NON-TECHNICAL SUMMARY OF THE PROJECT

It is planned that "**Project on Capacity Increase of Eti Bakır Samsun Plants and Additional Investments**" will be carried out and managed by **Eti Bakır A.Ş.** on the parcels No. 1713/1, 2241/1, 2242/1, 3715, 1716/2, 1716/3within the boundaries of Tekkeköy District of Samsun Province.

Within the scope of additional investments; it is planned to establish and manage a phosphoric acid production plant with a capacity of 210.000 tons/year, a DAP fertilizer production plant with a capacity of460.000 tons/year or a NP/NPKfertilizer production plant with a capacity of1.100.000 tons/year, 3 pcs phosphoric acid tanks with a capacity of5.000 tons, Jibs waste and plaster storage area with a capacity of625.000 tons/year, a DAP or NP/NPK fertilizer tank with a capacity of150.000 tons/year, an ammonia tank with a capacity of15.000 tons/year, a fertilizer package unitwith a capacity of5.000 tons/day, and a fertilizer raw material tank with a storage capacity of 5.000 tons.

Within the scope of capacity increase; it is planned to make an increase in the capacities of the following units.

Available Plants	Products	Available Capacity	Planned Increase	Final Capacity
Smelter	Anode Copper	100.000 tons/year	30.000 tons/year	**130.000 tons/year**
Electrolysis Plant	Cathode Copper	90.000 tons/year	10.000 tons/year	**100.000 tons/year**
Acid Plant	Sulfuric Acid	600.0000 tons/year	150.000 tons/year	**750.000 tons/year**
Flotation Plant	Cinder Concentrate	400.000 tons/year	350.000 tons/year	**750.000 tons/year**
Oxygen Plant	Oxygen	15.000 Nm^3/hour	20.000 Nm^3/hour	**35.000 Nm^3/hour**

Plants within the scope of the investment, which is the subject matter of the project, and Projects on which the Environmental Impact Assessment of Regulation on Environmental Impact Assessment published in the Official Gazette dated 25.11.2014 and numbered 29186:

Annex-1 List;

- **Article 6- Chemical plants that make production on an industrial scale by using various functionally interconnected units:**

b) production of inorganic chemicals

c) Production of phosphorus, nitrogen, and potassium based simple or composite fertilizers in an amount of 20.000 tons or above per year." and

- **Article 27**

c) Mineral processing plants, in which biological, chemical, electrolytic or heat treatment methods are implemented, and/or waste plants for these mineral processing plants"

- **Article 31**

It is in the scope of **"plants with a capacity of 50.000 m^3or above, and in which petroleum, natural gas, petrochemicals and chemicals are stored"**.

Since a capacity increase is planned for the available units involved in the project scope;

- ***"Capacity Increases" (Regulation on Environmental Impact Assessment, by the amendment dated 26.05.2017)***

ARTICLE 20 – (1) Capacity Increases;

a) In the projects with "EIA Affirmative" decision;

2) It is in the scope ofthe fact that ***"If it is equal to threshold value specified in the Annex-1 list or it is above this value, an application must be made in accordance with the Article 8"***. Therefore, within the scope of EIA Regulation, EIA Report Special Format was received, and this EIA Report was prepared.

It has been planned that the additional plants planned in the EIA Application File prepared (phosphoric acid production plant with a capacity of 210.000 tons/year, a DAP fertilizer production plant with a capacity of 460.000 tons/year or a NP/NPK fertilizer production plant with a capacity of 1.100.000 tons/year, 3 pcs phosphoric acid tanks with a capacity of 5.000 tons, a DAP or NP/NPK fertilizer tank with a capacity of 150.000 tons/year, an ammonia tank with a capacity of 15.000 tons/year, a fertilizer package unit with a capacity of 5.000 tons/day) will be in the Samsun Plants Area, and some part of the property of Jibs waste and plaster storage area will be in Eti Bakır A.Ş., and other part of it will be in the area belonging to Tekkeköy Municipality, and taking into consideration the environmental factors and the investor's demand in the EIA process, the additional plant areas and the Jibs Waste and Plaster Storage Area were revised.The whole possession of all of the planned facilities and the Jibs Waste and Plaster Storage Area are located within the area belonging to Eti Bakır A.Ş. As a result, the parcels numbered 1716/2 and 1716/3 belonging to Eti Bakır A.Ş. were included in the project at this stage.

The whole requested Plant EIA Area is 167.93 hectares; The Jibs Waste and Plaster Storage Area (Total of 1^{st} and 2^{nd} Parts) is 19.08 hectares and **the whole property of the area** where the subject activity of the project will be conductedis in the possession of **Eti Bakır A.Ş., the investor company**.

An area of 77.937 m^2located in the area with a total surface area of 2.725.846 m^2, registered in the land registry office on the plot No. F36c05a and parcels No. 1713/1, 2241/1, 2242/1, 3715, 1716/2, 1716/3 is the existing closed area of the plant in Samsun Province, Tekkeköy District, Tekkeköy Quarter, Selyeri Location.

1.679.300 m2 of the 2,725,846 m2 area was chosen as the EIA site and 190,800 m2 is the Jibs waste and plaster storage area. The property deeds of the plant are attached.

In accordance with the 1/100.000 Scaled Environmental Plan Map of Samsun-Çorum-Tokat Planning Region, the plant remains within the "**industrial and storage areas**" of the EIA Area and the Planned Plaster Waste and Plaster Storage Area.

In accordance with the 1/100.000 Scaled Environmental Plan Map of Samsun-Çorum-Tokat Planning Region, the plant remains within the "industry and storage areas" of the EIA Area and the

Planned Plaster Waste and Plaster Storage Area. In accordance with the 1/5000 Scaled Master Plan and 1/1000 Scaled Implementation Development Plan, the aforementioned area remains within the region, which is defined as "**industrial area**".

The project area remains on the I. and IV class areas on the 1/100.000 Scaled Land Size Map.

The project area is accessed by using existing asphalt roads from Samsun-Ordu (D010) Highway.

Eti Bakır A.Ş. Samsun Enterprises was established for the purpose of evaluating the copper ore deposits in the Black Sea Region and producing blister copper. The mentioned plant consists of basically six facilities. These are as follows:Smelter, Flotation Plant, Sulfuric Acid Production Plant, Electrolysis Plant, Oxygen Plant, and Crystallized Ammonium Sulphate Plant. The operating license of the plant and the business license and work permit are attached.

The smelters were taken into operation on January 23, 1973, and the sulfuric acid production facilities in 1975.**Sulfide copper concentrate of 400,000 tons/year from Küre, Murgul, and Giresun Copper deposits are processed in Flash furnaces and converters in smelters, and anode copper is produced as a result.**Copper Concentrate is stored in a fully closed area of 11,722 m2, which is designated in the site plan as a concentrated stockyardThe cinders received from the furnace and converter are processed in the concentrator plant in order to obtain cinder concentrate, and the SO2 gases composed are evaluated in the acid factory for the production of sulfuric acid.

Anode copper with a purity of 99.5% is produced by using flash furnace technology at the Smelter. In consequence of the process, SO2 gas is composed. There is a Sulfuric Acid Production Plant, in which all of the SO2 gas released in the smelter is used as raw material.Sulfuric acid is obtained by keeping SO2 gases coming to the acid plant, thus the SO2 emissions in the chimney are reduced to the limit values specified in the SKHKKY (Industrial Air Pollution Control Regulation) and HKDY (Air Quality Assessment and Management) Regulations.The sulfuric acid produced in the acid factory is processed with ammonia in the crystallized ammonium sulfate plant and transformed into ammonium sulfate fertilizer.

ETİ Bakır A.Ş. Samsun Enterprise was **exempted from the provisions of EIA Regulation** pursuant to the "TEMPORARY ARTICLE2 of EIA Regulation dated 25.11.2014 and numbered 29186 "(1) Projects which are documented concerning that they are started to be produced and/or managed before 7/2/1993, which is the first issuance date of Environmental Impact Assessment Regulation, are out of the scope of Environmental Impact Assessment. The Canceled Opinion of the Provincial Directorate of Environment and Forestry of the Samsun Governorship of the Republic of Turkey, is attached.

For the electrolysis plant constructed after the corporatization of the enterprise, EIA Positive Certificate was given by the Ministry of Environment and Forestry pursuant to the canceled decision dated 15.03.2010 and numbered 1864. "Decision of EIA is Not Required" was taken by the canceled letter dated 24.01.2012 and numbered 4446 of the Provincial Directorate of Environment and Forestry of the Samsun Governorship of the Republic of Turkey for the ammonia tank installed for the ammonia to be used in the Crystallized Ammonium Sulphate Plant and $DESO_X$ system.

EIA studies were initiated in Samsun Integrated Plants in 2014 within the scope of increase of the available capacity in the Smelter, Acid Plant, Electrolysis Plant, and Flotation Plant, installation and management of Oxygen, Nitrogen, Argon Production Plants and Storage Tanks, Ammonium Sulphate Plant, and Flotation Sanitary Landfill for flotation wastes within the plant area boundaries, and EIA Positive Certificate was given by the Ministry of Environment and Urbanization with the date of 24/06/2015 and number 3910.

In 2018, on the sea side of Samsun Integrated Plants, which are under construction, EIA studies for Eti Bakır A.Ş. Samsun Port Project were initiated, and EIA Positive Certificate was given with the date of 06.06.2018 and number 101457.

In the planned EIA studies; it is planned to increase the capacity of the existing Smelter, Electrolysis Plant, Sulfuric Acid Plant, Flotation Plant, and Oxygen Plant, and establish additional facilities (Phosphoric Acid Plant, Fertilizer Plant, Acid Tanks, Waste Jibs Storage Area, Plaster Storage, Fertilizer Storage, Ammonia Tank, and Fertilizer Package Unit).

Total investment value of **"Project on Capacity Increase of Eti Bakır Samsun Plants and Additional Investments**" is 1.550.000.000 TRY.

8 hours of work will be carried out throughout the construction phase of the planned plant in 3 shifts (2 shifts for construction and excavation works, and 3 shifts for installation works). 400 people will be employed in the construction phase. In the management phase, it is planned to employ approximately 75 personnel (currently 650 persons + 75 additional persons = 725 persons) in 3 shifts for 8 hours. The construction and installation work for the aforesaid project will take approximately 36 months, and the economic life of the project is predicted as approximately 50 years with the revisions.

Following the actualization of the project, employment of the local people in the unskilled working class (or qualified worker status, if any) will offer a revival in the regional economy. As a result, job opportunities will be offered to the local people. Besides, the supply of necessary equipment and materials for the construction, as well as the procurement of food and other daily consumption materials during the construction, will also bring both local and regional market boom.

An essential part of the social needs of the personnel to be employed will be met from the construction site planned to be established in the construction phase, and from the administrative building to be located in each facility to be established in the operation phase. The drinking water needs of the personnel to be employed are met with plastic bottles and dispenser-size bottled water approved, permitted, and licensed by the Provincial Health Directorate, and utility water needs will be met from the public water mains.

Starting from the preparation of the land until the units are taken into operation, electrical energy will be used and fuel for heating purposes will not be used in the construction site to be established for the workers.

In the current situation, the plant maintains its operations within the scope of the Environmental Permit and License Certificate dated 12/02/2019 and numbered 222708236.0.1 on "**Air Emission, Wastewater Discharge Landfill - Class 2 (Municipal Wastes and Non-Hazardous Waste Landfill**)".

Domestic wastewater that will be generated from the personnel working within the scope of the project will be collected in portable septic tank in accordance with the provisions of the "Regulation on Pits to be Constructed in Places where Sewerage Canal Construction is Not Possible" and will be discharged to the sea through the existing wastewater channel within the body of Eti Bakır A.Ş. after being treated in the existing package treatment system in the plant. Wastewater from the treatment will comply with the discharge criteria specified in the Regulation on Water Pollution and Control in force and the Regulation on Aquaculture Law and Regulation No. 1380.

There will be no systematic change in the current industrial wastewater treatment plant, but the plant will be subjected to a comprehensive maintenance process and the treatment efficiency will be increased by changing the machinery and equipment in it when required. Within the scope of the activity, all the essential measures related to pollutant elements that may adversely affect surface and groundwater will be taken by the business owner.

In compliance with the relevant article of the provisions of the " Waste Management Regulation" published and enacted in the Official Gazette dated 02.04.2015 and numbered 29314 regarding domestic solid wastes to be generated within the scope of the project, wastes will be collected and accumulated separately in order to prevent environmental pollution and contribute to the economy. By complying with the principles specified for the collection and transportation of solid wastes, solid wastes will not be dumped in places that will adversely affect the environment and will be collected by being stored in closed standard garbage containers. Collected domestic solid wastes will be taken by Tekkeköy Municipality with closed special vehicles in a manner that will not pollute the environment with regard to appearance, smell, dust, leakage, and similar factors.

Within the scope of the project, the "**Zero Waste Regulation**" published and enacted in the Official Gazette dated 12.07.2019 and numbered 30829 shall be elaborately complied with.

Within the scope of the project, the provisions of the "Regulation on Control of Industrial Air Pollution" published and enacted in the Official Gazette dated 03.07.2009 and numbered 27277 (with the amendments made in the Official Gazette on 30.03.2010, 10.10.2011, 13.04.2012, 16.06.2012, 10.11.2012 and 20.12.2014) and the "Regulation on Air Quality Assessment and Management" published and enacted in the Official Gazette dated 06.06.2008 and numbered 26898 (Amendment Official Gazette: 05.05.2009-27219) will be complied with.

Within the scope of the project, the measures identified in the "**Regulation on the Protection of Employees from Noise-Related Risks**" will be taken in order to eliminate the negative effects of noise level on the personnel. Besides, continuous exposure of the personnel to this noise will be prevented. In addition to this, it will be ensured that the construction equipment is maintained continuously and the provisions of the Regulation on Environmental Noise Assessment and Management will be complied with regarding noise.

The noise levels of the equipment to be used within the scope of the project shall be below the values indicated in the provisions of the canceled "**Regulation on Noise Emission in the Environment Created by the Equipment Used in the Open Area**" prepared by the Ministry of Industry and Trade and published in the Official Gazette dated 30.12.2006 and numbered 26392.

In addition, within the scope of the project, the provisions of Public Health Law No. 1593 , the Environmental Law No. 2872, the Occupational Health and Safety Law No. 6331 and the Occupational

Health and Safety Regulation and the relevant regulation based on them will be complied with. In addition, within the scope of the project, the provisions of Public Health Law No. 1593 , the Environmental Law No. 2872, the Occupational Health and Safety Law No. 6331 and the Occupational Health and Safety Regulation and the relevant regulation based on them will be complied with.

1 - I. SECTION, DESCRIPTION, PURPOSE AND CHARACTERISTICS OF THE PROJECT

Eti Bakır A.Ş. Samsun Enterprises was established as a public economic enterprise to produce blister copper using flash tracking technology from sulfur copper concentrates in Tekkeköy district in the east of Samsun province. It is planned that "**Project on Capacity Increase of Eti Bakır Samsun Plants and Additional Investments**" will be carried out and managed by **Eti Bakır A.Ş.** on the parcels No. 1713/1, 2241/1, 2242/1, 3715, 1716/2, 1716/3 within the boundaries of Tekkeköy District of Samsun Province.

Eti Bakır A.Ş. Samsun Enterprises was established as a public economic enterprise to produce blister copper by using flash smelting technology from sulfur copper concentrates in Tekkeköy district in the east of Samsun province. The enterprise, which has been working as a public institution for many years, was taken over by Eti Bakır A.Ş. with the decision of the Privatization Supreme Board dated 02.04.2004 and numbered 2004/23.

The aforementioned enterprise has an important place in the development of the national economy and provides significant benefits in bringing the resources of our country to the national economy and in keeping the national resources within the country.

Eti Bakır A.Ş. Samsun Enterprises was established to produce blister copper by evaluating the copper ore deposits in the Black Sea Region. The said enterprise consists of basically six plants. These are as follows: Smelter, Flotation Plant, Sulfuric Acid Production Plant, Electrolysis Plant, Oxygen Plant, and Crystallized Ammonium Sulphate Plant.

Anode copper with a purity of 99% is produced by using flash oven technology in the Smelter. SO_2 formation is in question in the waste gas formed as a result of the process. The direct release of this gas into the atmosphere is not correct in terms of air quality. Therefore, there is a Sulphuric Acid Production Plant within the body of the enterprise, in which all SO_2 released in the smelters is used as raw material. **Thus, both sulfuric acid production is carried out and the SO_2 emission from the enterprise is minimized and a demanded product with a positive value is produced.** After being kept in the SO2 acid factory in the flue gas, it is released to the atmosphere within the framework of the limit values designated in the Environmental Law and Related Regulations.

In the current situation, the plant maintains its operations within the scope of the Environmental Permit and License Certificate dated 12/02/2019 and numbered 222708236.0.1 on "**Air Emission, Wastewater Discharge Landfill - Class 2 (Municipal Wastes and Non-Hazardous Waste Landfill**)".

Facilities within the scope of the project subject investment, Environmental Impact Assessment Regulation, which came into force after being published in the Official Gazette dated 25.11.2014 and numbered 29186, Projects to which Environmental Impact Assessment will be applied:

Annex-1 List;

- **Article 6- Chemical plants producing on an industrial scale using various functionally interdependent units:**

b) production of inorganic chemicals
c) Production of simple or compound fertilizers based on phosphorus, nitrogen and potassium of 20,000 tons or more per year." and

- **Article 27**

c) Ore beneficiation plants where biological, chemical, electrolytic or heat treatment methods are applied and/or waste facilities related to these ore beneficiation plants"

- **Article 31**

It falls within the scope of **"Plants where oil, natural gas, petrochemicals and chemicals are stored with a capacity of 50,000 m^3 and above".**

In addition, since capacity increase is planned in the existing units within the scope of the project;

- ***"Capacity increases" (EIA Regulation, with the amendment dated 26.05.2017)***

ARTICLE 20 – (1) Capacity increases;

a) In projects with an "EIA Positive" decision;
2) It falls within the scope of ***"An application must be made within the scope of Article 8 if it remains at or above the threshold value in the Annex-1 list".***For this reason, the EIA Report Special Format has been obtained within the scope of the EIA Regulation and this EIA Report has been prepared.

Additional facilities planned in the prepared EIA Application File (Phosphoric acid production facility with a capacity of 210,000 tons/year, DAP fertilizer with a capacity of 460,000 tons/year or 1.100.000 tons/year NP/NPK fertilizer production facility, 3 phosphoric acid tanks with a capacity of 5,000 tons, 150.000 tons/year DAP or NP/NPK fertilizer warehouse, 15,000 tons/year capacity ammonia tank and fertilizer packaging unit with a capacity of 5,000 tons/day) have been planned within EtiBakır Samsun Plants, Jibs Waste and Gypsum Landfill, on the other hand, have been planned in the area, of which is partly owned by EtiBakır A.Ş. and partly by Tekkekoy Municipality; and in the EIA process, the additional facility locations and the Jibs Waste and Gypsum Storage Area were revised, taking into account the environmental factors and the investor's demand.In the last case, all of the planned facilities and the Jibs Waste and Gypsum Landfill are located in the area owned entirely by EtiBakır A.Ş. As a result, parcels 1716/2 and 1716/3, which are owned by EtiBakır A.Ş., have been included in the project at this stage.

The entire requested Facility EIA Area is 167.93 hectares; The Jibs Waste and Gypsum Storage Area (1st and 2nd Parts Total) is 19.08 hectares and **the entire property of the area where the project subject activity will be carried out belongs to the investor company, EtiBakır A.Ş.**

- ***Priority of the Project***

EtiBakır A. Ş. Samsun Plant was established with the aim of making use of copper ore deposits in the Black Sea Region and producing blister copper. The mentioned facility basically consists of six facilities. These are Copper Smelting Plant, Flotation Plant, Sulfuric Acid Production Plant, Electrolysis Plant, Oxygen Plant and Crystallized Ammonium Sulphate Plant. The operating certificate for the facility and the business license and work permit are attached.

On January 23, 1973, the smelting facilities and in 1975, the sulfuric acid production facilities were put into operation. Anode copper is produced by processing 400,000 tons/year of sulfide copper concentrate from Kure, Murgul and Giresun Copper deposits in Flash furnaces and converters in smelters. Copper Concentrate is stored in a completely closed area of 11,722 m^2, which is shown in the site plan as a concentrate stock area.

The slag taken from the furnace and converter is processed in the concentrator facility to obtain slag concentrate, and the SO_2 gases formed are evaluated in the acid factory to produce sulfuric acid.

Anode copper with a purity of 99.5% is produced by using flash furnace technology at the Copper Smelting Facility. As a result of the process, SO_2gas is formed. There is a Sulfuric Acid Production Facility, where all of the SO_2gas released in the smelting facilities is used as raw material. Sulfuric acid is obtained by holding SO_2gases coming to the acid plant, and thus SO_2emissions in the smoke hole are reduced to the limit values specified in the SKHKKY and HKDY Regulations. The sulfuric acid produced in the acid factory is converted into ammonium sulfate fertilizer by being treated with ammonia in the crystallized ammonium sulfate facility.

The copper in the concentrate processed in the Flash Furnace is separated from the slag by the difference in density and the remaining slag is removed and cooled by keeping it in the furrow area (without storage) then it is passed through the crushers and reprocessed in the flotation facilities to recover the remaining copper. The floor of the Furrow field is covered with gravel, and the material kept in the field (not storage) is cooled for 36-48 hours on its own, 8-12 hours with a fountain water system. In the meantime, necessary security measures are taken/will be taken against entrances and exits to the furrow area. The ground impermeability of the site is sandstone, semi-permeable rock environment.

The anode copper produced in the smelting facility is purified from foreign materials in the electrolysis unit by electrolysis method, and cathode copper with a purity of 99.99% is obtained.

Currently, concentrates and silica stored in the Concentrate Stockyard are dried by rotary dryer before being fed to the flash furnace and stored in the dry concentrate silo. A steam dryer with a capacity of 100 tons/h is used in the existing facility. Nitrogen gas, which is the inert gas obtained in the oxygen plant, is used to minimize the risk of burning the concentrate in the steam dryer.

ETİ Bakır A.Ş. Samsun Plants is exempted from the provisions of the EIA Regulation dated 25.11.2014 and numbered 29186 PROVISIONAL ARTICLE 2 “(1) Projects that are documented to have started production and/or operation before 7/2/1993, the first publication date of the Environmental Impact Assessment Regulation, are out of the scope of Environmental Impact Assessment.” Opinion of the abolished Provincial Directorate of Environment and Forestry of T.R. Samsun Governorship is provided in the annex.

The EIA Positive Certificate was given by the Ministry of Environment and Forestry of the Republic of Turkey, with the date of 15.03.2010 and the Decision no 1864, for the electrolysis facility built after the privatization of the enterprise.

An "EIA Not Required Decision" was given to the ammonia tank established for the ammonia used in the Crystallized Ammonium Sulphate Plant and the DESOX system, with the letter dated 24.01.2012 and numbered 4446 by the T.R. Samsun Governorship, the Abolished Provincial Directorate of Environment and Forestry.

EIA studies have been initiated within the scope of increasing the existing capacity, establishing and operating the Oxygen, Nitrogen, Argon Production Plants and Storage Tanks, the Ammonium Sulphate Plant and the Flotation Waste Sanitary Landfill for flotation wastes within the boundaries of the facility site in Samsun Integrated Facilities, Copper Smelting Facility, Acid Facility, Electrolysis Facility and Flotation Facility in 2014, EIA Positive Certificate was granted by the Ministry of Environment and Urbanization with the date 24/06/2015 and number 3910.

In 2018, Eti Bakır A.Ş. Samsun Port Project EIA studies were started on the sea side of Samsun Integrated Facilities, which are under construction, and an EIA Positive Certificate was given with the date of 06.06.2018 and number 101457.

In the planned EIA studies; it is planned to increase the existing Smelting Plant, Electrolysis Plant, Sulfuric Acid Plant, Flotation Plant and Oxygen Plant capacities and additional facilities (Phosphoric Acid Plant, Fertilizer Plant, Acid Tanks, Waste Storage Area, Gypsum Storage, Fertilizer Storage, Ammonia Tank and Fertilizer Packing Unit) are planned to be established.

Within the scope of the planned activity, the Environmental Permit Certificate will be renewed within the scope of the "Environmental Permit and License Regulation" through the capacity increase after the completion of the EIA process according to the EIA Regulation No. 29186 dated 25.11.2014.