on 07.01.2014) The Regulation contains procedures and principles regarding: (i) granting of licenses and certificates, mineral exploration, operation processes, license modifications, audit and control of activities, discovery rights, desertion, handover and transfer processes, principles of mine exploration and exploitation, documents to be prepared by licensees, payable charges, permits to be obtained in order to engage in activities, mining register and expropriation processes; (ii) processes to be implemented in public investments as mineral exploration and operating activities, as well as state and provincial routes, roads, railways, airports, ports, dams, power plants, petroleum and natural gas, geothermal pipelines and facilities, water conveyance lines hindering each other, mineral exploration and mining activities becoming impossible due to practices of public corporations and institutions as well as failure to find alternative areas for public and private investments; (iii) granting of permits for the production of construction raw materials to be used by public corporations and institutions for projects such as roads, bridges,

Exploration License
Pre-exploration activity
report
Exploration activity report
Detailed exploration
activity reports
Operation Project
Operating License





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dams, ponds, and ports, etc.

Yearly Notification to General Directorate

Pursuant to Article 25 (Evaluation of operation license applications of Group III, Group IV and Group VI mining facilities), for license applications, these facilities should submit a detailed activity prospecting report and Management project including operation plan indicating visible and potential reserve data, which will also include a commitments on Environmental compliance during operation and closure periods in accordance with Annex-10 of the regulation and a paper indivates demand fee payment. An operation license is granted if the application is deemed appropriate. Pursuant to Article 35, facilities that have been granted an operation license must pay an Environmental Compliance Warranty, which is equivalent to the annual operation license fee, excluding the provisions of specific regulations.

Article 36 – (1) Every year until the end of April, the documents below are given together with the operating activity information form specified in Annex Form-14 and sales information form specified in Annex Form-15: a) Production of prior years, manufacturing map and appropriate scaled sections that shows the production of the previous year and the planned production of the next year, ventilation plan which includes the ventilation information for underground facilities, b) General/detailed research activity report which includes the source/reserve report appropriate for the nature of the activity if a research has been done in the operational area.

Article 114 – (1) If the mining activity is being done with the method of underground mining; the necessary permits are required to be obtained in the area of surface facilities that are connected to underground mining facilities and structures such as gallery heading, shaft, and ventilator. The underground mining activities project that is approved by the General Directorate in accordance with the applied method, technology and depth, permission is not needed to the surface area corresponding to the underground mining activities.

Article 117 – (1) The license holder shall have the required permit such as EIA decision according to the Law Article 7, the property permit, business license and working license with the permits related to the areas saved in the records of the General Directorate within three years after the operating license date of entry into force and after giving the permits to the General Directorate, operating permit is issued.

According to Article 123 (Mining activities on areas that are allocated for public service or for public benefit, and on private lands), permit from General Directorate of Mining Affairs should be received for mining activities located within 60 m distance to places and facilities for public services or for the benefit of public such as places of worship, schools, hospitals, libraries, highways and railways. It is mandatory to get the written consent of the property owner when mining activity is to be performed within 60 m distance to buildings and 20 m distance to private lands. These distances calculated horizontally can be determined for each activity by the General Directorate of Mining Affairs considering the extent of the activities, operation method, safety measures, and topographical and geological structure of the land. These areas are subject to restrictions specified in this regulation for Group II (a) mines and Group I (b) mines that are produced via blasting.

Pursuant to Article 126 (Mining activities in drinking and utility water basins); (1) The activities can continue within the framework of vested rights, in mining operation license areas located within 1000 m distance from the maximum water level of a drinking and utility water reservoir and authorized by the relevant institutions before the effective date of 5995 numbered Law





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	[Law No: 5595 O.G. dated 24.06.2010) is the law which made amendments to the Mining Law (Law no: 3213)]; (2) Mine extraction and operation activities and infrastructure facilities which are scientifically and technically proved not to damage the environment and human health, are permitted within the 1000-2000 m wide strip from maximum water level of a drinking and utility water reservoir, on condition that no blasting via gallery method is made and no wastewater is directly discharged into the receiving environment without treatment (provided that vested rights are protected); (3) Mine extraction and any kind of facility that are found appropriate to be performed according to the EIA report, can be done within the protected zone after 2000 m from maximum water level of drinking and utility water reservoir; (4) For mining activities performed within drinking and utility water protection basins, production activities are ceased if the provisions of this regulation are not met and necessary permits are not received, until the necessary measures and permits are received.  SECTION 3 of the Regulation states the responsibilities, qualifications, authorities of the Technical and Permenent Supervisors and Technical Officier.	
Regulation on Mining Permits	Regulates the principles and procedures to be followed for permitting of mining activities in certain allocated areas.	EIA not required or EIA
Official Gazette date/number: 21.06.2005/25852	According to Article 9 of the regulation, when a project is subject to EIA, mine operators should apply to the Ministry of Environment and Urbanization for an EIA report format within three months of receiving the operating certificate. For facilities subject to selection elimination criteria, a Project Description File is submitted to the Ministry of Environment and Urbanization and/or governorship within three months of receiving the mining certificate. An operation permit is granted upon EIA positive or EIA not required decision is issued.	positive decision Operation permit
Regulation on Reclamation of the Areas Disturbed by Mining Activities Official Gazzette Date/Number: 23.1.2010/27471; Last amended on 28.09.2012)	The regulation determines the principles and procedures regarding the reclamation of lands and the environment which have been destroyed as a result of mining activities and excavation activities conducted for material and soil supply.  Article 5 of the Regulation provides that mining facilities shall prepare a "Reclamation Plan" in the format provided within the annexes of the regulation as an exhibit to the EIA Report. Two separate formats are provided for projects listed in Annexes 1 and 2 of the EIA Regulation. The reclamation efforts shall start simultaneously with the excavation and moulding activities; shall continue during the mining activities; and shall finalize within two years after the mining activities are completed. In addition to the above stated two-year reclamation period, the mine area shall be subject to another three-year monitoring period or any other monitoring period specifically provided within the scope of the EIA Regulation, depending on the type of the mine. Pursuant to Article 9; operators of mine facilities are required to submit a monitoring report to the PDEU by the end of January of each year. However, if the area subject to reclamation activities is regarded as forest, supervision of monitoring activities shall be conducted by the Forestry General Directorate; and if the area subject to reclamation activities is a pasture or an agricultural land, supervision of monitoring activities shall be conducted by the Ministry of Agriculture and Rural Affairs.	Rehabilitation Plan
OCCUPATIONAL and COMMUNI	TY HEALTH & SAFETY	
Labor Law No. 4857 (Official Gazette Date/Number:	The purpose of this law is to regulate the working conditions and work-related rights and obligations of employers and employees working under an employment contract.	Workplace notification





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10.6.2003/25134; last amended on 19.02.2014)	Article 3. Declaring the establishment: The employer who sets up or takes over an establishment covered by this Act, who completely or partly changes the nature of his business, or who permanently closes down an establishment due to the completion of work or for any other reason must, within one month, notify the Regional Directorate of Labour of the name and surname or trade mark and address as well as the names, surnames and addresses of employer representatives, if there are any.	
	Article 10. Employment which, owing to its nature, lasts only up to 30 days is transient; and employment which requires a longer period is continuous.	
	Article 63. In general terms, working duration is at most forty five hours a week. However, working duration for employees who work underground mining activities is at most thirty six hours in a week and siz hours in a day.	
	Article 69. Night hours and night work: Night work for employees must not exceed seven and a half hours.	
	Article 73. Children and young employees under the age of eighteen must not be employed in industrial work during the night.	
Occupational Health and	The purpose of this Law is to regulate the employer and the employees' duties, powers, responsibilities, rights and obligations to	Onsite doctor
Safety Law (Official Gazette Date/Number:	provide the occupational health and safety at work and improve the current health and safety conditions.  Pursuant to Article 2, this law shall be applied on all public and private sector jobs and businesses, all workers including the	Health and Safety specialist
30.06.2012/28339; Last amended on 11.09.2014)	employers with employer representatives of these businesses, apprentices and trainees regardless of the fields of activity.  According to Article 4, the employer is obliged to provide work related health and safety. The employer's obligations are; (i) Prevention of occupational risks, taking all necessary measures including education and providing information, making	Health and Safety Unit (if required)
	organization, providing the necessary tools and equipments, adapting the health and safety measures into the changing	Risk Assessment
	conditions and making efforts to improve the current situation (ii) Monitoring and inspecting the occupational health and safety measures in the workplace and help to recover incompatibilities (iii) Performing the risk assessment or getting performed (iv)	Emergency Action Plan
	Considering the employee's eligibility in terms of health and safety while tasking (v) Taking necessary measures to prevent workers to enter in the vital and special danger areas other than the workers who have adequate information and instruction.	Safety Report (for higher level establishments)
	Article 6 states the employer's responsibilities on providing occupational health and safety services(occupational health and safety expert, onsite doctor etc.) to prevent occupational risks and the works to protect against these risks	Major incident preventio policy (for lower level
	Pursuant to Article 8, Health and Safety experts shall have at least (A) class certificate for very dangerous works, (B) class certificate for dangerous works and (C) class certificate for low dangerous works. If full timeon-site doctor and health and safety expert are required to be employed, employer establishes an onsite health and safety unit.	establishements)
	Pursuant to Article 10, employer shall conduct a risk assessment.	
	Pursuant to Article 11, emergency action plans are prepared, emergency teams are established and emergency practices are conducted.	
	Article 14. The employer keeps records of all work related accidents, makes the necessary inspections and prepares related reports. Notifies occupational accidents, occupational diseases to the Social Security Institution within three days after being reported by the occupational physician and health service providers.	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Pursuant to Article 15, employer shall medically check employees before they start working, in case of any work change, etc.	
	Article 17. The employer is obligated to provide occupational health and safety training to the workers. This training shall be given especially before starting the work, after workplace or job changings, work equipment changings or application of any new technology. The training shall be repeated in accordance with changings and emerging risks and when necessary shall be renewed by regular intervals.	
	Article 20. Employer delegates one or more employee representatives (if he/she cannot be determined by election of other workers) considering the total numbers of the workers.	
	Article 22 states that occupational health and safety board is required to be established for the workplaces having 50 and more worker and active along six months and more.	
	Article 25 states the issues related to situations that require the work to be suspended.	
	Article 26 lays down the penalties to be applied in case of non fulfillment of employer's obligations.	
	Pursuant to Article 29, for the workplaces which may cause major industrial accidents, employers prepare a major incident prevention policy or safety report.	
Occupational Health and Safety Risk Assessment	The purpose of this regulation is to determine the procedures and principles of the risk assessment in terms of occupational health and safety.	Risk assessment
Regulation (Official Gazette Date/Number: 29.12.2012/28512; Last	Article 5. The employer performs the risk assessment for the purpose of providing, maintaining and developing health and safety of work environment and the workers. Performing risk assessment shall not eliminate the employer's obligation to ensure the occupational health and safety at work.	
amended on 29.12.2012)	Article 10 lays down steps that shall be applied for risk control; (i) Planning (ii) Deciding on risk control measures (iii) Implementation of risk control measures (iv) Monitoring applications.	
	Pursuant to Article 11, risk assessment is required to be documented.	
	Article 12. Performed risk assessments shall be renewed regularly according to the hazard class; at most every two years for very dangerous workplaces, every four years for dangerous workplaces, every six years for less dangerous workplaces. Apart from this, under certain conditions (process changes, accidents etc.) risk assessment shall be updated or renewed.	
Regulation on the Provisions of Occupational Health and Safety Training of Employees (Official Gazette Date/Number: 15.05.2013/28648)	The regulation sets the principles for health and safety trainings to be given at workplaces to employees by the employers. This regulation is applicable to those workplaces that are within the scope of Occupational Health and Safety Law.	Employee training
	Article 5. Liabilities of the Employer: Employers are responsible for (i) informing workers on their legal rights and responsibilities, (ii) preparing occupational health and safety training programs on the occupational risks they are faced and the necessary precautions that need to be taken, (iii) organization of the trainings, (iv) ensuring the participation of employees to these trainings. Employers are responsible for providing the necessary training to employees regardless of the type of employment contract.	





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Relevant permit requirements or other actions

Article 6. Employer shall provide occupational health and safety trainings for employees. Trainings shall include subjects defined in Annex-I.

Article 10. Development of Training Programs: A yearly training program is developed including information on the purpose, topic, duration and date of the trainings, the names and titles of the trainers, the number of the participants.

Article 11. Training Durations and Topics: Workers are trained before they start work and at determined periods during the work. Durations of the trainings for each worker are minimum eight hours for low dangerous works, twelve hours for dangerous works, and sixteen hours for very dangerous works. Topics of trainings are given in Annex-1.

Pursuant to Article 13, occupational health and safety specialist and on-site doctor assigned in workplaces, other authorized institutions and organizations and common health and safety units can provide occupational health and safety trainings.

Article 15. The trainings are recorded and kept in the workers' personal files.

### Occupational Health and Safety Services Regulation

(Official Gazette Date/Number: 29.12.2012/28512; last amended on 31.01.2013)

The purpose of this regulation is to regulate the principles related to the establishment of "workplace health and safety units" and certification of "common health and safety units", and set out the duties and responsibilities of these units.

This regulation is applicable to those workplaces that are within the scope of the Occupational Health and Safety Law.

Pursuant to Article 5 of the regulation, The employer appoints one or more on-site doctor, occupational health and safety specialist and other health care personnels among the workers who meet the qualifications set out in this Regulation in order to determine and monitor the implementation of the occupational health and safety measures to be taken at workplace, prevention of occupational accidents and occupational diseases and in order to ensure the first aid and emergency treatment of the workers with protective health and safety services. The employer is responsible (i) to assign one or more than one workplace doctor, occupational health and safety specialist and other health personnel. This service can be externally supplied from Common Health and Safety Units (CHSU) in case of absence of qualified personnel in the workplace (ii) to establish a Workplace Occupational Health and Safety Unit (WHSU) for the workplaces in which full time on-site doctor and occupational health and safety specialist are required. For the workplaces in which full time doctor is employed, other health personnel is not obligatory (iii) The employer is responsible that the workplace doctor, the occupational health and safety specialist, and the units from which services are obtained have valid authorization certificates in accordance with the Occupational Health and Safety Law.

Pursuant to Article 7, employer maintains (i) any records relevant to health and safety activities (ii) personal health files at least 15 years after release date (iii) each page of the "approved notebook" is approved by relevant Provincial Directorate of Labor and Employment Agency, General Directorate of Occupational Health and Safety or notaries (Approved notebook is a unique notebook for each workplace which is used by on-site doctor and occupational health and safety specialist to note detections, advices and other required issues). Approved notebook is required to be submitted to relevant authorities whenever it is requested.

Pursuant to Article 10, WHSU is composed of at least one on-site doctor and one occupational health and safety specialist who is appropriate for the hazard class of the workplaces. Any other health personnel can be employed at this unit.

Article 10 and Article 11 state requirements and relavant conditions to be provided in workplaces (Annex-1 states minimum first

Occupational health and safety specialist

On-site doctor and other health personnel

Workplace occupational health and safety unit

Supply an approved Notebook





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	aid equipment requirements) in case of establishement of a WHSU, or employment of on-site doctor and occupational health and safety specialist or obtaining service from CHSU. First aid and emergency response room; instruments listed in Annex-1 and transportation vehicle are not stipulated to be made available in WHSUs that are agreed with health care provider by The Ministry of Health.	
Communiqué on Danger Class Lists Related to Occupational	The communiqué classifies the works in three categories including less dangerous works, dangerous works and very dangerous works (Annex-1).	
Health and Safety (Official Gazette Date/Number: 26.12.2012/28509;Last	According to Annex-1 of the regulation danger class of the Project components are classified as follows:  05.10.01-Hard Coal Mining: "Very Dangerous"	
amended on 18.04.2014)	41.20.01-Construction of non-residential buildings (industrial buildings, schools, hotels etc.): "Very dangerous" 42.91.01- Construction of coast and port and relevant hydromechanical structures (waterways, port, quays etc.): "Very Dangerous"	
	43.12.01-Preperation of ground and land sites, site cleaning activities with excavation and construction works (prepration of drainage of construction and agricultural area, blasting and lifting rocks),(except for mining activities): « Very Dangerous »	
	43.12.02- Preparation of the mining sites (including tunnel opening): "Very Dangerous"	
	43.99.02-Underground works (including gallery opening for mining, storage etc.): "Very Dangerous"	
Regulation on Duties, Authority, Responsibilities	The purpose of this regulation is to set out the principles related to the qualifications, trainings, certification, duties, authority and responsibilities of the occupational safety specialists.	Occupational health and safety specialist (working
and Trainings of Occupational Health and Safety Specialists	This regulation is applicable to those workplaces and educational institutions that are within the scope of Occupational Health and Safety Law.	duration is determined considering the
(Official Gazette Date/Number: 29.12.2012/28512; last amended on 31.01.2013)	Pursuant to article 5, employer shall appoint at least one employee as the occupational safety specialist by taking into consideration of certificate class that is appropriate to the danger class of the workplace. In case of absence of qualified employee, employer obtains this service from common occupational health and safety units. Occupational safety specialist employment shall not affect employer's responsibilities.	specification of the projecomponents such as numbers of workers, danger class etc.)
	Pursuant to article 6, in case of full time employment of workplace doctor and health and safety specialist, employer establishes workplace health and safety unit.	
	Article 7. An occupational safety specialist shall have a valid occupational safety specialist certificate. Occupational safety specialists who have (i) C class certificate can work in low dangerous works, (ii) B class certificate can work in low dangerous and dangerous works, and (iii) A class certificate can work in workplaces with all danger class.	
	Pursuant to Article 12, the working duration of the occupational safety specialists at workplaces under:	
	Low dangerous class and having less than 10 workers: At least 60 minutes per worker in a year	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Low dangerous class: At least 6 minutes per worker in a month Dangerous class: At least 8 minutes per worker in a month Very dangerous class: At least 12 minutes per worker in a month Low dangerous class and having 2000 and more workers: One full time specialist per 2000 workers. If the numbers of the workers are greater than the multiple of 2000, additional numbers of occupational health and safety specialists are appointed considering the remaining number of workers.  Dangerous class and having 1500 and more workers: One full time specialist per 1500 workers. If the numbers of the workers are greater than the multiple of 1500, additional numbers of occupational health and safety specialists are appointed considering the remaining number of workers.  Very dangerous class and having 1000 and more workers: One full time specialist per 1000 workers. If the numbers of the workers are greater than the multiple of 1000, additional numbers of occupational health and safety specialists are appointed considering the remaining number of workers.	
Communiqué on Occupational Health and Safety Specialists (Class C) that can be Employed in Very Dangerous Works Official Gazette Date/Number: 14.06.2013/28677; Annulled Dylaw 26.12.2013)	This Communiqué regulates procedures and principles on Occupational Health and Safety Specialists employed in sectors defined in Occupational Health and Safety Law.  According to Article 5, Occupational Health and Safety Specialists (Class C) with 3 years of experience, can work in sectors defined in Annex-1.	
Regulation on the Occupational Health and Safety Boards (Official Gazette Date/Number: 18.01.2013/28532)	The regulation determines workplaces in which health and safety boards are to be established, and the working methods and the tasks, authorities, working procedures and principles of these boards.  The employer is liable to establish an occupational health and safety committee at workplaces where (i) works regarded as industrial is carried out, (ii) with minimum 50 workers that work permanently, and (iii) with permanent jobs that last more than 6 months.	Occupational Health and Safety Board
Regulation on the Health and Safety Measures to be taken in Workplace Buildings and Additions (Official Gazette Date/Number: 17.07.2013/28710)	The purpose of this regulation is to determine minimum health and safety conditions in the workplace buildings and additions. The regulation covers all workplaces within the scope of the Occupational Health and Safety Law.  Pursuant to Article 5, employers are obliged to apply minimum conditions stated in Annex-1 of the regulation.	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
Regulation on Health and Safety at Construction Sites	The purpose of this regulation is to determine the minimum health and safety requirements to be taken in construction works.  Article 4. Definitions	Health and Safety Coordinator (if required)
(Official Gazette Date/Number: 05.10.2013/28786)	Project responsible: Natural or legal entity assigned by employer and responsible to preparation, application and control of the application on behalf of the employer.	Health and Safety Plan
	Health and safety coordinator: Natural or legal entity given responsibility by employer or project responsible in preparation or application of the project and working on the health and safety assignments stated in articles 10 and 11 of this regulation.	Signboard (if required)
	Article 5 of the regulation sets the general obligations of the employer regarding the works (i.e waste management, sub-contructer relations, material use and transport, health and safety rules in the construction areas, personal protective equipment use) in construction areas.	
	Article 6. Project responsible and obligations of employers: Employers can assign one or more project responsible to fulfill provisions stated in this regulation instead of them.	
	Article 8. Employment of health and safety coordinators, health and safety plan and declaration: (i) In cases where there is more than one employer or subcontractor at a construction area, the employer or the person responsible for the project must assign one or more coordinators for health and safety issues (ii) The employer or the responsible person must prepare a health and safety plan prior to commencement of construction works (iv) In cases defined below, the employer or the responsible person is liable to declare the information defined in Annex III, to the relevant Regional Directorate of the Ministry of Labor and Social Security: If the construction works will last more than 30 days and there will be more than 20 permanent workers, If the size of the work requires more than 500 daily paid workers.	
	A signboard presenting the declared information must be placed in an appropriate location on the construction site and the information must be updated when required.	
	Article 10 and 11 states duties of the coordinators in site preparation and construction phases, respectively.	
	Prusuant to article 12, workers will be informed on health and safety measures taken at the construction area.	
	Annex-IV of the regulation defines the necessary measures for health and safety at the construction site by taking into account the minimum requirements.	
Regulation on the Tasks, Authority, Responsibility and	The purpose of this regulation is to set out the principles related to the qualifications, education, certification, duties, authority and responsibilities of the workplace doctors and also authorization of public health centers.	On-site doctor
Education of On-Site Doctor and Other Health Personnel	Pursuant to Article 5 of the regulation, employer shall employ an on-site doctor considering dangerous class of the workplace and numbers of the workers.	
(Official Gazette Date/Number: 20.07.2013/28713)	Pursuant to article 6, in case of full time employment of workplace doctor and health and safety specialist, employer establishes workplace health and safety unit.	
	Article 7. An on-site doctor shall have a valid certificate.	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Pursuant to Article 12, the working duration of the on-site doctor at workplaces under:	
	Low dangerous class and having less than 10 workers: At least 25 minutes per worker in a year For others:	
	Low dangerous class: At least 4 minutes per worker in a month	
	Dangerous class: At least 6 minutes per worker in a month	
	Very dangerous class: At least 8 minutes per worker in a month	
	Low dangerous class and having 2000 and more workers: One full time on-site doctor per 2000 workers. If the numbers of the workers are greater than the multiple of 2000, additional numbers of on-site doctors are appointed considering the remaining number of workers.	
	Dangerous class and having 1500 and more workers: One full time on-site doctor per 1500 workers. If the numbers of the workers are greater than the multiple of 1500, additional numbers of on-site doctor are appointed considering the remaining number of workers.	
	Very dangerous class and having 1000 and more workers: One full time specialist per 1000 workers. If the numbers of the workers are greater than the multiple of 1000, additional numbers of on-site doctor are appointed considering the remaining number of workers.	
Regulation on Health and Safety Requirements in the	The regulation sets out the minimum requirements to be met in terms of health and safety in the use of work equipments. All workplaces within the scope of the Occupational Health and Safety Law are covered by the regulation.	
Use of Work Equipments (Official Gazette Date/Number:25.04.2013/286 28; Last amended on 02.05.2014)	Article 5. General Liabilities of the Employer: (i) The employer shall take all the necessary measures to ensure that work equipment is appropriate to the work to be done and this equipment does not endanger the health and safety of workers (ii) While selecting the work equipment, by considering the specific working conditions and hazards regarding health and safety of workers the employer shall mind that the equipment will not pose an additional hazard (iii) In cases where the work equipment is not free from danger, the employer shall take measures to reduce the risk to a minimum level.	
	Article 6. The employer will ensure that the work equipments meet the minimum requirements defined in Annex 1 of the regulation and that they are at an appropriate safe level in accordance with the defined issues in Annex 2.	
	Article 7. Control of the Work Equipment: In cases where the safety of the work equipment depends on its installation conditions, the equipment will be checked after its installation, before used for the first time and when its position is changed. Accordingly, a document will be prepared showing that the equipment is correctly installed and working safely. Periodical control of the equipment that may pose a hazard will be done by specialists. The results of the controls will be recorded and kept. The equipments to be controlled, control frequency and conditions, and the procedures and principles regarding the documents to be prepared as a result of these controls are given in Annex-3.	
	Article 8 states that, work equipment having special risk shall only be used by assigned personnel and the repair, modification, control, maintanence, and commissioning shall only be made by specifically assigned people.	
	Article 10. Informing Workers: The employer is responsible for informing the workers on work equipment and their use by giving	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	them written instructions. Written instructions will consist of at least the following information: (i) the provisions of the use of work equipment, (2) the predictable abnormal conditions in the work equipment, (3) the results of the previous use experiences. Workers, even if they do not use the equipment, shall be informed about the hazards of the work equipment and hazards that arise upon modification of the work equipment. All the information and the written instructions shall be understandable by the relevant workers.	
	Article 11. Training of the Workers: The workers who use the work equipment shall be trained on the risks that may be caused by the use of the work equipment and ways to avoid these risks. Workers who are responsible for repair, control and maintenance of work equipment shall be given an adequate special training.	
Regulation on Manual Handling	The regulation sets principles to determine the necessary measures at works where manual handling is performed, to protect the workers from the risks particularly from back injuries.	
(Official Gazette Date/Number: 24.07.2013/28717)	According to Article 5 of the regulation, the employer is responsible for the following: (i) to take appropriate organizational measures, or use the appropriate means, in particular mechanical equipment, in order to avoid the need for the manual handling of loads by workers and (ii) where the need for the manual handling of loads by workers cannot be avoided, to take the appropriate measures and use the appropriate means or provide workers with such means by taking into account the provisions set out in Annex 1 (risk factors related to loads), in order to reduce the risk involved in the manual handling of loads.	
	Pursuant to Article 7, the employer is responsible to consider if the worker is appropriate for the work in terms of health and safety by considering Annex-2 (Individual Risk Factors).	
	Pursuant to Article 8, the employer shall inform workers and/or their representatives of measures to be implemented with regard to the protection of health and safety. The employer shall ensure that workers and/or their representatives receive general indications and, where possible, precise information on (i) the weight of a load and (ii) the centre of gravity of the heaviest side of eccentric loads. The employer shall provide information and training to workers on how to handle loads correctly and the risks they might be open to if the loads are not handled correctly. According to Article 9, the employer shall take the opinions of the workers and/or their representatives on this regulation and the annexes, and ensure their participation.	
Regulation on Fire Protection of Buildings (Official Gazette Date/Number: 19.12.2007/26735; Last	The purpose of this regulation is to determine procedures and principles to protect any building, workplace, facility etc. against fire. Temporary or permanent, official of private construction activities and their additional facilities are treated under this regulation. Pursuant to "Regulation on Opening and Operation Licenses of Workplaces", any company employing more than 30 employees is required to obtain a report which proves that the precautions taken against fire in the workplace are sufficient.	Fire Safety Report
amended on 05.04.2012)	Section three of the regulation states the classes of the buildings considering their purposes.	
	Pursuant to Article 114 (Notification and permit obligation), notifications shall be made regarding explosive and flammable storage units. In case of exceeding quantities stated in the article and Annex-11, permits must be received from the Fire Authority.	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
Regulation on the Emergency Cases in Workplaces	The purpose of this regulation is to determine procedures and principles regarding the preparation of emergency response plans, prevention, protection, evacuation, fire fighting, first aid, employers to be assigned to these areas and similar issues.	
(Official Gazette Date/Number: 18.06.2013/28681)	The regulation covers the workplaces within the scope of the Occupational Health and Safety Law.	
Regulation on the Use of Personal Protective Equipment in Workplaces (Official Gazette Date/Number:	The purpose of this regulation is to determine the principles regarding the properties, supply and use of personal protective equipments in cases when risks are not prevented or minimized sufficiently with collective protection based on technical measures or working methods. This regulation is applicable to those workplaces that are within the scope of Occupational Health and Safety Law.	
02.07.2013/28695)	Article 8. The employer shall supply the necessary personal protective equipment defined in Appendix II to the workers when it is not possible to prevent or restrict risks by collective protection methods in works and relevant workplaces defined in Appendix III.  Article 9. The employer shall inform the workers and/or their representatives on the necessary measures to be taken with	
	respect to health and safety in the use of personal protective equipment.  Article 10. The employer shall take the opinions of workers and/or their representatives and ensure their participation about the issues stated in this regulation.	
Regulation on Safety and	The regulation sets out the rules for the implementation of health and safety signs in workplaces.	
Health Signs (Official Gazette Date/Number:	Article 5. The employer must supply and properly use the health and safety signs when risks can not be prevented or restricted by working methods, work organization and collective protective measures.	
11.09.2013/28762)	Article 6. The employer shall inform workers and/or their representatives on health and safety signs and provide written instructions about the meaning of the signs and the required action of the sign.	
First Aid Regulation	The regulation sets forth the principles related to first-aid.	
(Official Gazette Date/Number: 22.05.2002/24762; Last amended on 04.04.2012)	Pursuant to article 16 of the regulation, one first-aider (holding a basic first aid certificate) per 10 employees should be present at the facilities that are considered as heavy and dangerous works and one first-aider (holding a basic first aid certificate) per 20 employees should be present at the all institutions and organizations. The first aider shall hold a certificate of "Basic First-Aid Training" that is taken by the authorized first-aid training body.	
Regulation on the Protection of the Workers against Risks Relevant to Noise (Official Gazette Date/Number:	The purpose of this regulation is to determine the necessary measures to protect the workers from health and safety risks, especially from risks associated with hearing due to exposure to noise.	
	Article 5. Exposure limit values and exposure effective values for noise are set out. The personal exposure action values and limits are as follows;	
28.07.2013/28721)	Min. exposure action values (LEX, 8h) = 80 dB(A) or (Ppeak) = 112 Pa [135 dB(C) re. 20 $\mu$ Pa]	
	Max. exposure action values (LEX, 8h) = $85dB(A)$ or (Ppeak) = $140$ Pa [ $137$ dB(C) re. $20$ $\mu$ Pa]	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Exposure limit values (LEX, 8h) = $87dB(A)$ or (Ppeak) = $200 Pa [140 dB(C) re. 20 \mu Pa]$	
	Article 6 and Article 7. Exposure determination and risk assessment: The employer shall assess and, if necessary, measure the levels of noise to which workers are exposed.	
	Article 8. Prevention and reducing exposure: Risks associated with the exposure to noise shall be prevented at source or reduced to a minimum level.	
	Article 9. Personal protection: If the risks associated with noise can not be prevented, ear-protectors that exactly fit the worker will be given and these protectors will be used by the workers.	
	Article 11. The employer is responsible for informing workers about these risks associated with noise and measures for their prevention, and training them on the appropriate use of ear protectors.	
	Article 13. Medical Surveillance: Workers will be subject to medical surveillance when it is confirmed by the risk assessment that there is health risk.	
Regulation on the Protection of the Workers against	The purpose of this regulation is to determine the necessary measures to protect the workers from health and safety risks due to exposure to mechanical vibration.	
Vibration Risks	Article 5. Exposure limit values and exposure effective values for hand-arm and for whole body vibration are set.	
(Official Gazette Date/Number: 22.08.2013/28743)	Article 6 and 7. Exposure Determination and Risk Assessment: The employer shall assess and, if necessary, measure the levels of mechanical vibrations to which workers are exposed. Risks associated with the exposure to mechanical vibration shall be prevented at source or reduced to a minimum level.	
	Article 10. The employer is responsible for informing workers about these risks and measures for their prevention.	
	Article 12. Workers will be subject to medical surveillance when it is confirmed by the risk assessment that there is health risk. To prevent the health problems due to exposure to mechanical vibration and for the purpose of early diagnosis, necessary protective measures will be taken by taking into account the medical surveillance results.	
Regulation on Working	Regulates the principles for the implementation of working duration.	
Duration Related to Labor Law	Article 4. The maximum working duration is 45 hours a week. The daily working duration cannot exceed 11 hours in any case	
(Official Gazette Date/Number: 06.04.2004/25425)	Article 9. The employer should document the working durations of workers by appropriate means.	
Regulation on Excess Work	The aim of this regulation is to set out the principles for works that are above the weekly working period set out in Labor Law.	
and Work in Excess Periods	Excess work is defined as those works that exceed 45 hours per week.	
(Official Gazette Date/Number: 06.04.2004/25425)	Work in excess periods is defined as those works that are lower than 45 hours per week according to a contract and when the work exceeds this working period set in the contract and becomes 45 hours per week.	
	Pursuant to Article 4, the wage for each hour of the excess work is paid by increasing the hourly wage of normal working condition by 50%. The wage for each hour of the work in excess periods is paid by increasing the hourly wage of normal working	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	condition by 25%.	
	Pursuant to Article 5, the total time for excess work for a worker should not exceed 275 hours per year. In calculating the working periods for excess work and work in excess periods, periods that are less than half an hour is calculated as half an hour and periods that exceed half an hour are calculated as one hour.	
Regulation on Occupational Health and Safety in	The aim of this regulation is to ensure that workers with an employment relationship governed by a fixed-duration contract or on a temporary employment are afforded the same level of protection as that of other workers.	
Temporary or Fixed Term  Employment  (Official Gazette Date/Number:	This regulation is applicable to workers working under (i) an employment contract for a "fixed duration" that is made between the employer and the employee in written form, which has a specified term or which is based on objective conditions such as completion of a certain work and (ii) a temporary employment contract.	
23.08.2013/28744 )	Pursuant to Article 5, the employer shall provide protection to those workers specified above, the same conditions with regard to health and safety at work as other workers are afforded, and shall not treat the workers specified above differently particularly regarding access to personal protective equipment.	
	According to Article 6, the employer shall provide information to workers specified above, beforehand of the work and any risks they may face. The information includes in particular occupational knowledge, skills and experience, medical surveillance required and additional specific risks that may arise due to the work.	
	According to Article 7, the employer shall ensure that the workers receive sufficient training appropriate to the particular characteristics of their job, taking into account their qualification and experience.	
	Pursuant to Article 8, the employer shall ensure that the workers are subject to special medical surveillance for works that are dangerous with regard to health and safety. The special medical surveillance specified above continues if required, after the employment contract ends.	
Regulation on Special	Principles on work durations, night work, week holidays and breaks in works with shifts are set out in the regulation.	
Principles in Works Carried out by Employing Workers in Shifts (Official Gazette Date/Number: 07.04.2004/25426)	Article 3. The employer is liable to announce the start and end time of each shift, the names and surnames of workers who are working in shifts, their breaks and week holidays in a way that is easily seen and readable by the workers.	
	Article 4. Shifts are arranged in a manner that there are at least 3 shifts in duration of 24 hours.	
	Article 12. The employer is liable to submit the list of night-shift workers as well as a copy of their health reports issued before starting work and those that are periodical, to the relevant regional directorate of labor.	
Regulation on the Minimum	Establishes the purpose of the regulation, its scope, bases and definitions.	
Wage (Official Gazette Date/Number:	According to the regulation a Commission under the authority of the Ministry of Labor and Social Security is entitled to determine the minimum wage most lately biennially. The minimum wage is defined for employees over 16 and under 16	
01.08. 2004/25540; last amended on 07.07.2012)	According to the The Ministry of Labor and Social Insurance ( <a href="http://www.csgb.gov.tr/csgbPortal/cgm.portal?page=asgari">http://www.csgb.gov.tr/csgbPortal/cgm.portal?page=asgari</a> ), the gross minimum wage for the year 2014 is 1071 TL/month for the period between 01.01.2014-30.06.2014, respectively.	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
Regulation on Suspension of Work in Workplaces (Official Gazette Date/Number:	Regulation specifies the conditions that may lead to the suspension of works in workplaces and procedures and principles on permision to resumption. This regulation is applicable to those workplaces that are within the scope of Occupational Health and Safety Law.	
30.03.2013/28603)	Pursuant to Article 7, in case of life threatening situations, works shall be suspended until situation is avoided. Works shall be suspended if risk evaluation is not conducted in very dangerous work places like mines, metal, construction works, facilities that works with dangerous chemicals or likely to have major industrial accidents.	
	Pursuant to Article 8, decision of suspension shall be put in force by local authority within 24 hours.	
	Pursuant to Article 13, employer is obligated to pay wages of employees that can not work due to suspension of works or give any other job by considering their profession or conditions by paying pay same wage at least.	
Regulation on Health and Safety Measures in Works	The regulation is to be applied to workplaces where the workers may be at risk to be exposed to carcinogenic and mutagenic substances.	
with Carcinogenic and Mutagenic Substances	Article 5: Risk assessment should be conducted in work places with Carcinogenic and Mutagenic Substances based on the form, exposure amount and duration and appropriate mitigation measures should be taken accordingly.	
(Official Gazette Date/Number: 06.08.2013/28730)	According to the Annex-1 of the Regulation, coal soot, coal tar and coal bitumen are carcinogenic substances.	
Regulation on Health and Safety Measures in Works	The aim of the regulation is to lay down minimum requirements to protect the health of workers from the dangers and adverse affects of chemical substances that are present, used or processes at workplaces, and to create a safe working environment.	
with Chemical Substances	This regulation is applicable to all workplaces that are within the scope of Occupational Health and Safety Law.	
(Official Gazette Date/Number: 12.08.2013/28733)	Pursuant to Article 5, the employer shall take all measures in works with chemical substances to prevent workers from exposure to chemical substances, and if this is not possible to minimize the exposure and to protect the workers from the dangers of chemical substances. According to Article 6, the employer shall determine whether there are dangerous chemical substances at the workplace and if there are, shall undertake a risk assessment to determine negative impacts with regard to the health and safety of the workers. It is not allowed to work with chemical substances without undertaking a risk assessment and without taking the measures specified in this regulation.	
	The regulation sets forth protective and preventative measures and measures for accidents and emergency cases in Articles 7 and 8, respectively.	
	Pursuant to Article 9, the employer shall inform and train the workers who are working with chemical substances on the results of the risk assessment, chemical substances that are present or can arise at the workplace and the health and safety risks of these substances, the occupational exposure limit values and other legal regulations, measures that must be taken and the material safety data sheets.	
	If the risk assessment identifies workers at risk, these workers will be subject to proper medical surveillance according to article 12. Annex-1 of the regulation defines vocational exposure limit values for certain substances.	





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
Regulation on the Works in Which Workers shall Work Maximum Seven and Half Hours or Less in a Day in Terms of Health Rules (Official Gazette Date/Number: 16.07.2013/28709)	Article 4 of the regulation defines the works in which workers shall work maximum seven hours.  The following categories of work listed under this article are potentially relevant to the works within the scope of the Project:  Mining Works  Noisy works exceeding the highest level of effective noise exposure (8h=85 dB(A))	
Regulation Concerning Water Intended for Human Consumption (Official Gazette Date/Number: 25730/17.02.2005)	The regulation lays down the principles and procedures for ensuring that water for human consumption conform to technical and hygienic requirements and quality standards, and for the production, packaging, labeling, marketing and inspection of the spring and potable waters. The regulation is implemented by the Ministry of Health and provides quality standards for drinking water for parameters that have potential risks to human health.	
Bylaw on Worker Health and Operational Safety Measures in Mine and Quarry Operations and Tunnel Construction (Official Gazette Date/Number: 22.10.1984/18553; annulled with bylaw 2014/6573)	Health and safety measures for workplaces prospecting, preparing to operation, operating, extracting and enriching natural materials, apart from the ones stated in the "Worker Health and Occupational Safety Bylaw", to be taken are given in this bylaw. Article 4. Technical supervisor shall conduct audits at least ones in 15 days. Results of the audit shall be recorded in technical supervisor notebook and signed by technical supervisor.  Pursuant to Article 5 of this regulation, it is obligatory to keep entrance and exit ways of mine well-kept, always opened and known by workers and to place signs that showing direction of roads to necessary places and protect them.  Pursuant to Article 6 of the regulation, except for the preperation stage there shall be two different ways to connect underground working areas to above ground. Pillars between theese ways can not be less than 30 m and each way must have its own gateway.  Pursuant to Article 7, for mines composed of two shafts and connection roads located close to each other, in case of no other safe ways between shafts, there shall be a connection at the deepest level.  Article 8. For the shafts with depth of less than 50m, it is compulsory to build steady and well-kept stairs (ladder) for workers to use.  Article 9-12 states the provisions about connection of shafts, stairs and material transportation on stairs.  Article 13. Manifacturing maps shall be prepared at the end of the month and be kept ready together with reasoned report and manifacturing book to be shown to certified officer.  Article 14. Explosives to be used in mines, quarries and tunnel constructions shall only be used if it is approved by Ministry.  According to article 15, acceptance, transportation, storage, distrubution ect. of explosives shall be carried out according to relevant legislation provisions, by trained person who assigned by technical supervisor.	Report notebooks (notarized), recordings (by Technical Supervisor, igniter person etc.)  Explosive Material Storage Area Permit (for storage of dynamite above 150 kg and more than 300 capsule)





Act, Regulation, Order
(date and ref)

## Brief summary of scope / key articles and relevance to the Project

Relevant permit requirements or other actions

Article 16-19 states the provisions about blasting (ignition) of explosives, defective explosives and explosive storage area.

Article 20. Principles regarding to the handling and storage of explosive materials shall be determined by directive which is prepared by technical supervisor. For preparation of this directive, relevant legislation provisions will be taken into account together with subjects given as: (i) Facilities and general layouts/status plans, (ii) Protection against humidity, deterioration and freezing, (iii) Seperation, (iv) Ventilation, (v) Measures against explosion and fire, (vi) Discharge of gas and smoke in case of fire.

Article 21 of the regulation prohibits entering into explosive storage area for people who are not in charge or allowed by technical supervisor.

Article 22-25 lays down the provisions about handling, recording and protection of explosives. Igniter persons are responsible to fill a consumption notebook.

Article 26-29 states the provisions and safety measures about charging, stemming and blasting/ignition.

Pursuant to Article 31, appropriate shelters and protection facilities shall be built on locations that unable to get protected against the pieces dispersed due to blasting activities.

Article 32 states provisions about unexploded explosives in blast hole.

Article 33 prohibits entering into the blasting area until all smoke and gasses cleaned, carefully checked and announced as safe by authorized person.

Article 34 states the provisions about pre-existing holes.

Article 35-39 state the provisions and rules about blasting equipment.

Pursuant to Article 40, it is forbidden to use explosives in circumstances defined as; (i) In areas containing 1% and more methane which detected by safety lamp or methane detector, (ii) In old and new processing spaces and cracks that haven't checked for possible firedamp occurrence, (iii) To open stucked coal, blind shafts and silos, (iv) To open closed fire gates.

Article 41. For the gaseous mines, responsible person of ignition measures concentrations of firedam within the area of 25m radius around blast holes (especially pores, cracks and holes). It is forbidden to charge, If 1% methane is detected.

Article 42. Appropriate and enough ground support shall be placed to all underground works to prevent falling and sliding of stone, soil, coal etc.

Article 43-47 lay down the provisions about removal and inspection of ground support, mandatory to use of ground support and ground support application to inclined seams.

Article 48. Instruction prepared pursuant to Article 42. of this Bylaw are maintained in engineers' and technical supervisors' report notebooks.

Pursuant to Article 49, every stage of filling works shall be regulated and managed by the permanent supervisor or technical supervisor.

Article 51. Slope of railways shall not be more than %0,5 (except mechanical maneuver and special transport mechanism).

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# Act, Regulation, Order (date and ref)

## Brief summary of scope / key articles and relevance to the Project

Relevant permit requirements or other actions

Article 55-56 state the provisions about ways and walkways.

Article 57. Places given below shall be illuminated enough and painted by limestone; Important transportation roads, garages, landings, turnouts and road junctions, places that cars hooked down, places that cars' hooks are released.

Article 59-64 state the provisions and prohibitions about hooking, signing and illumination of locomotives.

Article 65 of the regulation prohibits the use of gasoline powered locomotives in coal and sulphure mines.

Pursuant to Article 66, broken locomotives can not be employed.

Article 69-70 state the provisions about maintenance of locomotives.

Article 71. Fuels should be transported to mine inside closed, leakproof, metal barrels or tank wagons. Empty barrels shall be moved away from mine immediately.

Article 72-74 state the provisions about filling stations.

Article 75. At least once in a week, air containers of pressurized air locomotives shall be tested under pressure (1.5 times more than the operating pressure) by authorized person.

Article 77. Chargings and changings of locomotive batteries shall be made in filling stations and theese stations shall;

- a) be equipped to fit for purpose;
- b) be ventilated well and outlet air shall be given to return air way directly;
- c) be constructed by non-combustible materials;
- d) be equipped by necessary protection units against electrolyte caused fires;
- e) has acceptable electricity wiring; maintenance of lightning fittings shall be carried out regularly.

Article 78. Locomotive transportation depends on permission of Ministry.

Article 80. Usage of electrical locomotives is prohibited for mines that contain 0.3% methane concentration in haulage drifts.

Article 81-83 lay down the provisions about the use of ropes.

Article 84-91 states the provisions about using, locating and signing of cranes and brakes.

Article 93-96 states the provisions about placement and signing of conveyors.

Article 99 of the regulation prohibits the transport of workers with material transport vehicles without Ministry's permission.

Article 100-103 lay down the situations and places that prohibited for workers to be located.

Pursuant to Article 104, steps or stairs shall be constructed to the ground of 20°-45° inclined worker roads.

Article 111-159 lay down the provisions about cages, mandallar, headwheels, extracting machines, hoisting machines, koepe pulleys, signing system that used in transport and ropes.

Article 133. A parachute system shall be integrated to cages to prevent sudden falls due to rope breakage and dislocation of





Act, Regulation, Order	Brief summary of scope / key articles and relevance to the Project	Relevant permit
(date and ref)		requirements or other
		actions

strapping system.

Article 152. Signing systems shall be inspected by person in charge at least once in six months and results shall be recorded to report book and signed.

Article 160. Continuous fresh air ventilation system shall be provided in working areas to protect workers health by controlling temperature and firedamp concentration.

Article 161. Air speed can not exceed 8 m/sec in human and material transportation shafts, galleries, main lantern ways, inclined and horizontal roads.

Pursuant to Article 162, it is forbidden to work in areas with air contains; 2% or more Methane, 19% or less Oxygen, 0.5% or more Carbon Monoxide and other dangerous gasses.

Article 166-168 lay down the provisions about ventilators and aspirators.

Article 170. Mine ventilation system shall be designed to minimize number of gates which is used for divertion of air in one direction or distribution of air.

Article 171. Sufficent number of air measurement stations shall be located in mines. Air velocity and air quantity in main and partial air streams shall be measured once in a month.

Article 175. Temperature and humidity rate shall be measured regularly in several parts of mine.

Article 176-190 states the provisions about gaseous mines.

Article 176. Everyday, in every shift, firedamp measurements shall be conducted by technical supervisor and authorized person in gaseous mines.

Article 178. Gaseous mines shall be divided to independent ventilation sections; especially dangerous areas shall be ventilated independently.

Article 179. In essence, ventilation shall be in upward direction.

Article 181. Important firedamp accumulations should be cleaned with a great attention.

Article 183. Employer is obliged to provide gas detectors in every ventilation part to measure harmful gasses other than security laps and methane detectors.

Pursuant to Article 184, Methane concentration shall not exceed; 1.5% in foots that shares same air stream together, 1.5% in horizontal and inclined roads, 1% in returnways of these steams.

Article 186. In gaseous mines and mines containing combustible seams, all workers must carry carbonmonoxide mask during working.

Article 187. Sufficient safety measures above ground shall be taken to prevent harmful gasses to create danger.

Article 189. In case of breakdown of ventilation system, supervisor shall take all necessary safety measures for workers and when necessary evacuates mine partially or completely.





# Act, Regulation, Order (date and ref)

### Brief summary of scope / key articles and relevance to the Project

Relevant permit requirements or other actions

Pursuant to Article 191, it is forbidden to work in mines or mine parts containing more than 2% methane (except rescue works).

Article 193. Air measurements shall be carried out at least once in 10 days in stations that are defined in ventilation plan. Measurements shall continue until methane reduced below 1%.

Article 194-206 lay down the provisions and measures against coal dust and dust explosion.

Article 194. Technical supervisor is obliged to detect any possible explodible dust and taking measures.

Article 207-214 lay down the provisions about miner lamps.

Article 207. Electric and security lamp types that are used on gaseous mines shall be approved by the Ministry. All lamps shall be numbered. It is allowed to use only gasoline as fuel in security lamps.

Article 208. All lamps shall be checked by supervisor in charge at lamb cabin and gateways; it is not allowed to take defective lamps inside of mine.

Article 210. Electrical (battery powered) lamps that mounted to miners' helmet can not be removed from helmet and cannot be carried on hand or anywhere else except compulsory situations,.

Article 211. Maintenance, reparing and protection of lamps shall be carried out in a lamp cabin located above ground.

Article 215-219 lay down the measures against floodings.

Pursuant to Article 215, the technical supervisor is obliged to collect all information about;

- Former working places,
- Possible water containing beds in and around mine,
- Faults.
- Status, width and depth of puddles like water sources,

and plot these information to annual manifacturing map.

Article 217. An emergency pillar shall be placed to mines that are located under waterlogged land beds.

Article 218. For mines subject to flooding or running sand danger, employer shall determine envisaged occupational health and safety measures and report to The Ministry of Labor and Social Security and The Ministry of Energy and Natural Resources.

Article 220-232 lay down the provisions about fires.

According to Article 220, technical supervisor shall take all measures against fires. For mines employing more than 50 workers in 24 hours, a fire crew shall be organized.

Article 225. Types of fire extinguishers must be the types which are permitted by the Ministry to use on closed spaces.

Article 232. Dams that seperating the fire fields from the abandoned and isolated mine parts shall be regularly inspected.

Article 232. Yangın sahalarını terk ve tecrit edilmiş ocak kısımlarından ayıran barajlar, düzenli olarak denetlenir.

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Act, Regulation, Order	
(date and ref)	

### Brief summary of scope / key articles and relevance to the Project

Relevant permit requirements or other actions

Article 233-245 lay down the provisions of transport and signaling system during shaft drilling or deepening.

Article 233. The technical supervisor, who is responsible from the safety in shafts, shall examine the general situation of the shafts together with systems, tools and equipments of landings and the pumps being hung in the shaft, at least once in every 24 hours and write in the shaft report book.

Pursuant to Articles 234, all measures shall be taken against falling.

Article 240. During the drilling or deepening, the records are installed in the shafts at the depth of 50 meters.

Article 244. The buckets which are used to carry people shall not pass the speed of 1.5 meter per second.

Article 246-264 state the general provisions related to electricity.

Article 246. There shall be a scaled and detailed plan in the mine management place, which is showing the current status of electricity network and the fixed devices and facilities.

Article 248. Sufficient numbers of appropriate spare lighting tools shall be located in places where dangerous conditions may occur in case of blackout.

Article 258. The mines whose installation projects are not approved by the Ministry, electrical energy must not be used.

Article 265-309 states the provisions of electrical equipments, conductors, facilities and measures to be taken against explosions.

Article 271. In every workplace, the electrical conductors or cables that shall be selected according to the characteristics of works.

Article 273-274. The cables inside the mine and the shaft shall be protected against attrition, crashing and other objects that may fall.

Pursuant to Article 280, the voltage of lightning networks shall not exceed 250 volts.

Article 287. For mines with the possibility of a sudden firedamp discharge, the electric energy usage other than the portable electric lamps may only be used in accordance with the regulations that will be implemented by the Ministry.

Article 289. In places where explosion hazard of firedamp or coal dust or the both, the electrical devices shall be given from a test station which is approved by the Ministry and should have the qualified certificates of being flame-sealed or self-locking.

Article 296. If the methane ratio in the general air exceeds 1.5%, the voltage of the conductors and electrical devices should be shut down and kept so until reaching better condition.

Article 297. All electrical devices, cables and details of them, shall be examined from outside at least once in a week and shall have insulation control at least once a year.

Article 310-317 state the provisions related to machines and mechanical equipment.

Article 310. Machines and mechanical equipment used in underground works shall have the required qualifications of the mines.

Article 318-330 states the provisions on emergency, hazard and accident reportings, first aid, rescue and security service.





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Article 322. During the emergency, points that the workers should not pass, shall be identified and clearly marked by the supervisor (fenni nezaretçi) or assistants.	
	Article 323. Hazards that may affect worker health and work safety, accidents that cause loss of life, serious injuries or poisonings shall be reported immediately to the Ministry of Labor and Social Security and the Ministry of Energy and Natural Resources. Occupational accidents that result with more than 7 days of incapacity of work, should be reported including the cause of the accident to the authorities above in written.	
	Article 325. The workers in the mine shall be trained in first aid courses (not less than 3 people and at least 5% of them).	
	Article 327. An independent first aid center shall be established in a central location of the mine.	
	Article 330. The employer inspects the first aid rooms, materials, injured transporting method at least once a month.	
	Article 331-343 lay down the provisions about Rescue and Occupational Safety Organization.	
	Article 332. It is necessary to establish a rescue station in mines. However, the mines in an area of maximum 50 km diameter can establish a common rescue station in a central location.	
	Article 333. The workers in the mine shall be trained before to take charge in rescuing job (at least 10 people and 3% of the workers).	
	Pursuant to Article 337, the number of vehicles and type and amount of equipments, which will be present in the rescue stations shall be determined by the Ministry.	
	Article 340. In every mine, there shall be a plan which shows the main doors, dams, air bridges, airflow layout and phone stations; a sample shall be sent to the rescue station.	
	Article 342. For mine with less than 300 workers, a security supervisor and for mine with more than 300 workers a security engineer shall be assigned by the manager, to do inspection on occupational health and safety issues, carry out inspections, take the necessary measures and make suggestions.	
	Article 343. Mine management shall note the occupational accidents with their reasons by writing them into the accident book on a daily basis and at the end of the year, the statistics shall be sent to the Ministry of Labor and Social Security and the Ministry of Energy and Natural Resources.	
	Article 344. For The mines which are spread over 1000 meter distance from the mine entrance or working with at least 50 workers in one shift, sufficient number of phones shall be placed in appropriate places to provide communication inside the various parts of the mine and the outside.	
	Article 345. Persons without a written permit by the mine administration cannot enter into the mine.	
	Article 348. Places such as silos, blind shafts, fereler (inclined small galleries and shafts) etc. can only be entered by taking safety measures such as seat belts.	
Oust Control Regulation	The aim of this regulation is to prevent the dust formation in workplaces that may cause health risks on workers.	Risk Assessment





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions			
(Official Gazette Date/Number: 05.11.2013/28812)	Pursuant to Article 5, employers of the workplaces within the scope of this regulation are obliged to; (i) prevent dust emissions during working or take the necessary measures to suppress the dust generation (ii) to provide personal protective equipment to employees (iii) to apply engineering methods to prevent dust exit (iv) to supply sufficient amount of fresh air for workers (v) to control, audit and monitor the taken measurements (vi) to dispose wastes generated in the workplaces in compliance with the relevant legislation.				
	Article 6. Risk Assessment: A risk assessment shall be performed in accordance with the Occupational Health and Safety Risk Assessment Regulation.				
	Article 8. Dust Measurement: Dust measurements shall be performed considering the period determined as a result of the risk assessment. Measurement result shall be assessed considering exposure limits given in Annex-1.				
	Article 9: Exposure levels shall not exceed limits given in Annex-1.				
	Article 10 sets principles and aspects in periodical health surveillances which shall be conducted by employer during hiring and working phases.				
	Article 11 sets principles and aspects for the assessment of lung radiography.				
Occupational Health and Safety Regulation on Mining	This regulation determines the minimum requirements that shall be applied for the protection of workers' health and safety at the underground and surface mining workplaces.	Health and Safety Document			
Works	Pursuant to Article 5, at the underground and surface mine workplaces, the employer is obliged to fulfill the following issues:				
(Official Gazette Date/Number: 19.09.2013/28770; last amended on 10.03.2015)	In order to ensure the health and safety of workers; (i) Workplaces shall be designed, constructed, equipped, serviced, operated and maintained in a way that not to risk the health and safety of the workers while they are working, (ii) Any work at the workplace shall be done under the supervision and responsibility of the authorized person, (iii) Special risk jobs shall be carried out in accordance with the instructions and only by authorized specialists, (iv) All safety instructions are prepared in and understandable manner for the workers, (v) Adequate first aid equipment shall be provided and safety drills shall be held at least once a year.	Surveillance			
	Employer prepares and updates "health and safety document" in accordance with the provisions set out in Articles 4,10, 14 and 16 of Occupational Health and Safety Law. Listed subjects shall be in the health and safety document, in particular; (i) Identification and assessment of the risks (including psychosocial risks) that workers may be exposed in the workplace, (ii) appropriate measures to be taken for carrying out provisions of this Regulation, (iii) Safely organization, usage and maintenance of work places and equipment;				
	Employer prepares the health and safety document before starting work and the document should be reviewed and revised in case of significant changes, incidents etc. in the workplace.				
	In the presence of workers of more than one business, each employer is responsible for the workers under its control. The employer who is responsible for the whole workplace, shall coordinate the implementation of the measures for the protection of workers' health and safety and indicate the measures and methods to be applied to provide the coordination and the purpose of the coordination. This coordination does not affect employer's responsibilities stated in the Occupational Health and Safety				





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	Law.	
	Article 6: In terms of occupational health and safety, employees shall comply with the provisions of relevant legislation and related rules provided by the employers.	
	Article 7: Employers shall prevent the formation of explosive and harmful ambient air or if this is not possible to prevent igniton of this explosive environment, to detect start of the explosion and fire, to prevent their deploying and to fight them.	
	Article 8: Employers shall provide proper escape and rescue instruments for the employees in case of an emergency situation.	
	Article 9: Employers install required communication system.	
	Article 11: Periodical health surveillance (including in the employement process) of the employees shall be conducted by the employer.	
	Article 13: Subjects specified in the annex of this regulation shall be applied in all cases on the workplace, the work or the special risk conditions.	
	Annex-1 specifies the underground and surface mining operations and the minimum general provisions to be applied on surface facilities.	
	Annex-2 specifies the minimum general provisions to be applied to surface mining facilities.	
	Annex-3 specifies the minimum general provisions to be applied to underground mining facilities.	
	Annex-4 specifies the minimum general provisions to be applied to facilities mining with drilling.	
OTHER LEGISLATION		
Regulation on Workplace Opening and Operating	The regulation governs the principles and procedures in issuing opening and operation licenses required for workplaces. The regulation covers regulatory affairs (authorization) and auditing of sanitary and non-sanitary workplaces. The regulation	Opening and Operating License
Licenses (Official Gazette Date/Number: 10.08.2005/25902; Last amended on 06.12.2012)	designates the metropolitan municipalities, municipalities, provincial special administrations and organized industrial zone administrations as competent authorities for licensing. The type of opening and operation license an establishment has to possess depends on whether it is listed as a sanitary workplace (Annex-1) or non-sanitary workplace (Annex-2) under the regulation.	Location Selection and Facility Construction Permit (for the first class non-sanitary workplaces
	Article 5. Any company employing more than 30 employees is required to obtain a report which proves that the precautions it has taken against fire in the workplace are sufficient.	Trial Permit (for non-
	Article 6 of this regulation states that establishments cannot be operated without an "Opening and Operation License" from the relevant authority.	sanitary workplaces)  Fire safety report
	Pursuant to the Article 10, based on the main area of activity, single license is prepared for the workplaces having more than one area of activity and located at same address and operated by same business administrator considering main area of activity.	

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Pursuant to Article 16, establishing a health protection strip is mandatory in industrial zones, organized industrial zones and non-

Other activities are separately indicated in the license.





Act, Regulation, Order (date and ref)	Brief summary of scope / key articles and relevance to the Project	Relevant permit requirements or other actions
	sanitary workplaces to be established in or outside these industrial zones. Health protection strips can not be established outside the boundaries of ownership and residential construction and human residence are not allowed in this area.	
	Pursuant to article 18 of the regulation, facilities classified as first class non-sanitary establishments should obtain a "Location Selection and Facility Construction Permit", which is valid for a period of five years. Pursuant to article 19, facilities with an environmental assessment report and an EIA Positive Certificate are exempt from obtaining this permit.	
	Under article 20 of the regulation, first class non-sanitary workplaces may be issued a "Trial Permit" for a maximum period of one year if deemed necessary by the relevant authority or upon an application of the workplace owner. The Trial Permit temporarily replaces the Opening and Operation License.	
Regulation on Road Transportation	The regulation determines the necessary actions and mitigation measures for community health and safety regarding traffic and road transportation.	
(Official Gazette Date/Number: 18.07.1997/23053; Last amended on 19.02.2014)	In Article 128 of Section 8 of the regulation, the maximum loading capacity of the trucks are defined.	

Table 2 - Comparison of Turkish and International Environmental Standards for Ambient Air Quality

		TURKISH	EU	IFC
Parameter	Averaging Period	Air Quality Assessment and Management Regulation: Annex-I Industrial Air Pollution Control Regulation: Table 2.2 of Annex 2 Maximum Limit (μg/m³) [Settled dust (mg/m² day)] [Ar, Cd, Ni and Benzo (a) pyren (ng/m³)] [Pb, Cd, TI and their compounds in settled dust (μg/m² day)]	Directive 2008/50/EC Directive 2004/107/EC Maximum Limit (µg/m³)	General EHS Guideline value (μg/m³)
SO <sub>2</sub> -Sulphur	10 minutes	-	-	500
Dioxide	1 hour	Air Quality Assessment and Management Regulation: 470-350 (2015-2019) (to be decreased by 30 μg/m³ each year until 2019) (protection of human health) Industrial Air Pollution Control Regulation: 470-350 (2015-2024 and later) (to be decreased by 30 μg/m³ each year until 2019. The limit remains same after the year 2024).	350 (protection of human health)	-
	24 hours	Air Quality Assessment and Management Regulation: 225-125 (2015-2019) (to be decreased by 25 μg/m³ each year until 2019) (protection of human health) Industrial Air Pollution Control Regulation: 225-125 (2015-2024 and later) (to be decreased by 25 μg/m³ each year until 2019. The limit remains same after the year 2024)	125 (protection of human health)	20
	1 year	-	20 (protection of vegetation)	-
	Long-term limit value (annual	Industrial Air Pollution Control Regulation : 60 (2015- 2024 and later)	-	-

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		TURKISH	EU	IFC
Parameter	Averaging Period	Air Quality Assessment and Management Regulation: Annex-I Industrial Air Pollution Control Regulation: Table 2.2 of Annex 2 Maximum Limit (μg/m³) [Settled dust (mg/m² day)] [Ar, Cd, Ni and Benzo (a) pyren (ng/m³)] [Pb, Cd, Tl and their compounds in settled dust (μg/m² day)]	Directive 2008/50/EC Directive 2004/107/EC Maximum Limit (µg/m³)	General EHS Guideline value (µg/m³)
	mean)			
	1 year and winter season (Oct 1-March 31)	20 (2015-2024 and later) (Ecosystem protection) (limits are same in both regulations)		-
NO <sub>2</sub> -Nitrogen Dioxide	1 hour	Air Quality Assessment and Management Regulation: 290-200 (2015-2024) (to be decreased by 10 μg/m³ each year until 2019) (protection of human health) Industrial Air Pollution Control Regulation: 290-200 (2015-2024 and later) (to be decreased by 10 μg/m³ each year until 2024, The limit remains same after the year 2024)	200 (protection of human health)	200
	1 year	Air Quality Assessment and Management Regulation: 56-40 (2015-2024) (protection of human health)  Industrial Air Pollution Control Regulation: 56-40 (2015-2024 and later) (to be decreased by 4 µg/m³ each year until 2019. The limit remains same after the year 2024)	-	40
NOx	1 year	Air Quality Assessment and Management Regulation: 30 (protection of vegetation)	30 Calendar year and winter (1 Oct-31 March) (protection of vegetation)	-
Thoracic particles <10µm (PM10)	24 hours	Air Quality Assessment and Management Regulation: 90-50 (2015-2019) (to be decreased by 10 μg/m³ each year until 2019) (protection of human health)  Industrial Air Pollution Control Regulation: 90-50 (2015-2024 and later) (to be decreased by 10 μg/m³ each year until 2019. The limit remains same after the year 2024).	50 (protection of human health)	50
	1 year	Air Quality Assessment and Management Regulation: 56-40 (2015-2019) (to be decreased by 4 µg/m³ each year until 2019) (protection of human health) Industrial Air Pollution Control Regulation: 56-40 (2015-2024 and later) (to be decreased by 4 µg/m³ each year until 2019. The limit remains same after the year 2024).	40 (protection of human health)	20
Fine particles	24 hours	-	25	25
<2.5μm (PM2.5 <b>)</b>	1 year	-	25 (2015) 20 (2020)	10
СО	8 hours	Air Quality Assessment and Management Regulation: 14,000-10,000 (2015-2017) (to be decreased by 2,000 μg/m³ each year until 2017) (protection of human health) Industrial Air Pollution Control Regulation : 14,000-10,000 (2015-2024 and later) (to be decreased by 2,000 μg/m³ each year until 2017. The limit remains same after the year 2017)	10 000 (protection of human health)	-
Benzene	1 year	Air Quality Assessment and Management Regulation: 10 for 2015 and 2016, 9-5 (2017-2021) (protection of human health)	5 (protection of human health)	
HCI	24 hours	Industrial Air Pollution Control Regulation: 150 (2015-2024 and later)	-	-





		TURKISH	EU	IFC
Parameter	Averaging Period	Air Quality Assessment and Management Regulation: Annex-I Industrial Air Pollution Control Regulation: Table 2.2 of Annex 2 Maximum Limit (μg/m³) [Settled dust (mg/m² day)] [Ar, Cd, Ni and Benzo (a) pyren (ng/m³)] [Pb, Cd, Tl and their compounds in settled dust (μg/m² day)]	Directive 2008/50/EC Directive 2004/107/EC Maximum Limit (µg/m³)	General EHS Guideline value (µg/m³)
	1 year	Industrial Air Pollution Control Regulation: 60 (2015-2024 and later)	-	-
HF	1 hour	Industrial Air Pollution Control Regulation: 30 (2015-2024 and later)	-	-
	24 hours	Industrial Air Pollution Control Regulation: 5 (2015-2024 and later)	-	-
H₂S	1 hour	Industrial Air Pollution Control Regulation: 100 (2015-2024 and later)	-	-
	24 hours	Industrial Air Pollution Control Regulation: 20 (2015-2024 and later)	-	-
Total Organic	1 hour	Industrial Air Pollution Control Regulation: 280 (2015-2024 and later)	-	-
Compounds	24 hours	Industrial Air Pollution Control Regulation: 70 (2015-2024 and later)	-	-
Settled dust	24 hours	Industrial Air Pollution Control Regulation: 390 (2015-2024 and later)	-	-
	1 year	Industrial Air Pollution Control Regulation: 210 (2015-2024 and later)	-	-
Pb (Lead) and its compounds in settled dust	1 year	Industrial Air Pollution Control Regulation: 250 (2015-2024 and later)	-	-
Cd (Cadmium) and its compounds in settled dust	1 year	Industrial Air Pollution Control Regulation: 3.75 (2015-2024 and later)	-	-
TI (Thallium) and its compounds in settled dust	1 year	Industrial Air Pollution Control Regulation: 5 (2015-2024 and later)	-	-
Pb-Lead	1 year	Air Quality Assessment and Management Regulation: 0.9-0.5 (2015-2019) (protection of human health) Industrial Air Pollution Control Regulation: 0.9-0.5 (2015-2024 and later) (to be decreased by 0.1 µg/m³ each year until 2019. The limit remains same after the year 2019)	0.5 (protection of human health)	-
As-Arsenic	1 year	Air Quality Assessment and Management Regulation: 6 (Target by: 1.1.2020)	6	-
Cd-Cadmium	1 year	Air Quality Assessment and Management Regulation: 5 (Target by: 1.1.2020) Industrial Air Pollution Control Regulation: 0.02 (2015-2024 and later)	5	-
Ni-Nickel	1 year	Air Quality Assessment and Management Regulation: 20 (Target by: 1.1.2020)	20	-
Benzo (a) Pyrene	1 year	Air Quality Assessment and Management Regulation: 1 (Target by: 1.1.2020)	1	-
Ozone	8 hour daily max. (average of last three years)	Air Quality Assessment and Management Regulation: 120 (Target value for the year 2022) (protection of human health)	120 (protection of human health)	100
	May to July	-	18000 (calculated from 1 h values) (protection of vegetation)	-





Table 3 - Comparison of Turkish and International Environmental Standards for Stack Gas and Non-Stack Gas Emissions

	TURKISH		EU	IFC
Parameter	Industrial Sourced Air Pollution Control Regulation: Table 5.2 of Annex 5 and Section	Directive 2008/1/EC Directive 2010/75/EU	General EHS Guideline value	
	Emission limits for the combustion plants	Gas Turbines		Turbine
	Calorific value< 100 MW using natural gas (mg/Nm³)	Calorific value ≥ 10 MW (mg/Nm³)	-	=15MWth to < 50 MWth using natural gas
O <sub>2</sub> content	3%volume of oxygen will be taken into consideration at stack gas	15% volume of oxygen will be taken into consideration at stack gas	-	15% (Dry gas excess O₂ Content)
SO <sub>2</sub>	100	60	-	-
CO	100	100 for continuous operation	-	-
NO <sub>2</sub>	800	300	-	-
NO <sub>x</sub>	-	-	-	25 ppm
Dust	10	-	-	-
Particulate Matter	-	Sootiness degree limits according to Bacharach scale are 3 during operation and 4 when starting the operation (if required).	-	-
Note: Efficiency Crite mechanical efficiency engine exhaust and formula.  Gas turbines or comb Motors having mechanica New emission limit va Cogeneration efficien Cogeneration applica K=Power Plant Cogen New emission limit va Combined closed circ K=Combined circuit e	-	-		





New emission limit value=K* Current emission limit value										
CONCRETE PLANT										
				Т	URKISH				EU	IFC
				· ·	<b>2.1, 2.2, 2.3) and Section</b> nloading, and sorting of t	•			Directive 2008/1/EC Directive 2010/75/EU	General EHS Guideline value
Parameter		<u>Gr</u>	ain Size ≥ 5mn	<u>1</u>	<u>1mm ≤ (</u>	1mm ≤ Grain Size<5mm Grain Size ≤1 mm			-	-
	Stack Gas Emission Flowrates (kg/h)		s (kg/h)	Non-Stack Gas Settlable	At a distance of 3 m from the source	Stack Gas	Non-stack Settlable	Stack Gas	_	_
	≤ 1.5	1.5-2.5	≥2.5	(Montly Average)	(Hourly Average)		(Montly average)			
Dust	200 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>	100 mg/Nm <sup>3</sup>	450 mg/m² –day	3 mg/Nm³ (as PM10)	75 mg/Nm <sup>3</sup>	450 mg/m² -day	75 mg/Nm <sup>3</sup>	-	-





 Table 4 - Comparison of Turkish and International Environmental Standards for Wastewater Discharges

	WASTEW	WASTEWATER DISCHARGE to INFRASTRUCTURE FACILITIES  WASTEWATER DISCHARGE to RECEIVING ENVIRONMENT from INFRASTRUCTURE FACILITIES				WASTEWATER DISCHARGE to SURFACE WATER from TREATMENT FACILITIES	
	TURKI	ISH	EU	IFC	TURKISH	EU	IFC
Parameter	Water Pollution Cont Table 25-Wastewater for Connection to Wa Infrastructure Facilitie	Quality Criteria	Directive 2000/60/EC Directive 91/271/EEC	General EHS Guideline value <sup>1</sup>	Urban Wastewater Treatment Regulation (mg/L)	Directive 91/271/EEC (mg/L)	General EHS Guideline value Discharge to surface water <sup>2</sup>
	Wastewater infrastructure facilities where sewer systems are subject to complete treatment	Wastewater infrastructure facilities where sewer systems end with deep sea discharge					(mg/L)
Temperature (°C)	40	40	-	-	-	-	-
рН	6.5-10	6-10	-	-	-	-	6-9
Total Suspended solids	500	350	-	-	35 (more than 10000 population equivalent) 60 (2000-10000 population equivalent)	35 (more than 10000 population equivalent) 60 (2000-10000 population equivalent)	50
Oil and grease	250	50	-	-	-	-	10
Tar and petroleum based oils	50	10	-	-	-	-	-
Chemical Oxygen Demand (COD)	4,000	600	-	-	125	125	125
Biological Oxygen Demand (BOD)	-	400	-	-	25	25	30
Sulfate (SO4 <sup>=</sup> )	1,700	1,700	-	-	-	-	-
Total sulphur (S)	2	2	-	-	-	-	-
Phenol	20	10	-	-	-	-	-
Free chlorine	5	5	-	-	-	-	-
Total Nitrogen (N)	- (a)	40	-	-	-	-	10
Total Phosphorus (P)	- (a)	10	-	-	-	-	2





	WASTEW	/ATER DISCHARGE to IN	FRASTRUCTURE FACILITIES		WASTEWATER DISCHARGE t	WASTEWATER DISCHARGE to SURFACE WATER from TREATMENT FACILITIES	
	TURKI	-	EU	IFC	TURKISH	EU	IFC
Parameter	Water Pollution Cont Table 25-Wastewater for Connection to Wa Infrastructure Facilitie	Quality Criteria stewater es (mg/L)	Directive 2000/60/EC Directive 91/271/EEC	General EHS Guideline value <sup>1</sup>	Urban Wastewater Treatment Regulation (mg/L)	Directive 91/271/EEC (mg/L)	General EHS Guideline value Discharge to surface water <sup>2</sup>
	Wastewater infrastructure facilities where sewer systems are subject to complete treatment	Wastewater infrastructure facilities where sewer systems end with deep sea discharge					(mg/L)
Arsenic (As)	3	10	-	-	-	-	-
Total Cyanide (CN <sup>-</sup> )	10	10	-	-	-	-	-
Total Lead (Pb)	3	3	-	-	-	-	-
Total Cadmium (Cd)	2	2	-	-	-	-	-
Total Chromium (Cr)	5	5	-	-	-	-	-
Total Mercury (Hg)	0.2	0.2	-	-	-	-	-
Total Copper (Cu)	2	2	-	-	-	-	-
Total Nickel (Ni)	5	5	-	-	-	-	-
Total Zinc (Zn)	10	10	-	-	-	-	-
Total Tin (Sn)	5	5	-	-	-	-	-
Total Silver (Ag)	5	5	-	-	-	-	-
Chloride (Cl-)	10,000	-	-	-	-	-	-
Surface active agents reacting with methylene blue (MBAS)	In principle, dumping o biological degradation i Turkish Standards Instit prohibited.	s not in line with	-	-	-	-	-
Total Coliform Bacteria (MPN/100) <sup>3</sup>	-		-	-	-	-	400





Table 5 - Comparison of Turkish and International Environmental Standards for Environmental Noise, Vibration and Internal Noise

	TURKISH	EU	IFC	
Receptor (Environmental Noise)	Regulation on the Assessment and Management of Environmental Noise: Table 4 of Annex-7 Noise criteria for businesses, facilities and workplaces	Directive 2002/49/EC	General EHS Guideline value	
Sensitive areas especially educational, cultural and health areas and seaside resorts and camping sites	Ldaytime: 60 dBA, Levening: 55 dBA and Lnight: 50 dBA	-		
The areas involving commercial areas and noise- sensitive areas (especially resindences) together	Ldaytime: 65 dBA, Levening: 60 dBA and Lnight: 55 dBA	-	-	
The areas involving commercial areas and noise- sensitive areas (especially workplaces) together	Ldaytime: 68 dBA, Levening: 63 dBA and Lnight: 58 dBA	-	-	
-	Regulation on the Assessment and Management of Environmental Noise: Annex 7 Table-5 Environmental Noise Limit Values for Construction Sites	-	-	
-	Ldaytime: 70 dBA (construction, demolotion and repair of buildings	-	-	
Residential; institutional; educational	-	-	Ldaytime: 55 dBA and Lnighttime: 45 Dba (or a maximum increase in background levels of 3 dBA at the nearest receptor location off-site)	
Industrial; commercial	-	-	Ldaytime: 70 dBA and Lnighttime: 70 dBA(or a maximum increase in backgroundlevels of 3 dBA at the nearest receptor location off-site)	
Receptor (Vibration)	Regulation on the Assessment and Management of Environmental Noise: Annex 7 Table-7 Maximum ground vibration values allowed for driven pile and construction machines (peak value-mm/s)	Directive 2002/49/EC	General EHS Guideline value	
Residential areas	Continuous :5 Discontinuous: 10	-	-	
Commercial and Industrial areas	Continuous :15 Discontinuous: 30	-	-	
Type of Area (Internal Noise/Noise Limits For Various Working Environments)	Regulation on the Assessment and Management of Environmental Noise: Annex7 Table-9 Noise limits for planned buildings	Directive 2002/49/EC	General EHS Guideline value	
Treatment institutions and organizations, dispensary, polyclinics, nurseries, nursing homes and similar	Closed Window: 35 Leq (dBA) Open Window: 45 Leq (dBA)	-	-	
Treatment and resting rooms	Closed Window: 25 Leq (dBA) Open Window: 35 Leq (dBA)	-	-	
Hospitals	-	-	Equivalent levelLA <sub>eq</sub> ,8h =30-35 dbA Maximum LA <sub>max</sub> , fast= 40 dBA	



