KIRAZLIK HYDROELECTRIC POWER PLANT PROJECT

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The Kirazlık Hydroelectric Power Plant (Kirazlık HPP from this point onward) project is constructed at the Eastern Anatolia Geographical district of Turkey over the Botan Stream that is one of the major tributaries of the River Tigris.

The Kirazlık HPP is at the downstream of the following energy projects, counting from the closest to the upstream direction: Alkumru, Çetin, Pervari, Narlı, Olur and Keskin. The Kirazlık HPP is designed with a small reservoir with a downstream regulation power plant. The dam is an earth fill dam with central clay core and concrete gravity type with a 16.80 m height above thalweg

At the initial design the project was designed with a capacity of 37.62 MWe later the electromechanical equipment producers proposed to increase the capacity to 43.62 MWe, by improving turbine and generator efficiencies. In addition to this another turbine is added along the way of lifeline water discharge to make use of the energy of the water before it would be discharged to support the downstream aquatic life. And this additional unit improved the capacity by adding a capacity of 2.50 MWe and the total capacity of the project has ended up as 46.11 MWe. In total there are 4 units 3 of which have 14,537 MWe capacity and 1 have 2,5 MWe capacity.

The construction of the project has started in 28/06/2010. First unit was commissioned in 05/12/2013. Second unit was commissioned in 15/01/2014. Third unit was commissioned in 14/03/2014. Lastly the fourth unit was commissioned in 16/05/2014. The project start date is 05/12/2013 since the first unit was commissioned in that day.

With the latest designed capacity the project is estimated to produce 150,610 MWh of electricity per year.[1] During this 1st monitoring (*05-12-2013 to 28/02/2021*) the project has produced a net total of 887,873 MWh electricity and total amount of 479,318 tCO2e of emission reduction.

The following figure shows the relationship of the Project Activity with respect to other energy project activities over the Botan Stream (Figure 1). Note that not all of these projects are yet commissioned.

[1] The capacity change of the project is documented in the official correspondences made between the project ower, DSI and EMRA(DSI letter dated 24/04/2013) .

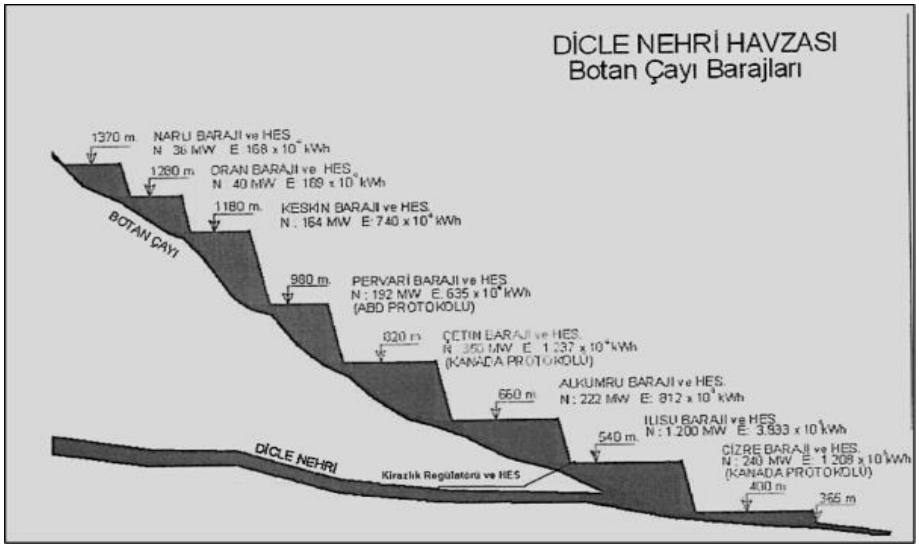

Figure 1:The Project Activity and its position on Botan River with respect to other energy project activities

The following figure (Figure 2) schematically summarizes how the project activity is operating and what needs to be considered within the physical project boundary.

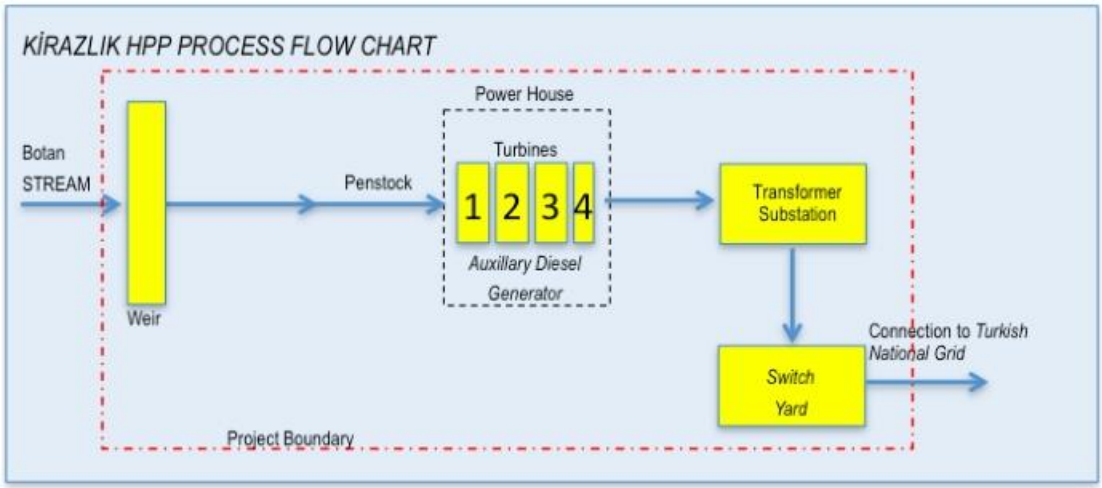

Figure 2:Flow chart showing the basic operational principles of the project activity

1.2 Sectoral Scope and Project Type

The project category is Sectoral Scope 1: Energy industries (renewable-/non -renewable sources). The project type is grid connected electricity generation from renewable sources. The project is a non- grouped, stand-alone project.

1.3 Project Proponent

Organization name	Baren Enerji Üretim San. ve. Ticaret A.S. [2]
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1.4 Other Entities Involved in the Project

Organization name	Ekobil Environmental Services and Consulting Ltd[3]
Role in the Project	Preparation of the Project Description Document
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1.5 Project Start Date

Project start date is 05-12-2013.

1.6 Project Crediting Period

The project crediting period is 10 years: 05-12-2013 to 04-12-2023. The crediting period is renewable twice.

[2] Baren Enerji Üretim San. ve. Ticaret A.S. is a subsidy of Limak Yatirim Enerji Uretim Isletme Hizmetleri ve Insaat Anonim Sirketi

[3] Registered to the Ankara Chamber of Trade, with the full name of "Ekobil Çevre Hizmetleri Danışmanlık Eğt.Tar. Hayv. Mad. İnş. İth. İhr.Tur. ve Tic. Ltd. Şti."

1.7 Project Location

The Project Activity is located on the Botan River in the Eastern Anatolia region of Turkey, within the Siirt city borders. It is located between the elevations of 541.80 m and 525.00 m between (Figure 3).

The Following (Table 1) gives the coordinates of the Kirazlık HPP Dam location and Powerhouse location.

Table 1:Coordinates of the Weir and Powerhouse

	Latitude	Longitude
Dam	37°55'28.43"N	42° 3'40.31"E
Powerhouse	37°55'25.73"N	42° 3'41.28"E

Figure 3:Map showing the location of Kirazlık HPP (red dot within the inset map) on the Botan River,Siirt,Turkey

1.8 Title and Reference of Methodology

The following UNFCCC methodology and its related tools are utilised:

Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources." Version 13.0.0.

Reference: https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG

The Approved Methodology refers to the following tools:

- "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 5.0.0)
- Tool for the demonstration and assessment of additionality" (Version 07.0.0)
- "Tool to calculate the emission factor for an electricity system". (Version 03.0.0)
- "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion" (Version 02).
- "Methodological Guideline on common Practice" (Version 2.0)

1.9 Participation under other GHG Programs

The project has not participated in any other GHG Programs.

1.10 Other Forms of Credit

Emission Trading Programs and Other Binding Limits: There is no other form of environmental credit generated by the project because there is no such system within the host country. The projects originate from Turkey do not comply for renewable energy certificates of EU because there is no energy trade between EU and Turkey because of different grid structures.

Other Forms of Environmental Credit: There is no other form of environmental credit generated by the project because there is no such system within the host country. The projects originate from Turkey do not comply for renewable energy certificates of EU because there is no energy trade between EU and Turkey because of different grid structures.

1.11 Sustainable Development

The Kirazlık HPP is at the downstream of the following energy projects, counting from the closest to the upstream direction: Alkumru, Çetin, Pervari, Narlı, Olur and Keskin. The Kirazlık HPP is designed with a small reservoir with a downstream regulation power plant. The dam is an earth fill dam with central clay core and concrete gravity type with a 16.80 m height above thalweg.

At the initial design the project was designed with a capacity of 37.62 MWe, later the electromechanical equipment producers proposed to increase the capacity to 43.62 MWe, by improving turbine and generator efficiencies. In addition to this another turbine is added along the way of lifeline water discharge to make use of the energy of the water before it would be discharged to support the downstream aquatic life. And this additional unit improved the capacity by adding a capacity of 2.50 MWe and the total capacity of the project has ended up as 46.11 MWe.

The following is a list of the project's contribution to the UN SDG:

SDG 7 on access to affordable, reliable, and sustainable energy, as the project is not relying on imported fossil fuels.

SDG-8 decent work and economic growth. As the project is providing a decent and secure work environment. Also employees are received occupational health and safety trainings.

SDG 13 on urgent action to combat climate change, as the project is replacing the fossil fuel based national grid and it is producing emission reductions.

Also, hydropower presents significant environmental benefits:

- Generating electricity from hydropower energy does not result in emissions of pollutants into the atmosphere with zero residuals that carry adverse impacts on soil, water etc.
- Regular emissions from conventional electricity generation such as sulphur dioxide, nitrogen oxide and particulates are not occurring in this case.
- As a renewable energy source hydropower can be used without jeopardizing the supply of primary energy sources in the future
- The project is significantly contributing to the reduction of GHGs.

The project pursues significant social benefits to the communities in the project area, such as:

- Construction of Kirazlık HPP and operation of the plant resulted in extra employment in the local area. The project created employment in the region. This power plant has 61 employees in current situation.

2 SAFEGUARDS

2.1 No Net Harm

In accordance with "Environmental Law" No. 2872 (Issued in 1983), 2 of Environmental Impact Assessment (EIA) Regulation (issued in 1993 and revised in 2001), run-off river type Hydroelectric Power Plants with an installed capacity of 50 MW or more are subject to a full EIA process or report preparation. The project has gone through a full EIA process and The Ministry of Forestry and Urban Planning granted an EIA Affirmative certification for the project presented in Annex-3 in the validated PDD;

It is summarized in the detailed EIA report (2009) that, for the construction of the project activity is taking materials from 2 clay and 1 sand and gravel quarry. Therefore the EIA report also covers a detailed mitigation plan for the recovery and remediation of these quarries.

As the planned hydro power plant is an “impoundment type of power plant” , the distance between the weir and the powerhouse is very short. Therefore the water that is taken via the weir is directly left to the riverbed.

The Environmental impacts and the mitigation measures are discussed in detail in the Environmental Impact Assessment report including more details at the relevant addendums that deal in more detail for issues such as noise and dust modeling. It is also mentioned in this third party government approved report that the impacts that forms during the construction phase of the project is temporary and is not be affecting the area as soon as the construction is completed.

During the operation phase on the other hand the most important issue is the continuity of the aquatic life in Botan River. The EIA report studies all the peculiarities of the river and states that it is enough for the project to release a lifeline water of 8m3/s during the relatively vet season, between October, November, December, January, February, March, July, August and September, and states that this amount would be 40m3/s during the spring months starting from April till end of June.

Based on the information obtained from the lawyers of the project owner, the right bank of the project site belongs to the forest authority and the reservoir lake area, access roads, damping sites and the site where the power house is to be constructed is located at this part. For that part of the project that covers and aerial extent of 519,374 m2, the permits are taken from the forest authority.

The land on the left banks of the project site coincides with a land designated with a meadow status. For this land the governor’s office has given approval for a change of status from Meadowland to treasury land, with a decision dated 14.03.2011 and numbered B.12.4.İLM.0.56.00.01.07-2/792-2443. The land use purpose change document is released and the 453,940.57-m2 piece of land is already registered with the parcel number 759, and registration number of M48-A-07-A, to the name of Treasury. The process of expropriation related to this piece of land, that is the transfer of land use rights was still in progress when this document was prepared.

Some of the potential impacts that may occur during the construction phase and their mitigation actions can be summarized as follows:

Dust: During the construction phase it is expected that dust can be form during the excavation and transportation of construction materials. The following measures are taken in order to minimize the amount of dust flow during all activities and to minimize the exposure of the construction workers:

1. The material loaded on trucks are covered with canvas during transportation.
2. Loading and unloading made without winnowing.
3. Speed limits are set for the vehicles.

4. The construction sites and service roads sprayed with water.

The provisions of “Regulations for Control of Air Pollution Caused by Industrial Facilities", announced in the Official Gazette No. 26236, dated 22/07/2006, is referred during this activity

Excavated waste material: Excavation waste is expected to occur not only during the material excavation from the quarries but also as a result of construction process, for such waste a waste damping site is designated

Top Soil: Top vegetative part of the soil is scraped and reserved separately at its designated site until the end of the construction period. Later on this topsoil used to cover the reclaimed areas and to improve the landscape.

Wastewater: The project is utilizing the well-structured Alkumru Dam Work site that also belongs to the subcontracted construction company. Therefore the household liquid treated at the biological packed waste water treatment facility that is set up at the Alkumru project site, as the workers logged in that work site campus.

For the toiletry needs of the workers that is working in power plant, about 5 km away from the Alkumru work site, mobile toilets are utilized, and their filled basins discharged to the sewage system of the Alkumru Dam work site, that drains to the biological packed waste water treatment system. The treated water is than discharged to the Botan River. The water quality of the discharged water is in line with the host country regulations.

Solid Wastes: The household solid waste that resulted from the presence of workers and other activities handled together with that of the wastes that occur as a result of activities in the construction of the Alkumru Dam. All these solid waste collected at the designated temporary solid waste storage site and transferred to the Aydınlar Municipality landfill or waste handling facility.

Other wastes such as cooking oils or heavy oils are collected separately and transferred to the licenced handling facilities. The project therefore complying with the host country regulations related to handling of solid waste, hazardous waste and waste oils.

Accordingly, The residue oils and fuels from the construction equipment are disposed of according to the Regulations for Control of Hazardous Wastes,announced in the Official Gazette No. 25755, on 14 of March 2005, and Regulations for Control of Waste Oils announced in the Official Gazette No. 25353, on 21 January 2004.

The explosive used in construction of the conveyance tunnel is ANFO. The explosives transported and used in accordance with the “Regulations of Measures to be Taken At Workplaces Operated Using Explosive, Combustive, Dangerous and Hazardous Substances" and the “Regulations Related to Procedures and Principles of Production, Import, Transportation, Preserving, Storing, Sales, Use, Disposal, Inspection of Explosive Substances, Hunting Materials and Similar

Substances, Excluding Tekel", announced in the Official Gazette No. 19589 on 29 September 1987.

Hazardous waste such as rubber, batteries, cables, paints, barrels, contaminated ground by oil, oil binding filters, etc. are collected and sent to a licensed hazardous waste recycling or disposal plant, and treated according to the provisions given in the "Regulations for Control of Hazardous Wastes" announced in the Official Gazette No. 25755, dated 14 March 2005.

Flora and Fauna: The project area is not designated as an area for preservation. According to the available literature, there are no rare, endemic, endangered or protected species by national and/or international laws. Fauna and flora species, which are included in the Bern Convention or Red Data Book categories, were not found in the project area. A fish passage for fish species built, and once in operation, the project is not producing any air or water pollution to the surrounding environment. It is therefore concluded that the implementation of the project is expected to have only a minor impact on the surrounding environment and regional ecology.

The reservoir lake and its surrounding is creating new habitat for waterfowl and other birds.

Possible impacts and Mitigation measures during the operation phase;

Due to the peculiarities of the project the distance between weir and the powerhouse is as short as 20-30 m. The project is confident about the lifeline water that support the sustenance of the aquatic life is released at all times. As mentioned above the amount of water to be released 8m3/s during the relatively vet season, between October, November, December, January, February, March, July, August and September, and states that that this amount would be 40m3/s during the spring months starting from April till end of June.

As the project is an impoundment type of dam, the amount of water that left during the operation phase is sufficient to support the aquatic life in the Botan River.

Fish Passage: The project has a fish ladder that is facilitating the upward and downward movements of the fish living in the Botan river.

Household Waste Water : In this monitoring period, it is observed that 61 employees are working in this project. For this personnel there is a housing constructed at the downstream axis of the Alkumru Dam site and the staff is living with their families in this site. The wastewater from this site is collected in a septic tanks that periodically sucked up and transferred to the wastewater treatment facility of the upstream Alkumru Dam Site.

In addition to the above information, project has some contribution in these ways too:

- Reducing greenhouse gas emissions in Turkey by replacing fossil fuel based grids.
- Creating employment in region during the construction and the operation phase of the plant

- Diversify the electricity generation portfolio and reduce dependency on import of other energy sources

2.2 Local Stakeholder Consultation

For the project activity a local stakeholders consultation meeting was held in Aydınlar town of Siirt Province, on April 2nd, 2009, at 11:00 am, in the Public Educational Centre Meeting Hall of Aydınlar Town, Siirt.

The LSC meeting targeted government officials, village heads (Muhtar's) of the nearby villages, and any interested local inhabitants as stakeholders of the project. The meeting was organized under the coordination of the local branch of MoEF, held within the context of the EIA process, to comply with the environmental regulations of the host country.

The meeting was announced at the bulletin boards of the governor house, and municipality, and by loudspeakers, several times before the day of the meeting. Also the meeting was announced via local newspaper (Siirt Postasi) via a National News Paper (Bugün Gazetesi) on March 19th, 2009.

On the day of the meeting, Limak Hidroelektrik Santral Yatırımları A.Ş. has sent mini-busses to the villages and helped the stakeholders reach to the meeting hall.

The consultant company that prepared the EIA report, moderated the meeting and provided information about the project and its environmental impacts to the local stakeholders and answered their questions.

In general most of the questions were related to the expropriation process and the amount of compensation money. None of the attendants mentioned any doubts about the negative impacts of the project to the surrounding environment. Both the project owner company representatives and the environmental consultants answered these questions emphasizing that the expropriation process would be conducted in line with the host country rules and regulations.

Continuous grievance and the communications means with stakeholders:

Since the beginning of the project, it has been declared by the authorized personnel that there has been no complaint about the project. When stakeholders or the local people want to communicate with the project owners, they can contact the plant manager directly. Communication can also be made by phone calls or coming directly to the power plant. The visits to the project facilities are recorded in the security teams log book (please see the examples of these logs presented as Annex-1. As can be seen from these logs there are visitors coming, registering and talking with the names stated in the logs.

In addition to this there are communication books provided to the villagers but the villagers are preferring a direct call or a visit to the facility to express their concerns or seek help for their issues.

2.3 AFOLU-Specific Safeguards

The project is a non-AFOLU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project consists of 4 units. Unit 2 was commissioned in 05-12-2013, which is the start date of the project activity. Unit 1 was commissioned in 15-01-2014. Unit 3 was commissioned in 14-03-2014. Finally, Unit 4 was commissioned in 16-05-2014. In October and November of 2014 there are no electricity production due to the maintenance activity. Also, from 2017 October to 2018 April there are no electricity production due to the maintenance and additional injection work in units. Since that date, there is no special event that may have impact on monitoring of GHG emission reductions. The following table summarizes the project milestones:

Table 2 : Chronological history of the project development and the Significant dates for the project monitoring period:

Date	*Event*
1-7-2007	Feasibility Study Report
1-9-2012	Revised Feasibility Report
12-8-2008	Water Usage Agreement Signed with DSI
9-10-2008	Electricity Production License issued by Energy Market Regulatory Authority (EMRA) and the revised special
19-8-2009	EIA Affirmative Certification
29-4-2010	Amendment to Water Usage Agreement
29-4-2010	Licence modifications approved by EMRA
28-06-2010	Construction Started
19-01-2011	Signing of the Kirazlık HPP Contract for Supply and Erection of Electromechanical Equipment
14-03-2011	Siirt Governance Approved the land use change of the Pasture portion
4-01-2012	TEIAS system connection agreements signed
27-02-2012	The pasture land is designated as land of treasury
01-05-2012	The start of the construction of the TEIAS electricity transmission line
01-09-2012	The feasibility report is revised and finalized to exhibit final design of the project activity
24-09-2012	The revised feasibility report is presented to DSI to inform about the design change.
25-09-2012	Application to DSI to inform about the September 2012 Feasibility Report that explains the addition of the 4th unit

24-04-2013	DSI correspondence to EMRA,stating that they recognize the Feasibility Study Report and they wait for EMRA to update the Production License so that they amend 2008 Water Usage Agreement.
25-04-2013	Application to Emra for the addition of the Fourth Turbine.

3.2 Deviations

3.2.1 Methodology Deviations

The UNFCCC methodology of ACM0002/ Version 13.0.0 and its related tools have been applied without any deviations.

3.2.2 Project Description Deviations

In the validated PD it is stated that all meters will be in compliance with the Communiqué for Metering Devices to be used in the Electricity Market and they have an accuracy class of Class002 indicating an accuracy range of 0.2%. In this monitoring period, the accuracy of the meters are 0.5% which is again in compliance with the regulations[4] in Turkey. Other than that, the project activity is in compliance with the scenario described at the Project Design Document, and validated by the validation report dated 17.06.2013.

3.3 Grouped Projects

The project is not a grouped project activity, nor de-bundled part of a grouped project activity.

[4] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

The following are the data and parameters available at validation:

Data / Parameter	FCi,y
Data unit	Volume Unit (cubic meter)
Description	Amount of fuel consumed by relevant power plants in Turkey in years, 2008, 2009, 2010.
Source of data	Official publications at the Turkish Electricity Transmission Company (TEIAŞ) Web Site
Value applied	Please see Annex 2-Table-1 in the validated PDD (version 2.02)
Justification of choice of data or description of measurement methods and procedures applied	Data used is taken from the TEIAŞ website, which is the website of the Turkish Electricity Distribution Company. The data published on the TEİAŞ website is the most up-to date and reliable data available for the Turkish grid.
Purpose of Data	Data used for the calculation of EFgrid,OM,Simple,y
Comments	-

Data / Parameter	NCVi,y
Data unit	GJ/Mass or Volume Unit
Description	Net Calorific Values for fossil fuel type in year, for the years 2008, 2009 and 2010
Source of data	Regional or national average default values that are reliable and documented in national energy statistics of the Turkish Electricity Transmission Company Web Site (http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/yakıt46-49/49.xls http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/yakıt46-49/47.xls)
Value applied	Please see Annex 2-Table-1b in the validated PDD(version 2.02)
Justification of choice of data or description of measurement methods and procedures applied	Data used is taken from the TEİAŞ website, which is the website of the Turkish Electricity Distribution Company. The data published on the TEİAŞ website is the most up-to date and reliable data available for the Turkish grid.
Purpose of Data	Data used for the calculation of $EF_{grid,OM,Simple,y}$. As data on the NCV is not published directly on the TEİAŞ website, this data is

	calculated using the heating values of fuels and the volume or mass of fuels consumed for each year.
Comments	-

Data / Parameter	EFCO2,i,y
Data unit	tCO2/GJ
Description	CO2 emission factor of fossil fuel type i in year y
Source of data	IPCC default values at the lower limit of the uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories, (http://www.ipcc- nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf).
Value applied	Please see Annex 2-Table-2 in the validated PDD(version 2.02)
Justification of choice of data or description of measurement methods and procedures applied	According to the "Tool to calculate the emission factor for an electricity system" version 03.0.0 , if values provided by the fuel supplier of the power plants in invoices or regional or national average defaults values are not available the IPCC default values at the lower limit of uncertainty must be used.
Purpose of Data	Data used both for the calculation of $EF_{grid,OM,Simple,y}$ and $EF_{EL,m,y}$
Comments	-

Data / Parameter	EGy
Data unit	MWh
Description	Net electricity generated in the project electricity system in other words, net electricity generated and delivered to the grid by all power sources serving the system, not including low-cost / must-run power plants / units, in year y
Source of data	Turkish Electricity Transmission Company Web Site http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/uretim%20tuketim(22-45)/40(06-10).xls www.teias.gov.tr/istatistik2009/30(84-09).xls
Value applied	Please see Annex 2-Table-3 and Table-4 in the validated PDD(version 2.02)
Justification of choice of data or description of measurement methods and procedures applied	Data used is taken from the TEİAŞ website, which is the website of the Turkish Electricity Distribution Company. The data published on the TEİAŞ website is the most up-to date and reliable data available for the Turkish grid.
Purpose of Data	Data used for the calculation of $EF_{grid,OM,Simple,y}$
Comments	-

Data / Parameter	EGm,y
Data unit	MWh
Description	Net electricity generated and delivered to the grid by power unit m in year y
Source of data	Turkish Electricity Transmission Company Web Site (www.teias.gov.tr). Data is extracted from the relevant annexes of the capacity projection reports for the years 2009[5]and 2010[6], and the projects that are listed in Gold Standard Registry, VCS project Database, and Blue Registry (VER+ Standard) are deducted.
Value applied	Please see Annex 2-Table 8a and Table 8b in the validated PDD(version 2.02)
Justification of choice of data or description of measurement methods and procedures applied	Data used is taken from the TEİAŞ website, which is the website of the Turkish Electricity Distribution Company. The data published on the TEİAŞ website is the most up-to date and reliable data available for the Turkish grid.
Purpose of Data	Data used for the calculation of $EF_{grid,BM,y}$
Comments	-

Data / Parameter	ηm,y
Data unit	%
Description	Specific electrical efficiency for all relevant energy sources (natural gas, lignite, coal/anthracite, fuel/motor oil).
Source of data	Default values provided at Appendix 1 of the Methodological tool: Tool to calculate the emission factor for an electricity system Version 03.0.0. In case where the default value is not provided, the efficiency value of the most similar primary fuel source is taken (for bitumen and lignite the efficiency factor of coal is considered).
Value applied	See Table 14 in the validated PDD(version 2.02)
Justification of choice of data or description of measurement methods and procedures applied	As no plant specific efficiency data is available, average numbers were calculated with the help of statistical data from TEIAS.
Purpose of Data	Data used for the calculation of $EF_{grid,BM,y}$
Comments	-

[5] http://www.teias.gov.tr/projeksiyon/KAPASITE%20PROJEKSIYONU%202010.pdf

[6] http://www.teias.gov.tr/projeksiyon/KAPASITEPROJEKSIYONU2011.pdf

4.2 Data and Parameters Monitored

The following are the data and parameters monitored subsequent to validation:

Data / Parameter	EGPP-self consumption, y
Data unit	MWh
Description	Quantity of electricity imported by the power plant from the Grid for self-consumption, in year y
Source of data	Monthly Electricity Meter Reading Records
Description of measurement methods and procedures to be applied	The primary source of data is the Main TEIAS meters located at the Kirazlık Powerhouse. The data read through these meters are recorded at the monthly reading protocols, the column related to electricity obtained from the Grid. There are three main meters, each recording the generation of electricity from each line that transmit the electricity generated by the generators, and there are three back-up meters, for each one of these main meters. The secondary source of data is the PMUM/MFRC web site screen shots, the column with the heading UECM[7]
Frequency of monitoring/recording	Recorded continuously, reported monthly on TEIAS Meter
Value monitored	4,874 MWh
Monitoring equipment	All Meters are in compliance with the communiqué for Metering Devices to be used in the Electricity Market[8]. They have an accuracy class of Class005 indicating an accuracy range of 0,5%.
QA/QC procedures to be applied	Measurements are carried out in compliance with the communiqué for Metering Devices to be used in the Electricity Market. The accuracy class of the meters are 0.5%. The monthly reported meter readings by the main meters are crosschecked with the readings of the back up meters. If the reading difference is less than ±0.005 (±0.5%) than the meter readings are considered to be OK, if not than the meters are checked. The monthly reported readings are also be crosschecked against the monthly PMUM/MFRC screen shots. The PMUM/MFRC data of

[7] UEÇM: Uzlaştırmaya Esas Çekim Miktarı-Amount of Electricity taken from the grid based on Reconciliation

[8] The latest version of the communiqué (in Turkish) can be found in the following link: http://www.epdk.gov.tr/web/elektrik-piyasasi dairesi/44

	electricity sales are also be a proof for quality and reliability of data.
Purpose of the data	Data to be used for the calculation of Baseline Emissions.
Calculation method	Direct continuous measurement
Comments	Data is used to calculate net electricity obtained from the grid.

Data / Parameter	EGPP-gross, y
Data unit	MWh
Description	Quantity of electricity produced by the power plant , in y
Source of data	The primary source of data is the Main TEIAS meters located at the Kirazlık Powerhouse. There are three meters. The data is read remotely by TEIAS, through these meters are recorded at the monthly reading protocols, the column related to electricity supplied to the Grid. There are three main meters, each record the generation of electricity from the line that transmit the electricity generated by each unit of generators, and there are one back-up meters, for each one of the three main meters. The secondary source of data is the PMUM/MFRC web site screen shots, the column with the heading ISVM[9]
Description of measurement methods and procedures to be applied	Measurements are made by electricity meters. That belongs to the grid operator TEIAŞ. The meters are in compliance with the collected data. Data is used to calculate the net electricity supplied to the grid
Frequency of monitoring/recording	Recorded continuously, reported monthly on TEIAS Meter Reading Protocols, Reported annually on the VCS Monitoring Report. (Monthly Protocol readings can be onsite, as well as remote by TEIAS).
Value monitored	

2013	3,441 MWh
2014	77,594 MWh
2015	118,268 MWh
2016	169,305 MWh
2017	118,048 MWh
2018	61,665 MWh
2019	195,446 MWh
2020	137,636 MWh
2021	11,344 MWh
Total	892,747 MWh

[9] ISVM: İletim Sistemine Veriş Miktarı-Amount Supplied to the Grid

Monitoring equipment	All Meters are in compliance with the communiqué for Metering Devices to be used in the Electricity Market [10].They have an accuracy class of of 0,5%.
QA/QC procedures to be applied	Measurements are carried out in compliance with the communiqué for Metering Devices to be used in the Electricity Market. The accuracy classes of the meters are 0.5%. The monthly reported meter readings by the main meters are crosschecked with the readings of the back up meters. If the reading difference is less than ±0.005 (±0.5%) than the meter readings are considered to be OK, if not than the meters are checked. The monthly reported readings are also be crosschecked against the monthly PMUM/MFRC screen shots. The PMUM/MFRC data of electricity sales are also be a proof for quality and reliability of data.
Purpose of the data	Data is used for the calculation of Baseline Emissions.
Calculation method	Direct continuous measurement
Comments	Data is used to calculate net electricity supplied to the grid.

Data / Parameter	CapPJ
Data unit	W
Description	Installed capacity of the hydropower plants after the implementation of the Project Activity.
Source of data	Project site
Description of measurement methods and procedures to be applied	Observed via the SCADA system of the Project Activity
Frequency of monitoring/recording	Once for each monitoring period
Value monitored	46,110,000
Monitoring equipment	SCADA system of the Project Activity
QA/QC procedures to be applied	Can be confirmed also by the parameter readings on the design plates of each turbine and by summing the two units.

[10] The latest version of the communiqué (in Turkish) can be found in the following link: http://www.epdk.gov.tr/web/elektrik-piyasasi-dairesi/44

Purpose of the data	Data to be used for the calculation of Baseline Emissions.
Calculation method	N/A
Comments	-

Data / Parameter	APJ
Data unit	m2
Description	Area of the reservoir measured in the surface of the water, after the implementation of the Project Activity, when the reservoir is full.
Source of data	Scada System of the project
Description of measurement methods and procedures to be applied	The reservoir area corresponding to maximum operational level has been determined as a certain value according to the topographical maps. And a correlation graphic that exhibits the relationship between the water depth, reservoir area and the volume of the reservoir is plotted against a graphic. In order to make verification of the reservoir area, the monthly maximum water depth recordings is be taken and the corresponding reservoir area is determined using the same graphic, Presented in Annex 4 in the validated PD.
Frequency of monitoring/recording	Once during each monitoring period
Value monitored	1,000,000 m2
Monitoring equipment	Scada system water level readings
QA/QC procedures to be applied	Can be checked and compared to satellite imagery available by Google Earth.
Purpose of the data	Data is used for the calculation of Project Emissions.
Calculation method	-
Comments	-

4.3 Monitoring Plan

Objectives of the monitoring program

The Monitoring plan is developed to ensure that the Project Activity is well organized from the start in terms of the collection and archival of complete and reliable data that is needed to ensure reliable and accurate measurements of actual emission reductions.

Data monitored

Given that the emission factor is calculated on an ex-ante basis, the first data monitored is the electricity net supplied to the grid.
The second data monitored is the installed capacity of the Project Activity. Using the SCADA system installed capacity measured automatically.
The third data monitored is the reservoir area of the Project Activity. The reservoir area corresponding to maximum operational level has been determined as a certain value according to the topographical maps. And a correlation graphic that exhibits the relationship between the water depth, reservoir area and the volume of the reservoir is plotted against a graphic. In order to make verification of the reservoir area, the monthly maximum water depth recordings are taken and the corresponding reservoir area determined using the same graphic, Presented in Annex 4 in the validated PDD.

Monitoring procedures

The Verified Emission Reduction (VER) Monitoring Team is conducting the monitoring. The VER Team Members, and their position and duties for the monitoring is outlined in the following table (Table 3):

Table 3: Positions and responsibilities of the VER monitoring team members

Position	Responsibility
Kirazlık HPP Manager (Also Monitoring Team Manager)	Day to day operation of the Kirazlık HPP, Compliance of the project activity with the host country rules and regulations. Coordination of the data collection and recording for the VCS monitoring report.
Chief Electrical Engineer	Day to day follow up of electrical equipment Recording and monitoring of the electricity generation data
Accounts Manager	Data keeping for power sales. Keeping the track record of PMUM/MFRC data
Chief Mechanical Engineer	Day to day operation of the power plant Keeping records of malfunctions and repairs
Carbon Consultant	Emission reduction calculations. Scripting of the periodic monitoring report. Follow up of the verification process

The power generation meter readings performed by using the main metering devices and the back-up metering devices used for accuracy checks only. Data from metering devices are recorded by TEİAŞ on monthly-agreed protocols and forms the basis for invoicing. In addition to the readings of the three metering devices, generation data of the Kirazlık HPP can be cross checked, via the TEİAŞ – PMUM web site (http://pmum.teias.gov.tr), which is accessible by a password available to the electricity generation companies. The monthly screen shot print outs of the PMUM data is available to the verifying DOE during the verification process for cross checking. Electricity generation data at the Market Financial Reconciliation Centre (MFRC/PMUM) web page exhibits the net electricity generated less transmission loss, to be able to produce comparable numbers, the figures taken from PMUM web site needs to be multiplied by the transmission loss factor of the grid.

Staff training

The VER Manager is responsible for ensuring that procedures are followed on site and continuously for improving the procedures to ensure the reliability of the monitoring system.
All staff involved in the VER project receiving training from the monitoring team manager. The Project Owner keeps records of staff training.

Monitoring equipment

The Electrical Engineers obtain the readings from the meters, report them in the spreadsheet for measurement control and store the data discharged from the meters electronically.

All the measuring equipment are in line with the EMRA requirements. The recalibration of these equipments done in line with the equipment requirements but re-calibration periods are defined by national metrology institutes country by country and in Turkey this period is defined as 10 years[11]. All the meters installed within the project are inline with EMRA requirements. Measuring equipments and details are given in the table below. TEİAS conducts the calibration and maintenance of the meters and thus, ensures the accuracy and quality of the measurements.

Meter	Main Meters			Backup meters		
Function	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3
Located	At the plant	At the plant	At the plant	At the plant	At the plant	At the plant
Serial No.	471123	471125	471127	471126	471124	471128
Calibration date	2012	2012	2012	2012	2012	2012
Valid Until[12]	2022[13]	2022	2022	2020	2022	2022
Model	ELSTER	ELSTER	ELSTER	ELSTER	ELSTER	ELSTER
Type	ABB 1500	ABB 1500	ABB 1500	ABB 1500	ABB 1500	ABB 1500
Accuracy Class	0.5S	0.5S	0.5S	0.5S	0.5S	0.5S
Meter	Main Meters			Backup meters		
Function	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3
Located	At the plant	At the plant	At the plant	At the plant	At the plant	At the plant
Serial No.	10013575	10013577	10013579	10013576	10013578	10013580
Calibration date	2020	2020	2020	2020	2020	2020
Valid Until	2030	2030	2030	2030	2030	2030
Model	EMH	EMH	EMH	EMH	EMH	EMH
Type	LZQJ-XC	LZQJ-XC	LZQJ-XC	LZQJ-XC	LZQJ-XC	LZQJ-XC
Accuracy Class	0.5S	0.5S	0.5S	0.5S	0.5S	0.5S

Electricity meters
The main and back-up electricity meters are bi-directional for quantifying the electricity delivered by the Project Activity to the grid.

[11] *http://www.mevzuat.adalet.gov.tr/html/21179.html*

[12] Within the scope of the regulation in Turkey (https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5), the stamp year is taken as basis year and the year it is stamped(2012) is counted as the first year,regardless of the date and the remaining period is calculated from the year it was stamped(2012+10 years).

[13] Although the meters were valid until 2022, on 12.10.2020, all of the meters were changed at with the request of TEIAS.

All the meters are in compliance with the standards of the Turkish Standards Institute and have obtained a "Type and System Approval" certificate from the Ministry of Trade and Industry. In case there are modifications to the standards, the modified standard shall be valid; and in case a valid standard is cancelled or abolished, the new standard shall be valid. The standards that used are TS-620 EN 60044-1 and TS718 IEC60044.2 for main and back-up meters, respectively. The meters are factory calibrated by the manufacturer before installation. Records of the meter (type, made, model and calibration documentation) are retained in the quality control system.

Data collecting and recording

I. The net electricity generation by the project activity. Based on the baseline scenario presented above, this amount of electricity would have been produced by the Turkish National Grid.

The electricity produced are sold to TEİAŞ. Therefore, TEİAŞ measures the electricity produced by three main meters and three Back-up meters.

These meters are placed at the Kirazlık powerhouse where the power plant gets connected to the Turkish national grid. Those meters provide official data, which are read and recorded monthly by TEİAŞ officers for invoicing. TEİAŞ also conducts the calibration and maintenance of these meters and thus, ensures the accuracy and quality of the measurements. The quality standards that the meters need to comply is "The ICE/TSE 62053-22: Electricity metering equipment (a.c) – Particular requirements - Part 22: Static meters for active energy (Classes 0,2 S and 0,5 S)" The calibration of the meters is done and the meters are checked continuously if there is a difference of 0.5 % in the readings of the main and the auxiliary meters, the calibration is repeated.

At the end of each month, the monthly generation is read remotely and e-mailed to the project owner. In case of failure of the main meters, back-up meters are used to determine the invoiced generation amount. These readings can be on site as well as remotely by the systems that puts in place by the grid operator TEIAS.

The net electricity produced (EGPP-net, y) in year y is calculated by subtracting the total electricity consumed by the hydroelectric power plant (EGPP-self consumption, y) , from the gross electricity generation (EGPP-gross, y) . After obtaining the net electricity production value, the emission reductions are calculated by multiplying the net electricity with the Ex-ante Combined Margin Emission Factor calculated above.

Measuring Installed Capacity

By means of the SCADA system established in the plant all kinds of technical parameters related with turbines and generators including installed capacity is measured and stored in the system on real time basis. The installed capacity of the plant is measured from SCADA once a year while the plant is operated with full load and the related data is stored as per the monitoring program.

Measuring Reservoir Area

The reservoir area corresponding to maximum operational level has been determined as a certain value according to the topographical maps. And a correlation graphic that exhibits the relationship between the water depth, reservoir area and the volume of the reservoir is plotted against a graphic. In order to make verification of the reservoir area, the monthly maximum water depth recordings are taken and the corresponding reservoir area is determined using the same graphic, Presented in Annex 4 in the validated PD.

Data management

At the end of each month, electricity supplied to the grid is entered into an electronic spread sheet. The data to be measured for installed capacity and reservoir area is entered into an electronic spread sheet at the end of each year. The electronic files backed up on both hard drives and on a Compact Disc (CD).

Quality Control and Assurance (QC/QA)

All of the main and back-up meters are owned and installed by the grid operator, TEIAS. The Project Owner sign an agreement with the grid operator to specify the QA procedure for measurement and calibration to ensure the measurement accuracy of the main and back-up meters are in compliance with national regulations. The Calibrations of the electricity meters are valid for the next 10 years after calibration.

The grid operator's Metering Officer should be notified of any failure of one of the meters. TEIAS is the only one entity, authorized to deal with fixing, calibrating, or changing the meters, which is

done either by the grid operator or by a company authorized by the grid operator. The Project Owner keeps electricity sale and purchase records, to which the recorded data is compared.
All written documentation such as maps, drawings, the EIA and the Feasibility study, are stored and available to the verifier so that the reliability of the information may be checked.
All data records are kept for at least 2 years from the last project-crediting year.
The continuity and security of the emission reductions related data depends on safe and sound operation of the project activity. To achieve this, the project owner and the project management team are doing their best to maintain the project activity in case of an emergency the emergency plan detailed between pages 196 and 198 of the EIA and the Emergency action flow charts outline in Addendum 14 of the EIA are implemented.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The baseline emissions (BEy) are calculated based on the following formula:

$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where:

BEy = Baseline emissions in year y (tCO_2-yr)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh-yr)

$EF_{grid,CM,y}$ = Combined margin CO_2 emissions factor in year y (tCO_2-MWh)

And

$EG_{PJ,y} = EG_{Facility,y}$

$EG_{Facility,y}$ = Quantity of net electricity generation supplied by the project plant to the grid in year y (MWh-y)

The Combined margin CO_2 emissions factor in year y (tCO_2 -MWh), $EF_{grid,CM,y}$, is fixed ex-ante for the duration of the crediting period, and is 0.53985 tCO_2e/MWh.

Table 4: Baseline emissions of the project calculated for the monitoring period (National Grid Emission Factor EF_{CM} is 0.53985 tCO_2e/MWh

		A-Gross Electricity Production	B-Self Electricity Consumption	C-Net electricity production C=A-B	Baseline Emissions = $EG_{PP\text{-}net,y} * EF_{CM}$
	Symbol	$EG_{PP\text{-}gross,\ y}$	$EG_{PP\text{-}self\ consumption,\ y}$	$EG_{PP\text{-}net,\ y}$	BE1
YEAR	Units	MWh	MWh	MWh	tCO_2e
2013	December	3,441	252.37	3,189	1,721
Total in 2013		3,441	252.37	3,189	1,722
2014	January	1,769.53	0.20	1,769	955.17
	February	9,450.78	0.08	9,451	5,101.96
	March	11,870.55	0.04	11,871	6,408.29
	April	13,709.22	0.05	13,709	7,400.90
	May	18,835.22	0.05	18,835	10,168.17
	June	7,389.34	0.09	7,389	3,989.09
	July	4,591.15	0.12	4,591	2,478.47
	August	4,838.69	0.11	4,839	2,612.11
	September	4,041.25	0.09	4,041	2,181.62
	October	0	0.11	-0.11	-0.06
	November	0	0.18	-0.18	-0.10
	December	1,098.40	0.19	1,098	592.87
Total in 2014		77,594	1.31	77,593	41,888
2015	January	4,338.10	184.00	4,154	2,242.59
	February	7,993.80	108.40	7,885	4,256.93

	March	11,617.40	19.60	11,598	6,261.07
	April	19,457.50	50.30	19,407	10,476.98
	May	26,141.90	9.80	26,132	14,107.41
	June	16,419.20	22.90	16,396	8,851.54
	July	8,102.20	54.00	8,048	4,344.82
	August	9,567.98	86.58	9,481	5,118.53
	September	7,202.53	78.97	7,124	3,845.65
	October	428.45	131.97	296	160.05
	November	2,164.64	175.07	1,990	1,074.07
	December	4,834.21	175.43	4,659	2,515.04
Total in 2015		118,268	1,097	117,171	63,255
2016	January	11,424.85	160.30	11,264.55	6,081.17
	February	16,932.08	0.54	16,931.54	9,140.49
	March	22,143.00	0.58	22,142.42	11,953.59
	April	26,453.68	0.48	26,453.20	14,280.76
	May	30,879.26	0.36	30,878.90	16,669.97
	June	18,454.25	0.35	18,453.90	9,962.34
	July	8,996.39	0.29	8,996.10	4,856.54
	August	6,746.54	0.14	6,746.40	3,642.04
	September	5,692.00	0.10	5,691.90	3,072.77
	October	3,114.01	0.11	3,113.90	1,681.04
	November	8,480.07	0.17	8,479.90	4,577.87
	December	9,989.21	0.41	9,988.80	5,392.45
Total in 2016		169,305	163.84	169,142	91,311
2017	January	3,316.49	0.59	3,315.90	1,790.09
	February	6,345.58	0.48	6,345.10	3,425.40
	March	13,836.68	0.18	13,836.50	7,469.63
	April	27,050.26	0.16	27,050.10	14,603.00
	May	32,904.70	0.50	32,904.20	17,763.33
	June	11,553.66	0.36	11,553.30	6,237.05
	July	9,955.57	0.37	9,955.20	5,374.31
	August	8,044.23	0.13	8,044.10	4,342.61
	September	5,041.19	0.09	5,041.10	2,721.44
	October	0	0	0	0.00
	November	0	0	0	0.00
	December	0	0	0	0.00
Total in 2017		118,048	2.85	118,046	63,727
2018	January	0	0	0	0.00
	February	0	0	0	0.00
	March	0	0	0	0.00
	April	0	0	0	0.00

	May	9,706.48	54.24	9,652.24	5,210.76
	June	12,046.25	0.35	12,045.90	6,502.98
	July	6,224.99	0.38	6,224.61	3,360.36
	August	9,440.64	0.35	9,440.29	5,096.34
	September	5,468.11	0.31	5,467.80	2,951.79
	October	2,094.76	0.26	2,094.50	1,130.72
	November	4,079.19	0.39	4,078.80	2,201.94
	December	12,604.56	0.55	12,604.01	6,804.27
Total in 2018		61,665	56.82	61,608	33,259
2019	January	10,826.90	200.56	10,626.34	5,736.63
	February	11,488.47	137.55	11,350.92	6,127.79
	March	23,566.03	131.21	23,434.82	12,651.29
	April	29,591.67	138.12	29,453.55	15,900.50
	May	31,320.42	127.27	31,193.15	16,839.62
	June	28,895.45	131.15	28,764.30	15,528.41
	July	31,320.42	127.27	31,193.15	16,839.62
	August	11,706.75	119.25	11,587.50	6,255.51
	September	6,235.18	101.48	6,133.70	3,311.28
	October	5,756.70	87.70	5,669.00	3,060.41
	November	2,909.67	94.17	2,815.50	1,519.95
	December	1,827.94	156.34	1,671.60	902.41
Total in 2019		195,446	1,552	193,894	104,673
2020	January	5,139.48	178.45	4,961.03	2,678.21
	February	9,582.36	166.51	9,415.85	5,083.15
	March	10,038.90	143.78	9,895.12	5,341.88
	April	26,473.67	123.87	26,349.80	14,224.94
	May	30,699.99	125.62	30,574.37	16,505.57
	June	19,618.18	118.51	19,499.67	10,526.90
	July	9,546.85	96.97	9,449.88	5,101.52
	August	8,024.10	113.80	7,910.30	4,270.38
	September	7,208.89	109.41	7,099.48	3,832.65
	October	3,034.42	89.16	2,945.26	1,590.00
	November	4,260.62	98.15	4,162.47	2,247.11
	December	4,008.29	133.99	3,874.30	2,091.54
Total in 2020		137,636	1,498	136,138	73,494
2021	January	7,006	119.16	6,887	3,717.68
	February	4,338	130.61	4,207	2,271.41
Total in 2021		11,344	249.77	11,094	5,989
Grand Total		892,747	4,874	887,873	479,318

5.2 Project Emissions

As the methodology states the PEy in case of a hydropower project is calculated:
"Emissions from water reservoirs of hydro power plants (PEHP,y)
For hydro power project activities that result in new reservoirs and hydro power project activities that result in the increase of existing reservoirs, project proponents shall account for CH4 and CO2 emissions from the reservoir, estimated as follows:"
"…the power density of the project activity (PD) is greater than 4 W/m2 and less than or equal to 10 W/m2:"
The project has a power density of 46.11 W/m2 therefore:
$PE_{HP,y} = 0$
Where:
$PE_{HP,y}$ = Project emissions from water reservoirs (tCO_2e/yr)
Although there are auxiliary diesel generators installed within the project boundary, the emissions from these have been deemed negligible as per the ACM0002 (version 13.0.0) methodology.

5.3 Leakage

There are no leakage emissions related to project activity.

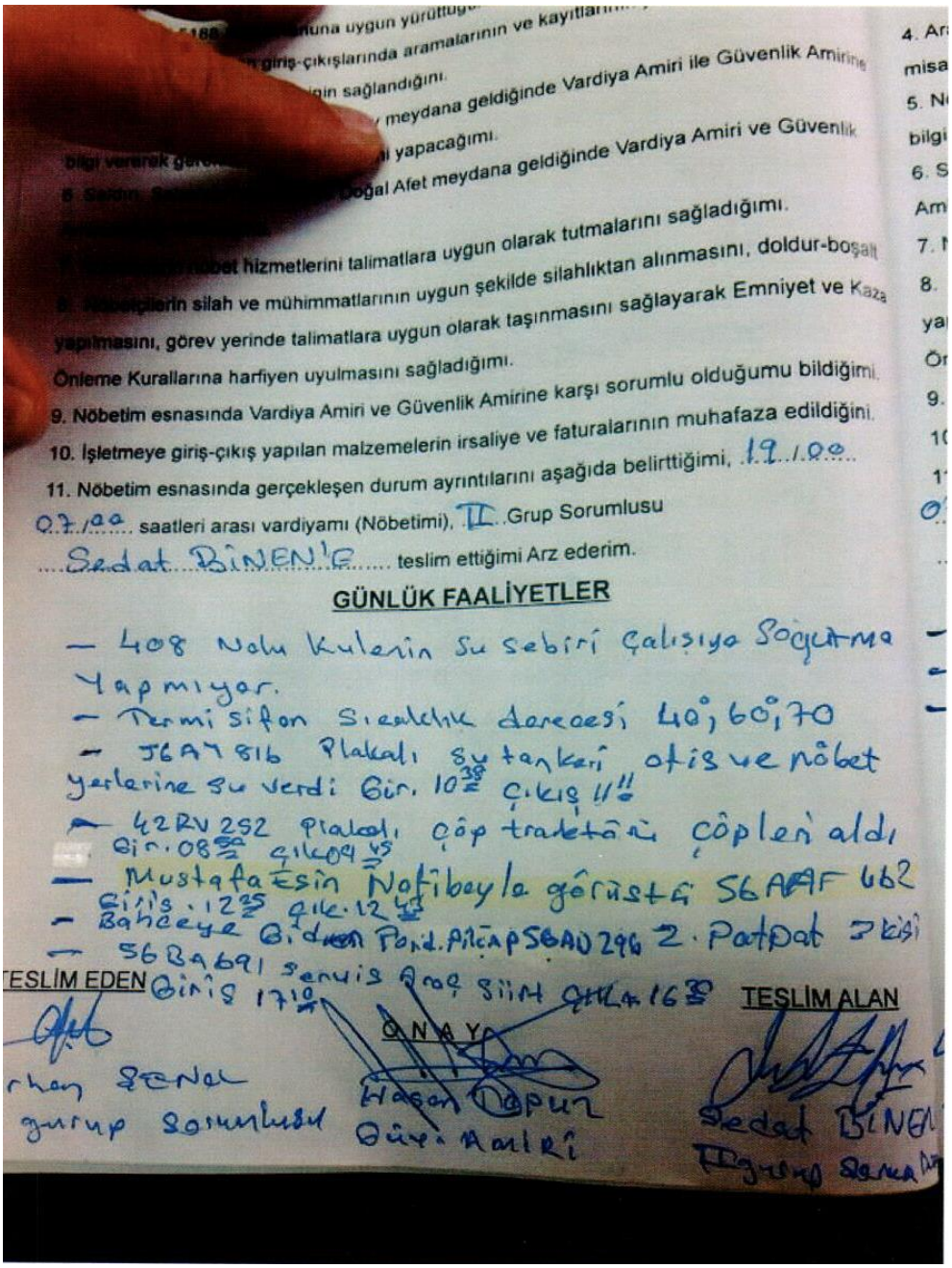
5.4 Net GHG Emission Reductions and Removals

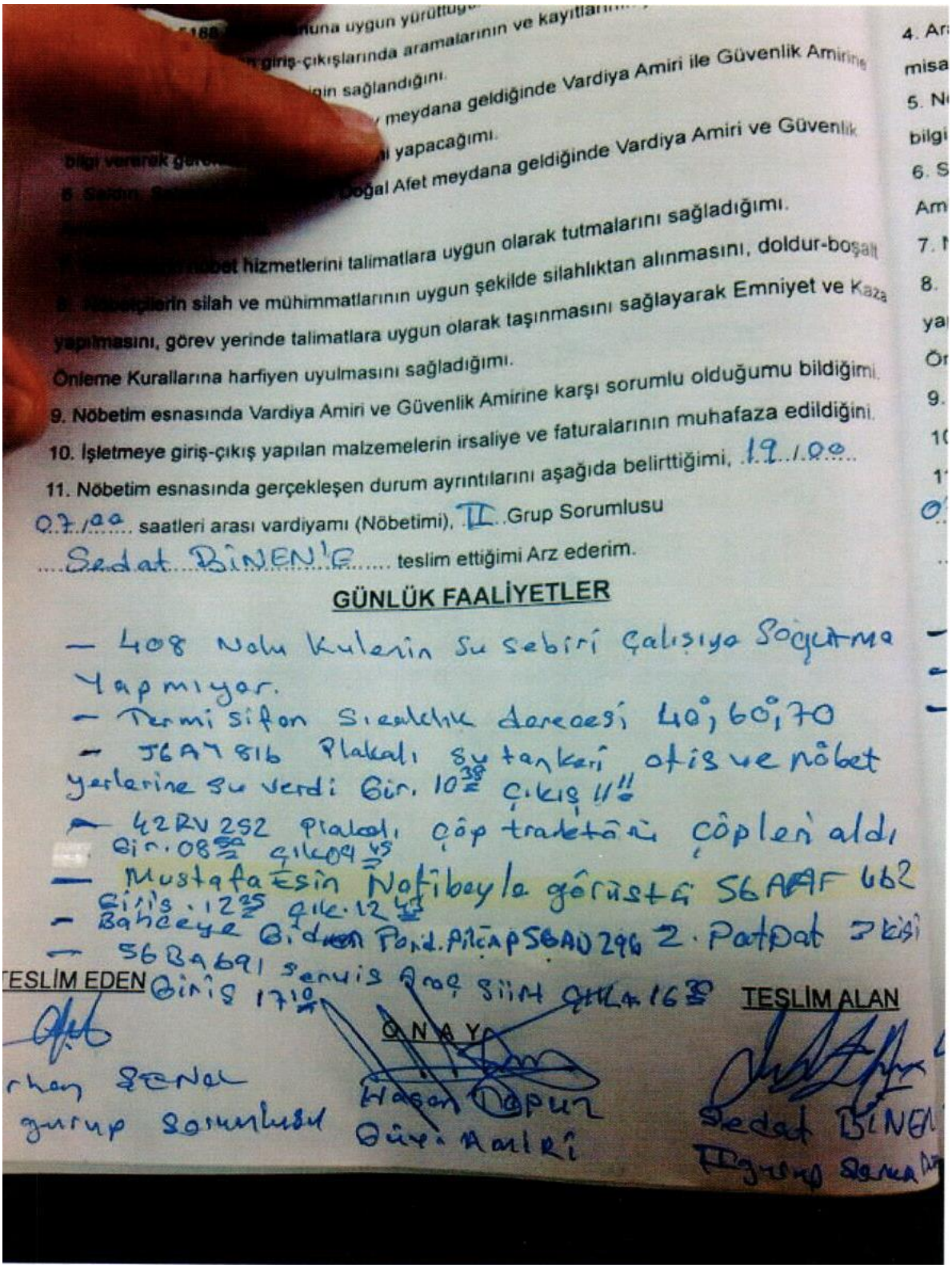
Table 5 : Project activity related emission reductions with respect to vintage years.

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2013(05-12-2013 to 31-12-2013)	1,722	0	0	1,722
2014(01-01-2014 to 31-12-2014)	41,888	0	0	41,888
2015(01-01-2015 to 31-12-2015)	63,255	0	0	63,255
2016(01-01-2016 to 31-12-2016)	91,311	0	0	91,311
2017(01-01-2017 to 31-12-2017)	63,727	0	0	63,727
2018(01-01-2018 to 31-12-2018)	33,259	0	0	33,259
2019(01-01-2019 to 31-12-2019)	104,673	0	0	104,673
2020(01-01-2020 to 31-12-2020)	73,494	0	0	73,494
2021(01-01-2021 to 28-02-2021)	5,989	0	0	5,989
Total	479,318	0	0	479,318

ANNEX -1 : SAMPLES OF THE RECORDS OF THE VISITORS TO THE PROJECT SITE FACILITIES

Below is the sample pictures from the security logs. The printed part is the list of the duties of the security personnel and it ends with to whom the log book is handed over. The hand written part is the log of the events and visitors. The visitor names, plate numbers and who was v,isited is recorded and is highlighted below with yellow.





...una uygun yürüttüg...
...giriş-çıkışlarında aramalarının ve kayıtlarının...
...ğın sağlandığını.
...meydana geldiğinde Vardiya Amiri ile Güvenlik Amirine
...i yapacağımı.
bilgi vererek gö...
6. Sa... Doğal Afet meydana geldiğinde Vardiya Amiri ve Güvenlik
...nöbet hizmetlerini talimatlara uygun olarak tutmalarını sağladığımı.
8. Nöbetçilerin silah ve mühimmatlarının uygun şekilde silahlıktan alınmasını, doldur-boşalt yapılmasını, görev yerinde talimatlara uygun olarak taşınmasını sağlayarak Emniyet ve Kaza Önleme Kurallarına harfiyen uyulmasını sağladığımı.
9. Nöbetim esnasında Vardiya Amiri ve Güvenlik Amirine karşı sorumlu olduğumu bildiğimi.
10. İşletmeye giriş-çıkış yapılan malzemelerin irsaliye ve faturalarının muhafaza edildiğini.
11. Nöbetim esnasında gerçekleşen durum ayrıntılarını aşağıda belirttiğimi, 19.1.00
07.00 saatleri arası vardiyamı (Nöbetimi), II. Grup Sorumlusu
Sedat BİNEN'E teslim ettiğimi Arz ederim.

4. Ar...
misa...
5. N...
bilgi...
6. S...
Am...
7. ...
8. ...
ya...
Ön...
9. ...
10...
11...
0...

GÜNLÜK FAALİYETLER

- 408 Nolu Kulenin Su sebili Çalışıya Soğutma Yapmıyor.
- Termi sifon Sıcaklık derecesi 40°, 60°, 70
- 16 AY 816 Plakalı Su tankeri ofis ve nöbet yerlerine Su verdi Gir. 10[38] Çıkış !!!
- 42 RV 252 Plakalı çöp traktörü çöpleri aldı Gir. 08[55] çık 09[45]
- Mustafa Esin Nöbetçiyle görüştü SGAAF 662 Giriş: 12[35] çık. 12[45]
- Bahçeye Gideon Pond. Pilot SGAU 296 2. Patpat 7 kişi
- SGBA 691 servis Araç Şöför çık. 16[35]

TESLİM EDEN

Giriş 17[10]

ONAY

TESLİM ALAN

rhan Şenel
grup Sorumlusu

Hasan Dapur
Güv. Amiri

Sedat BİNEN
II grup Sorumlusu

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10../.02.../2021..

GRUP SORUMLUSU NÖBET ÖZEL TALİMATI

1. Grup sorumlusu olarak vardiyayı hazırlayarak Vardiya Amirine bilgi verdiğimi.
2. Nöbetçi personelin kılık, kıyafet ve şahsi temizlik kontrollerini yaparak nöbet nöbet yerlerinin temiz ve tertipli bulunmasını sağladığımı.
3. Nöbetimi 5188 Sayılı Kanuna uygun yürüttüğümü.
4. Araçların, yayaların giriş-çıkışlarında aramalarının ve kayıtlarının yapılması ile gelen misafirlerin ilgili yerlere sevkinin sağlandığını.
5. Nöbet esnasında herhangi bir olay meydana geldiğinde Vardiya Amiri ile Güvenlik Amirine bilgi vererek gerekli tutanak işlemlerini yapacağımı.
6. Saldırı, Sabotaj, Yangın veya Doğal Afet meydana geldiğinde Vardiya Amiri ve Güvenlik Amirine bilgi vereceğimi.
7. Nöbetçilerin nöbet hizmetlerini talimatlara uygun olarak tutmalarını sağladığımı.
8. Nöbetçilerin silah ve mühimmatlarının uygun şekilde silahlıktan alınmasını, doldur-boşalt yapılmasını, görev yerinde talimatlara uygun olarak taşınmasını sağlayarak Emniyet ve Kaza Önleme Kurallarına harfiyen uyulmasını sağladığımı.
9. Nöbetim esnasında Vardiya Amiri ve Güvenlik Amirine karşı sorumlu olduğumu bildiğimi.
10. İşletmeye giriş-çıkış yapılan malzemelerin irsaliye ve faturalarının muhafaza edildiğini.
11. Nöbetim esnasında gerçekleşen durum ayrıntılarını aşağıda belirttiğimi, .07./..00.. 19./..00. saatleri arası vardiyamı (Nöbetimi), .II...Grup Sorumlusu ....Muzaffer...UŞANTI...'ye. teslim ettiğimi Arz ederim.

GÜNLÜK FAALİYETLER

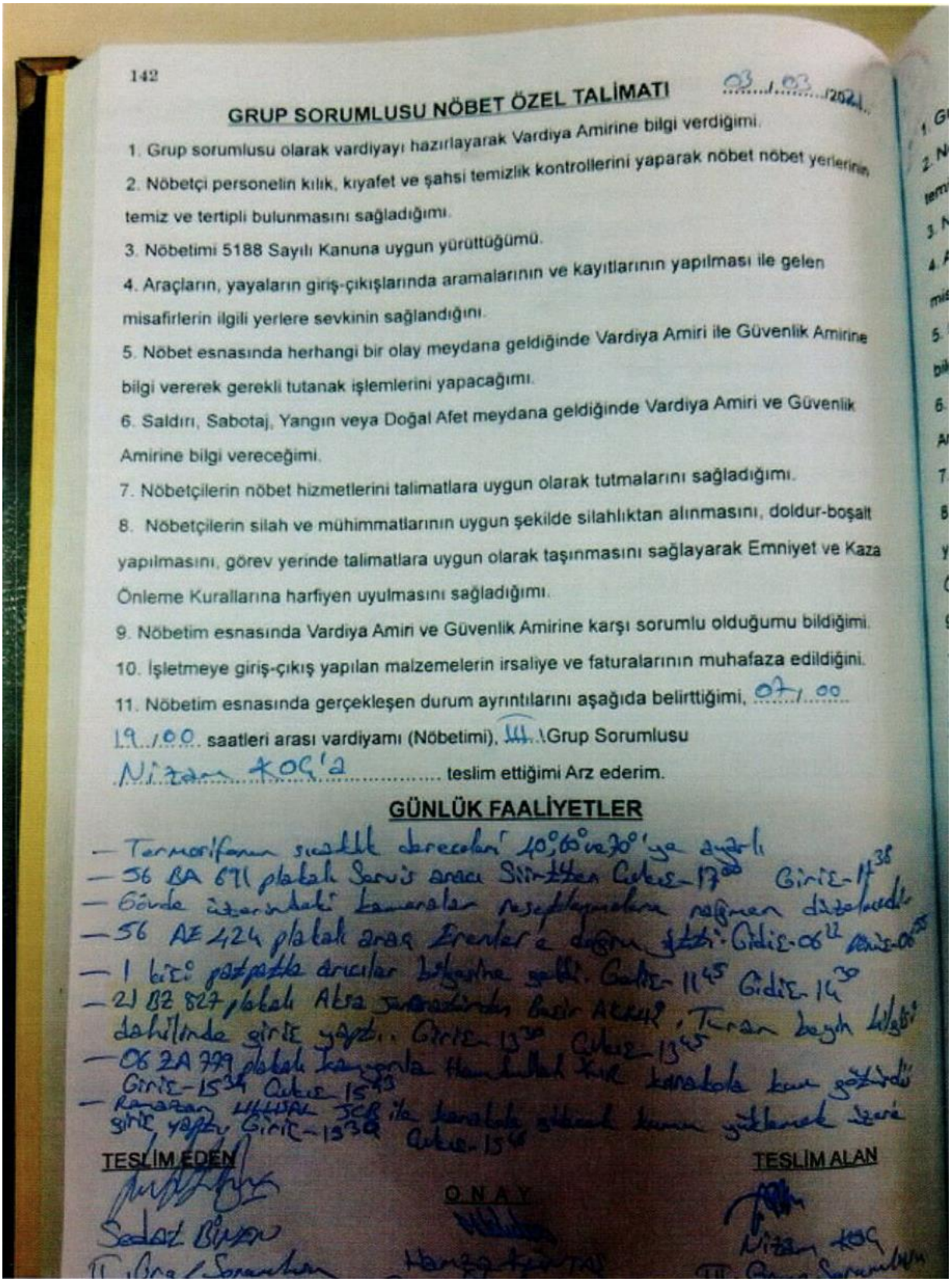
- Termosifon Sıcaklık derecesi kontrol edildi göstergede 40°'di ve 70°'ye ayarlı.
- Gövde üzerinde yapmış olduğum kontrollerde herhangi olağan bir duruma rastlanmadı.
- 42 RY 252 Plakalı Traktörde Ömer AKGAĞ Çöp toplamak için giriş yaptı: 07:11 10:44
- Kasım beydoğan Ahmet Beyin bilgisi dahilinde 1 Pat Pat Kum götürdü 09:40 11:55
- 58 BA 691 araçla Halit [illegible] [illegible] 17:[illegible] çıkış giriş 17:40

TESLİM EDEN

Medeni GÖLCAN

TESLİM ALAN

Muzaffer UŞANTI



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GRUP SORUMLUSU NÖBET ÖZEL TALİMATI 03.1.03.../2024..

1. Grup sorumlusu olarak vardiyayı hazırlayarak Vardiya Amirine bilgi verdiğimi.
2. Nöbetçi personelin kılık, kıyafet ve şahsi temizlik kontrollerini yaparak nöbet nöbet yerlerinin temiz ve tertipli bulunmasını sağladığımı.
3. Nöbetimi 5188 Sayılı Kanuna uygun yürüttüğümü.
4. Araçların, yayaların giriş-çıkışlarında aramalarının ve kayıtlarının yapılması ile gelen misafirlerin ilgili yerlere sevkinin sağlandığını.
5. Nöbet esnasında herhangi bir olay meydana geldiğinde Vardiya Amiri ile Güvenlik Amirine bilgi vererek gerekli tutanak işlemlerini yapacağımı.
6. Saldırı, Sabotaj, Yangın veya Doğal Afet meydana geldiğinde Vardiya Amiri ve Güvenlik Amirine bilgi vereceğimi.
7. Nöbetçilerin nöbet hizmetlerini talimatlara uygun olarak tutmalarını sağladığımı.
8. Nöbetçilerin silah ve mühimmatlarının uygun şekilde silahlıktan alınmasını, doldur-boşalt yapılmasını, görev yerinde talimatlara uygun olarak taşınmasını sağlayarak Emniyet ve Kaza Önleme Kurallarına harfiyen uyulmasını sağladığımı.
9. Nöbetim esnasında Vardiya Amiri ve Güvenlik Amirine karşı sorumlu olduğumu bildiğimi.
10. İşletmeye giriş-çıkış yapılan malzemelerin irsaliye ve faturalarının muhafaza edildiğini.
11. Nöbetim esnasında gerçekleşen durum ayrıntılarını aşağıda belirttiğimi, 07.00 19.00 saatleri arası vardiyamı (Nöbetimi), III. \Grup Sorumlusu Nizam KOÇ'a ..... teslim ettiğimi Arz ederim.

GÜNLÜK FAALİYETLER

- Termometrenin sıcaklık dereceleri 40°C, 0°C ve 30°C'ye ayarlı
- 56 BA 691 plakalı Servis aracı Sürüşten Çıkış-17[00] Giriş-17[38]
- Görüş üzerindeki kameralar reçetelerden rağmen düzeltildi
- 56 AE 424 plakalı araç Erenler'e doğru yola çıktı. Giriş-08[12] Çıkış-08[25]
- 1 kişi postayla araçlar bölgesine geldi. Çıkış-11[45] Giriş-14[30]
- 21 BZ 827 plakalı Akça [illegible] Bedir ACAR, Turan beyin bilgisi dahilinde giriş yaptı. Giriş-13[20] Çıkış-13[25]
- 06 ZA 779 plakalı kamyonla Hamidiye Kül karabola kum götürdü Giriş-15[34] Çıkış-15[43]
- Ramazan UĞURLU SCB ile karabola çıkacak kum yüklemek üzere giriş yaptı Giriş-15[39] Çıkış-15[46]

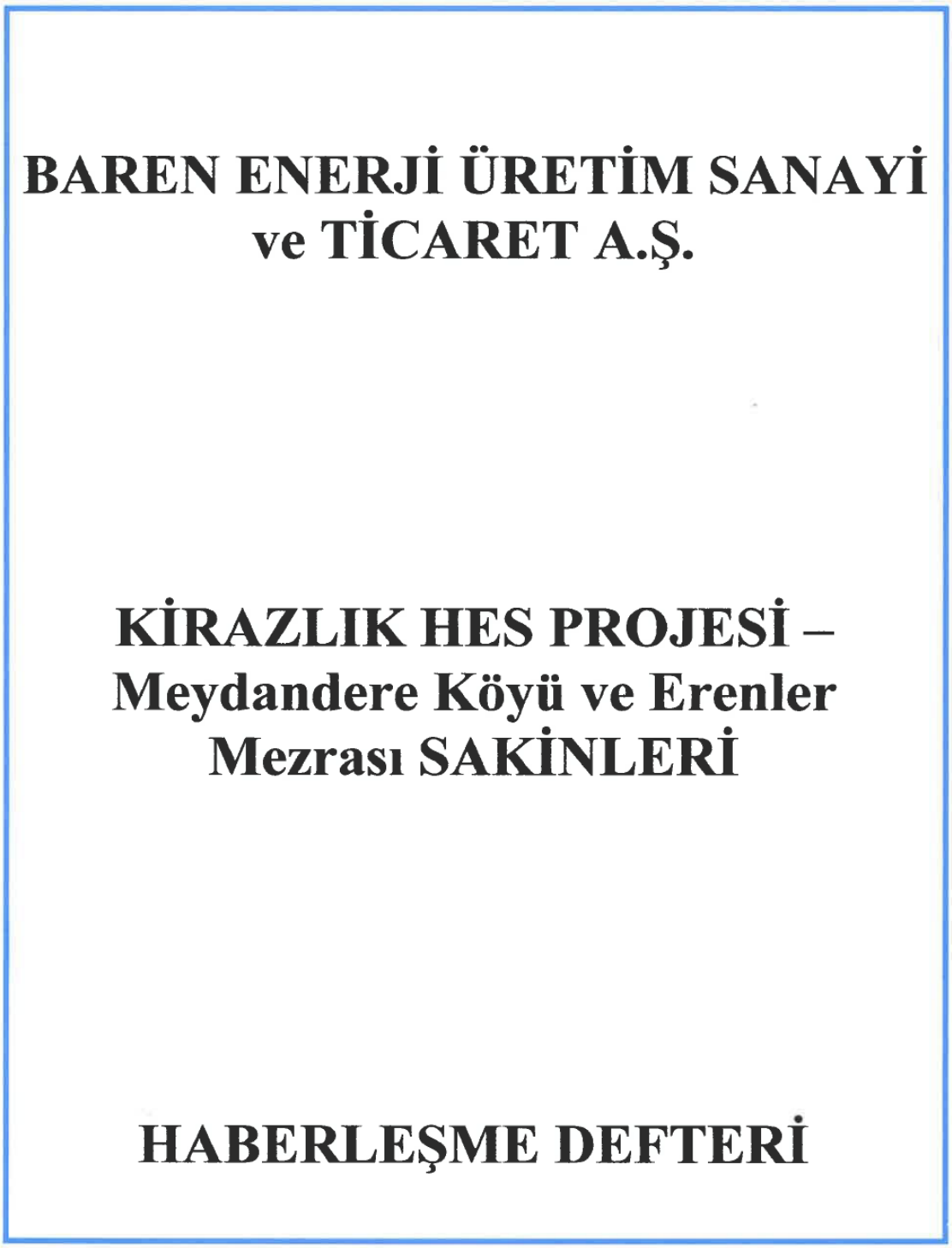
TESLİM EDEN
Sedat BİNGÖL

ONAY

TESLİM ALAN
Nizam KOÇ

ANNEX -2 : SAMPLES OF THE COMMUNICATION BOOK RECORDS

As can be seen the book is empty because the locals prefer using the phone of paying direct visits when they have a need or a concern:



NO	TARİH	ŞİKAYET/DİLEK/TEMENNİ	AD-SOYAD	İMZA	TELEFON NUMARASI