

# Environmental Monitoring Form

## - 1<sup>st</sup> January to 31<sup>st</sup> March 2020 -

### I . Thermal power plant

(1) **Construction phase**

(a) **Air pollution**

Location: **Closest Residential Area**, as recommended by Chapter 8, Feasibility Study Final Report, August 2014 by JICA and TEPSCO (1km from site – refer to Map 1)

Regulation: Sanitary norms, rules and hygiene normative documents of the Republic of Uzbekistan have been updated from San Pin No.0015-94 to 0293-11 for residential areas.

Unit mg/m<sup>3</sup>

Date	Item	Measured Value (30min)			Uzbekistan maximum permissible concentration (30min)	IFC/ EHC Guideline General;2007
		Average	Max	Min		
8 March 2020 – taken in nearest Residential Area	NO <sub>2</sub>	0.042	0.08	0.004	0.085	0.2(1hour)
	NO	-	-	-	0.6	-
	SO <sub>2</sub>	0.0	0.0	0.0	0.5	0.5(10min) 0.125(24hours)
	Dust	0.03	0.04	0.02	0.5	0.15(24hours)

*Baseline Data for Dust Conducted before and at commencement of Construction*

Date	Location	Measured Value (30min)			Uzbekistan maximum permissible concentration (30min) SanPin 0293-11	Uzbekistan maximum permissible concentration (30min) SanPin 0015-94	IFC/ EHC Guideline General;2007
		Average	Max	Min			
2012 - Environmental Impact Statement (and JICA Feasibility Study)	Namangan – residential Area (10 km off-site)	0.08	0.15	-	0.085	0.15	0.15(24hours)
	Namangan – Nearby Road (10 km off-site)	0.07	0.15	-	0.6	0.15	0.15(24hours)
18 April 2017	On Turakurgan Site just as construction commenced	0.37	0.15	0.3	0.5	0.15	0.15(24hours)

**COMMENT:** Air quality, both on site and in residential areas closest to site, are within the current SanPin Uzbekistan legal limits. Contractor continues to use dust suppression management around the site by using water carts, on a regular basis; removing of soft top silt (dust-causing) layer on access roads; and compacting access areas. Tests were witnessed by the Engineer' National Environmental and Social Expert.

**(b) Noise**

Location: **Closest residential Area to Power Plant (Refer to Map1)**

Regulation: Protection from noise” (State committee of Uzbekistan for architecture and construction. Tashkent. 1996) (Norms for household construction) (KMK 2001.08-96)

Unit:dBA

Date (Period)	Location	Average	Max	Min	Uzbekistan Noise standards	IFC/ EHC Guideline (General; 2007) residential area
14 March 2020 Day Time	Southside of site (over 1km) House No.49, 54, 58 and 60	24	25	24	Residential area Day: 55 Night: 45	Residential area Day: 55 Night: 45
14 March 2020 Night Time	Southside of site (over 1km) House No.49, 54, 58 and 60	21	22	20	Residential area Day: 55 Night: 45	Residential area Day: 55 Night: 45

\* Testing witnessed by Engineer' National Environmental and Social Expert

**(c) Water pollution (River water quality)**

Location: Outtake (GCN) – **Exit at lower end of site**

Regulation: Rules for protection of surface water from contamination by discharge water. (San Pin No.0056-98)

Sampling Date: **14 April 2020**

Item	Unit	Measured Value	Environmental standard in Uzbekistan	IFC/ EHC Guideline (General; 2007)
pH	—	7.6	6.5- 8.5	6-9
SS	mg/L	0.001	30	50
Oil and Grease	mg/L	0	0.05	10
BOD	mg/L	2.3	3.0	30
COD	mg/L	2.8	-	125
In case domestic wastewater is discharged into public water bodies such as GCN, a river, the analysis of the following items should be conducted. <b>Water not discharged into GCN</b> **				
Total nitrogen	mg/L	-	-	10
Total phosphorus	mg/L	-	-	2
Total coliform bacteria	MPN/100mL	-	-	400

**COMMENT:**

\* Sample testing of GNC was witnessed by the Engineer' National Environmental and Social Expert

\*\* Drained effluent is stored in separated tanks (eg. concrete batching Plant, Camp, etc) and taken away by local subcontractor for specialist disposal and is not discharged into the GNC or any other river systems.

(d) **Waste**

Location: **Project site and associated facilities**

Regulation: RD 118,0027714.60-97 Nature protection. Treatment of waste from production and consumption. Terms and definitions. Goskompiroda of Uzbekistan. Tashkent. 1997.

Reporting Date; **1 January to 31 March 2020**

Item	Hazardous Class	Place of generated waste	Storage amount (Unit: t or kg)	Disposal amount (Unit: t or kg)	Disposal method and place
General Office and Hard Domestic Waste	V	Project Site Area / Camp Area	200.59 m <sup>3</sup>	200.59 m <sup>3</sup>	Disposed through Service Provider at Turakurgan Disposal Yard
Paper Waste	V	Project Site Area / Camp Area	350 Kg	350 Kg	Taken by Uzbekenergo
Polyethylene waste	IV	Project Site Area / Camp Area	400 Kg	400 Kg	Taken by Uzbekenergo
Plastic Waste	IV	Project Site Area / Camp Area	270 Kg	270 Kg	Taken by Uzbekenergo
Non-ferrous Metallic Waste	V	Project Site Area	120 Kg	-	Stored at designated waste storage area at site
Black Metal Waste	V	Project Site Area	160.73 ton	160.73 ton	Taken by Uzbekenergo
Construction Waste (bricks, concrete blocks)	V	Project Site Area	155.25 ton	155.25 ton	Taken by Uzbekenergo
Rubber Waste	IV	Project Site Area	-	-	Nil
Oil Waste	II	Project Site Area / Camp Area	100 liters	-	Stored at designated waste storage area at site
Fabric / Cloth waste	IV	Project Site Area / Camp Area	-	-	Nil
Wood Waste	IV	Project Site Area	350.07 m <sup>3</sup>	350.07 m <sup>3</sup>	Taken by Uzbekenergo
Septic Waste Water	V	Project Site Area	300 m <sup>3</sup>	300 m <sup>3</sup>	Taken to Namangan City Wastewater Treatment Plant
Food Waste	V	Camp Area	15.7 m <sup>3</sup>	15.7 m <sup>3</sup>	Taken by catering services workers to their homes each day for feeding domestic animals
Luminescent Lamps	I	Project Site Area / Camp Area	-	-	Nil
Medical Waste	IV	Camp / Mobilization Area	40.2 kg	40.2 kg	Disposed at Turakurgan Hospital for Incineration
Glass waste	V	Camp Area	-	-	Nil
Battery Waste	II	Project Site Area / Camp Area	1 each	-	Stored at designated waste storage area at site

Waste is disposed from site by specialist sub-contractors. Those wastes taken by Employer are, as much as possible, sent for recycling. The Uzbekistan Law has defined waste by levels of hazardousness, as follows:

- Level I is Highly hazardous
- Level II is Hazardous
- Level III is Moderately Hazardous.
- Level IV is Slightly Hazardous
- Level V is Non-Hazardous

(e) **Ecosystem**

Location: **The project site and its vicinity**

Observation Date; **1 January to 31 March 2020**

Category (Amphibia, Reptiles etc)	Observation Location	Local name	The scientific name	Red Book of Uzbekistan	IUCN
<b>NO FAUNA SITINGS ON OR AROUND SITE DURING THE REPORTING PERIOD</b>					

(f) **Geology and soil**

Location: ~~Well~~, **Excavation site and soil storage sites during 1 January to 31 March 2020**

<**Excavation on site**>

Date	Locations	Status	Excavation amount (Unit:m <sup>3</sup> )	Provision	Remarks
Refer to Map 2 of Areas location and Map 3 for stockpile location and permits					
1 October to 31 December 2019	Areas A, B, C, D, E, F, sedimentation ponds and Canal intake area	Ongoing (210,507.59 m <sup>3</sup> remaining)	593,828.47 m <sup>3</sup>	Storage on-site	Excavation Total = 804,334.08 m <sup>3</sup>
1 October to 31 December 2019	Areas A, B, C, D, E, F, sedimentation ponds and Canal intake area	Ongoing (59,667.81 m <sup>3</sup> remaining)	180,014.00 m <sup>3</sup>	-	Backfilling Total = 249,701.81 m <sup>3</sup>

<**Topsoil Stockpiling**>

Date	Locations	Status	Storage amount (Unit:m <sup>3</sup> )	Provision	Remarks
Refer to Map 2 of Areas location and Map 3 for stockpile location and permits					
1 October to 31 December 2019	Areas A, B, C, D, E, F plus Plant access road, sedimentation ponds and Canal intake area	soil stripping = 0 – none this quarter	6,873.00 m <sup>3</sup>	Have permits, implementing erosion control measures	Soil Stripping Total = 6,873.00 m <sup>3</sup> and completed

(g) **Labor and working conditions**

Location: **Project Site Area**

Reporting Date – **1 January to 31 March 2020\***

Construction Contents	Inspection Item	Contents	Status	Provision	Remarks
HSE Plan	HSE Plan – Associated Plans and Procedures	Procedures such as Permit to work, hazardous materials and waste handling, waste management, excavation, working in confined spaces, work at heights etc. were submitted approved	No updated or separate plans updated for Commissioning/operation stages by contractor.	Contractor instructed to ensure full implementation of HSE and associated plans and procedures; and  Contractor requested to update plans and procedures for commissioning / operation	--
Emergency Management Planning	Emergency Management – Preparedness and Response	Emergency Management Plans still in operation and effectively sunning	Ongoing	Contractor has been instructed to comply with HSE Plan and associated Emergency Management Plans	--
Fuel and hazardous materials storage	Cooling Tower inspection	Oil leaks on cooling water tower pumps creating environmental hazard flowing into storm and wastewater systems without oily water separation. Also is a slip-safety hazard	Instruction given to Contractor by consultant and followed later by the employer also – ongoing to repair.	Contractor shall fix leaking pumps	--
Personnel safety during commissioning	HRSG Penthouse Silencer	Hot water leakages risks to worker H&S	Instruction given to Contractor to repair leak	Contractor to fix leak	--
Personnel Safety	PPE Distribution	PPE Procedures document; and Distribution of PPE on site  PPE still not	Distributed to all workers- 1 set PPE for all workers entering site; and special equipment provided to workers relating to relevant hazards of specific	Training in use of PPE is conducted on daily basis.  Contractor instructed to	Remains compliant, with just a few small exceptions

Construction Contents	Inspection Item	Contents	Status	Provision	Remarks
		always worn by truck operators and security.	activity  Contractor reminded to comply with all H&S procedures, including those approved by engineer and those in compliance with Uzbekistan laws and inspection by Government authorities in H&S	remind all workers to wear the issued PPE and always be aware of H&S on-site  During equipment testing, all safety and environmental procedures were not always followed being followed.	
Environmental	Air quality	Dust control	Ongoing	Dust measurements both at nearest residents and on-site, as reported by tests commissioned by the Contractor have all remained within or below required standard limits	--
Environmental	Waste Management	Solid Waste Management	Contractor has improved the waste management on-site, with frequent collection and less waste lying around over the construction site.  Contractor measures separated waste.  However, not all waste is disposed separately.  Central waste disposal area remains very full and is a potential fire hazard.	Contractor ordered by the engineers to increase frequency of solid waste removal from site, improve separation of wastes for recycling.	--
Environmental	Waste Management	Contractor Camp Wastewater Tanks	Disposal by subcontractor may not be compliant with EMP (ie. Untreated wastewater being taken to Namangan water treatment Plant)	--	
Safety	Working at	Dropping of	Ongoing H&S issue -	Contractor	

Construction Contents	Inspection Item	Contents	Status	Provision	Remarks
	heights	materials and equipment to the ground	<p>During inspections, tools, materials and parts of scaffold were being dropped onto the ground from heights.</p> <p>The Contractor was requested to instruct workers to prevent this happening again.</p>	ordered by the engineers to comply by instruction to workers, and maintaining a fenced off space in such areas where there is work at heights, in compliance with the Contractor' "Working at Height Procedures"	
Construction works	Labor	Permit to Work	PTW Procedure approved and implementing, although no specific person assigned to conduct day-to-day implementation.	Contractor already instructed to ensure such people are in place, as some incidents occurred, where permit-to-work and other approved HSE procedures in place, may have reduced risk of technical faults in commissioning and some near miss incidents relating to electrical equipment switches modes .	
Hiring Process	Health	Medical Fitness	Good - ongoing – all employees	Medical prescreening is conducted, and records are maintained	At Commencing work
Construction Works	Physical condition	Physical fitness	Good - ongoing – all employees	<p>Alcohol testing for all equipment operators and drivers</p> <p>During Commissioning and especially operations, the engineer has</p>	Daily

Construction Contents	Inspection Item	Contents	Status	Provision	Remarks
				that alcohol testing be mandatory for ALL personnel entering the site (this is Standard Operating Procedures internationally)	
Construction Works	Medical	Medical Check-up	Good - ongoing – all employees  On-site clinic was inspected by engineer and was seen to be cleaned, well stocked and medical supplies valid until 2021-2022	Medical Assistance provided to all needed	--

\* Based on both Environmental reporting from the Contractor and results of inspections by the Engineer (National Environmental Specialists)

**(h) Grievances**

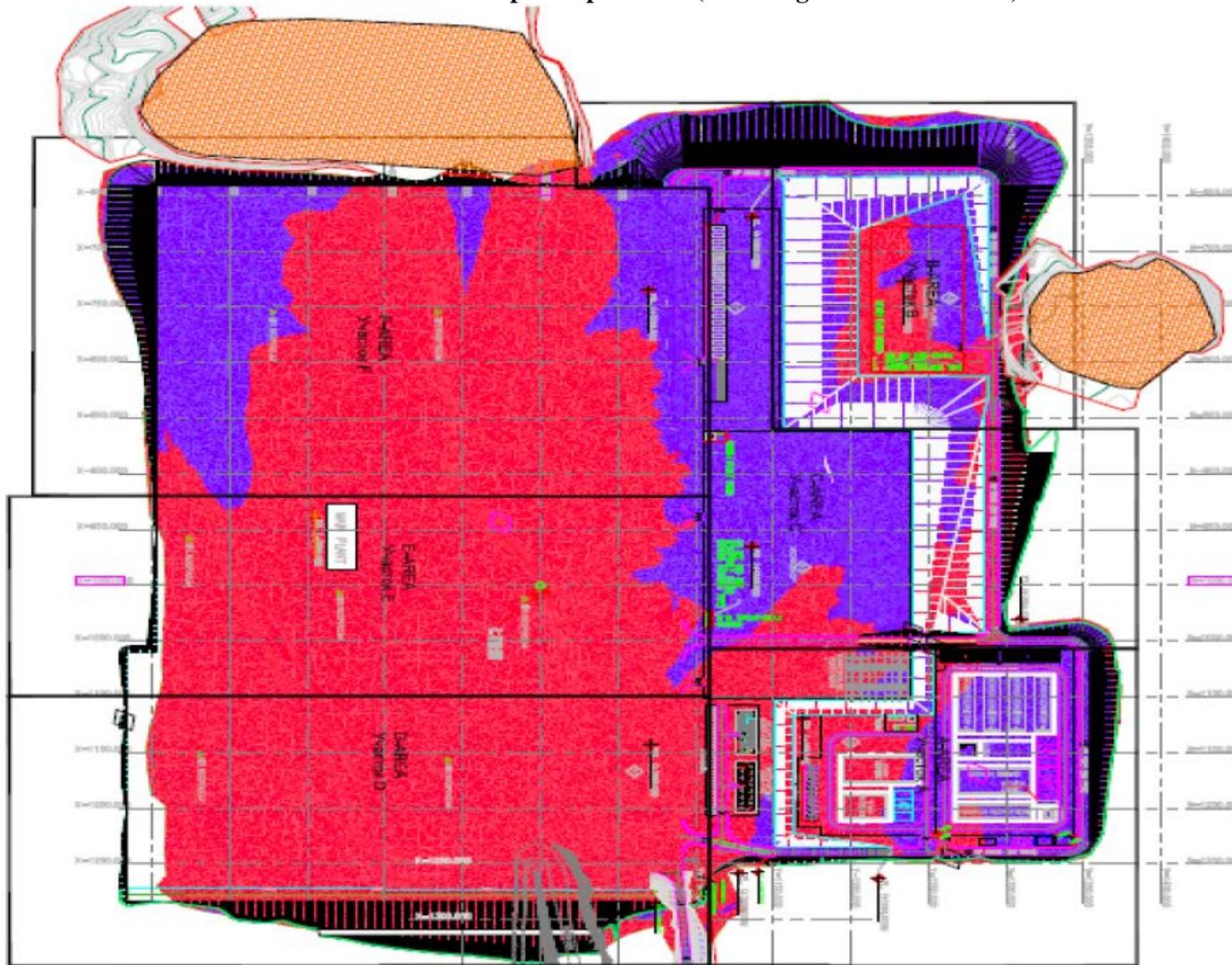
Location: **The project Site: 1 January to 31 March 2020**

Date	Name	Contents	Status	Results	Remarks
<b>No grievances recorded for this reporting period</b>					

**MAP 1 – Noise and Air Quality Sampling in Closest Residential Areas**



MAP 2 – Area sectors of power plant site (including mobilization area)



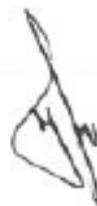
## Map 3 – Permit for Topsoil and Excavation Stockpile Approvals and Maps

Ўзбекистон Республикаси Ер ресурслари, геодезия, картография ва давлат кадастри давлат қўмитаси Наманган вилояти Тўрақўргон тумани Ер ресурслари ва давлат кадастри бўлими		O'zbekiston Respublikasi Yer resurslari, geodeziya, kartografiya va davlat kadastri davlat qo'mitasi Namangan viloyati To'raqo'rg'on tumani Yer resurslari va davlat kadastri bo'limi
160700 Тўрақўргон шаҳри Тўрақўргон кўчаси, 16.		160700 То'raqo'rg'on shahri To'raqo'rg'on ko'chasi, 16.
2017 йил «5» август		Тўрақўргон шаҳри № 534 -сонли

Тўрақўргон ИЭС дирекцияси  
 унитар корхонаси раҳбари  
 Н.Насибалиевга

Тўрақўргон ИЭС унитар корхонасига ажратиб берилган экин ер майдонининг 30 см унумдор қисмини қурилишдан узок бўлмаган ер майдонига ташлашни жойида атрофлича ўрганиб чиқилганлигини ҳамда 30 см унумдор қатламни “Шоҳидон Нурли Дийр” МЧ ММТП худудидаги кишлоқ хўжалик харитасининг 377-378-379-381-429-430-431-432-433-434-435-436-437-438-439-445-ко нтурларидаги ер майдонига ташиб бериш учун ажратиб берилганлигини маълум қилади.

Туман ер ресурслари ва давлат  
 кадастри бўлими бошлиғи в.б:



Э.Мансуров

## Д а л о л а т н о м а

Тўрақўрғон шаҳри

21 сентябр 2017 йил.

Тузамиз ушбу далолатномани шу мазмундаки, туман ер ресурслари ва давлат кадастри бўлими бошлиғи А.Шодмонов, туман ер ресурслари ва давлат кадастри бўлими мутахассислари А.Жумаев, И.Камолов, У.Тожибоевлар “То‘рақо‘رғ‘он IES qurish direksiyasi” унитар корхонаси в.б бошлиғи П.Насибалиев иштирокида бўлиб тузамиз ушбунини туманда Ўзбекистон Республикаси Президентининг 2013 йил 28 мартдаги “Наманган вилоятида қуввати 900 МВт бўлган иссиқлик электр станцияси қурилишини таъминлаштириш чоралари тўғрисида”ги ПҚ-1943-сонли қарори ижросини таъминлаш мақсадида тумандаги “То‘рақо‘рғ‘он IES qurish direksiyasi” унитар корхонасига “Тўрақўрғон иссиқлик электр станцияси” қурилиши учун туман ҳокимининг ва вилоят ҳокимининг тегишли қарорларига асосан ажратилган 91,6 гектар ер майдонлари жойида атрофлича ўрганиб чиқилди.

Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2011 йил 25 майдаги 146-сонли қарори билан тасдиқланган “Ер участкалари эгалари, фойдаланувчилари, ижарачилари ва мулкдорларининг кўрган зарарларини, шунингдек қишлоқ хўжалиғи ишлаб чиқариши нобудгарчиликларининг ўрнини қолдан тартиби тўғрисида”ги Низомга мувофиқ қурилиши учун ажратилаётган сугориладиган экин ер майдонидан фойдаланишда бўлган 30-40 сантиметр қалинликдаги тупроқнинг унумдор қатламини шу ҳудуддаги тупроқ унумдорлиғи жиҳатидан паст бўлган экин ер майдонларига ташиб бериш белгиланганлиги сабабли туман ҳокимининг ушбу ер ажратиш қарорини ижросини таъминлаш мақсадида Тўрақўрғон иссиқлик электр станцияси қурилиши учун ажратилган ер майдонидаги сугориладиган мавжуд экин ер майдонидан фойдаланишда бўлган 30 сантиметр қалинликдаги тупроқ унумдорлиғи жиҳатидан 36-37 баллга тенг бўлган тупроқнинг унумдор қатламини Тўрақўрғон иссиқлик электр станцияси ҳудудининг шарқи қисмида жойлашган “Шоҳидон Нурли Дибр” масъули хўжалиқ ички ер тузини харитасининг 238, 383, 237, 384, 385, 390, 386, 387-контурларидаги экин майдонларига таънаб бериш лозим деб тоғилди.

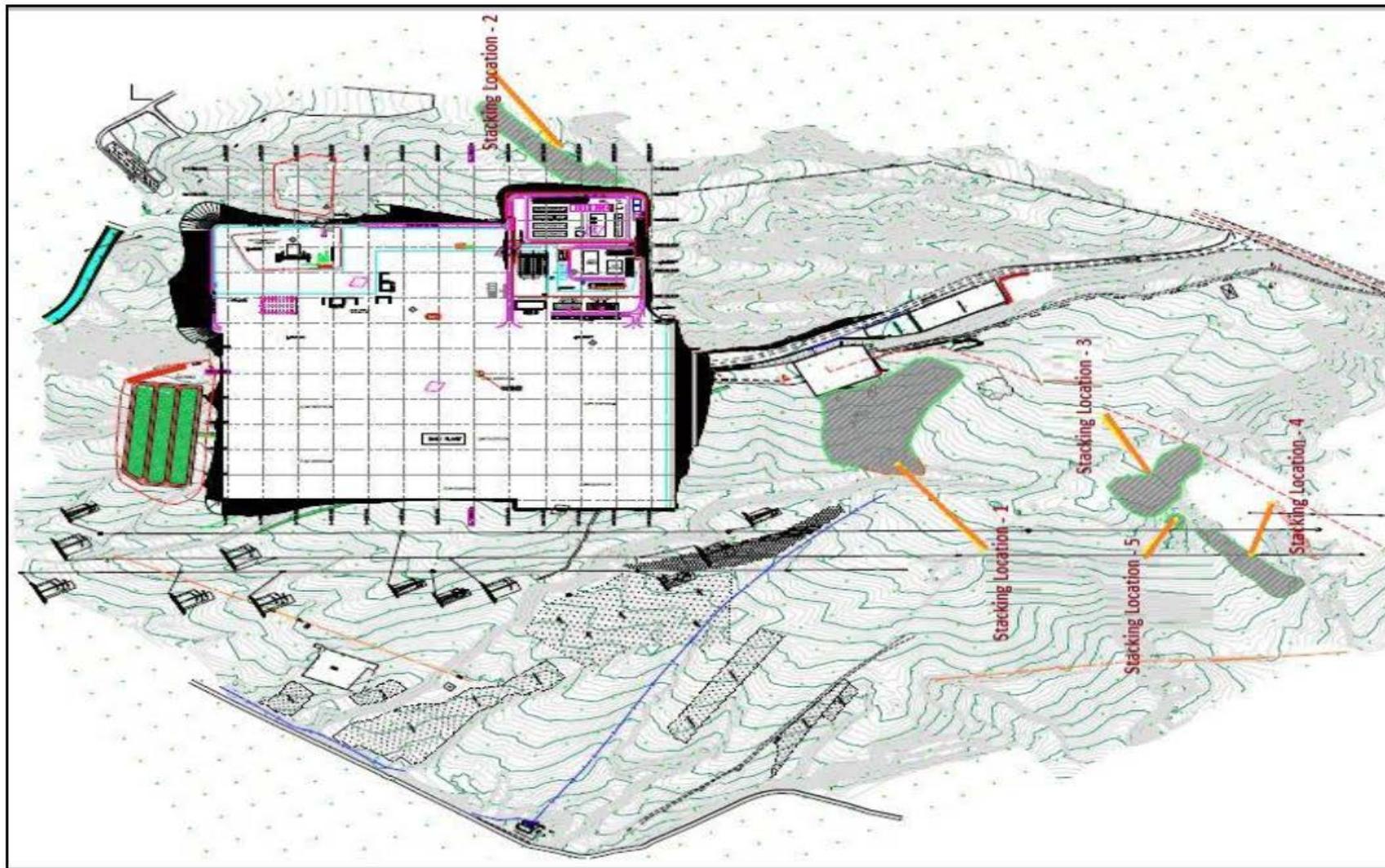
“То‘рақо‘рғ‘он IES qurish direksiyasi” унитар корхонасига Тўрақўрғон иссиқлик электр станцияси қурилиши учун ажратилган 91,6 гектар ер

майdonидаги кинчлук хўжалик ер майдон катламлари қирқиб олинган ер майдонлари ҳудудидаги ер теккислаш ишларини олиб бориш тасдиқланган лойиҳалар асосида ҳамда корхонанинг лойиҳа режалари бўйича иш олиб боришлари юзасидан келишилди.

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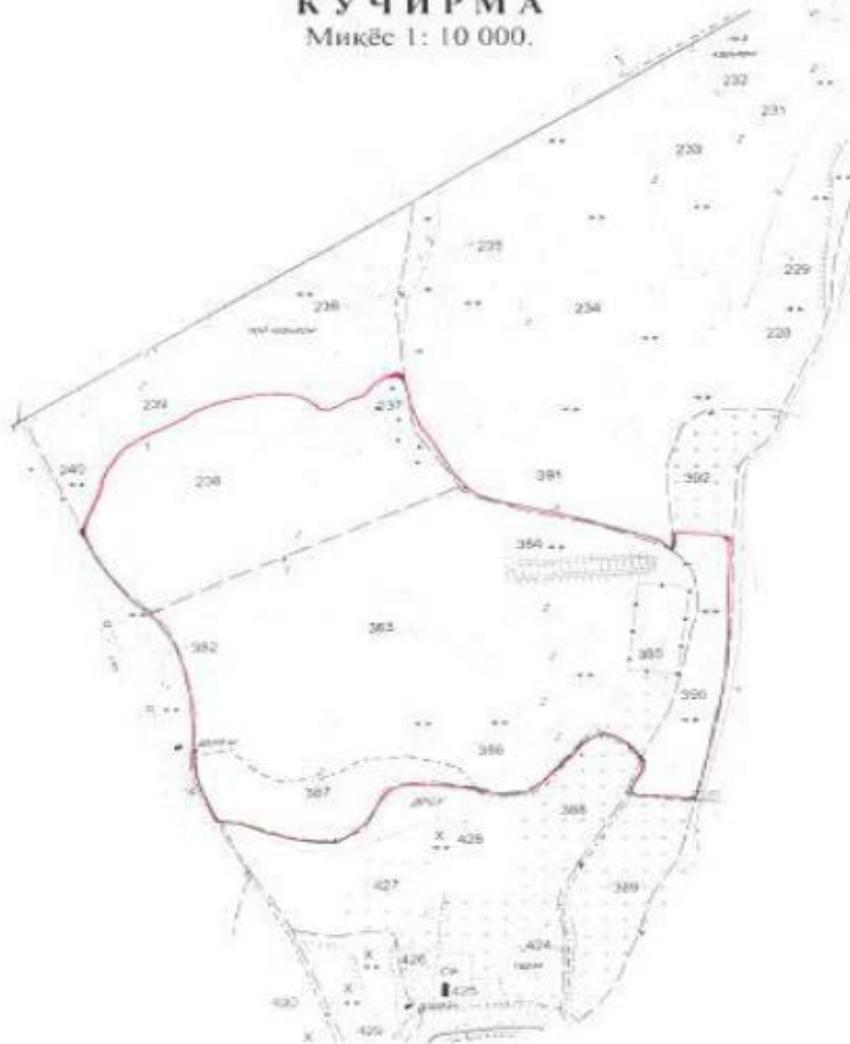
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	И.Камолов
	У.Тожибоев
	Н.Насибалиев





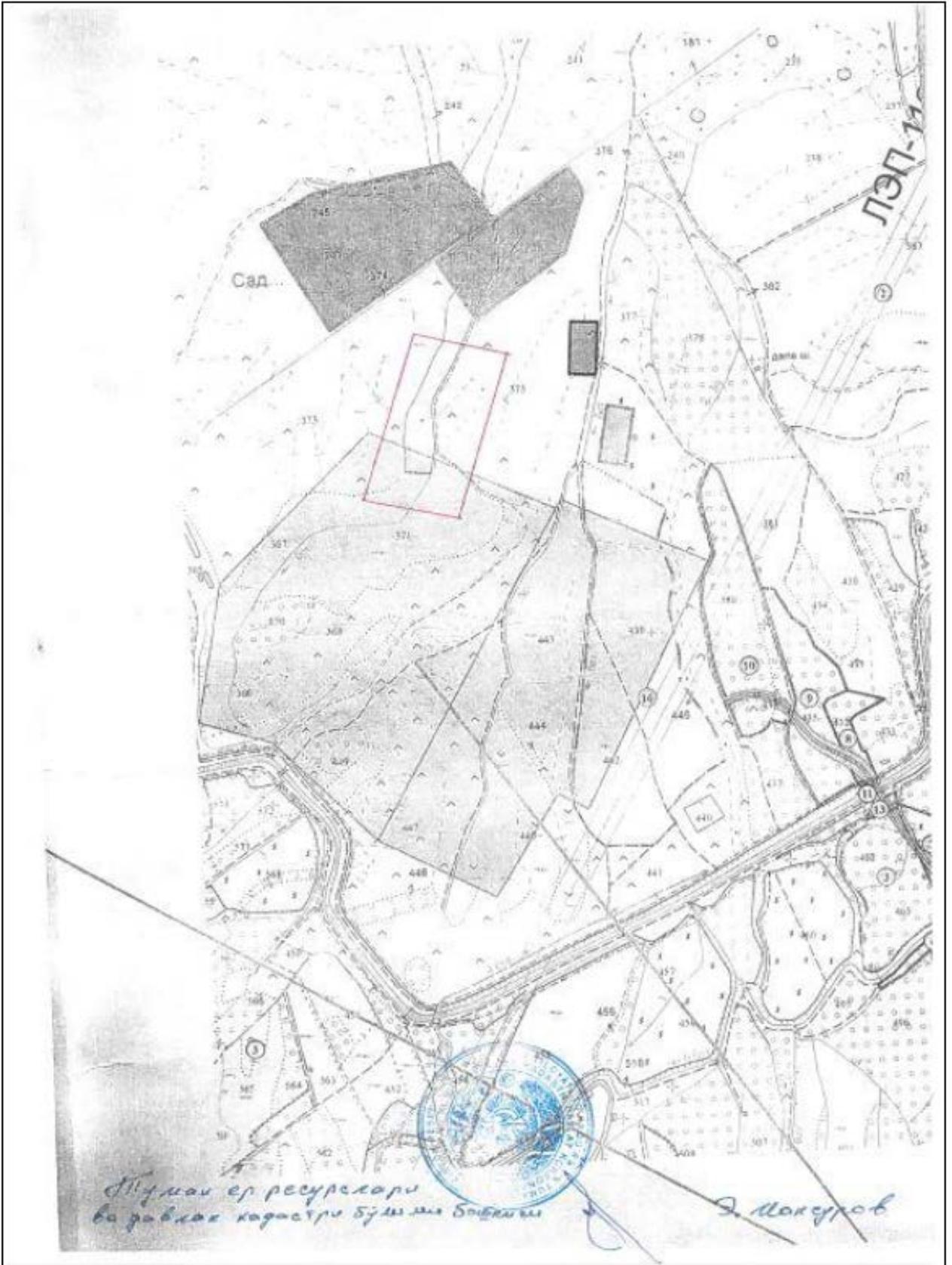
“То‘рақо‘рг‘он IES qurish direksiyasi” унитар корхонасига Тўрақўргон  
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30 сантиметр калинликдаги тупроқ унумдорлиги жihatидан 36-37 баллга  
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383, 237, 384, 385, 390, 386, 387-контурларидаги ер майдонларининг кишлок  
хўжалик харитасидан

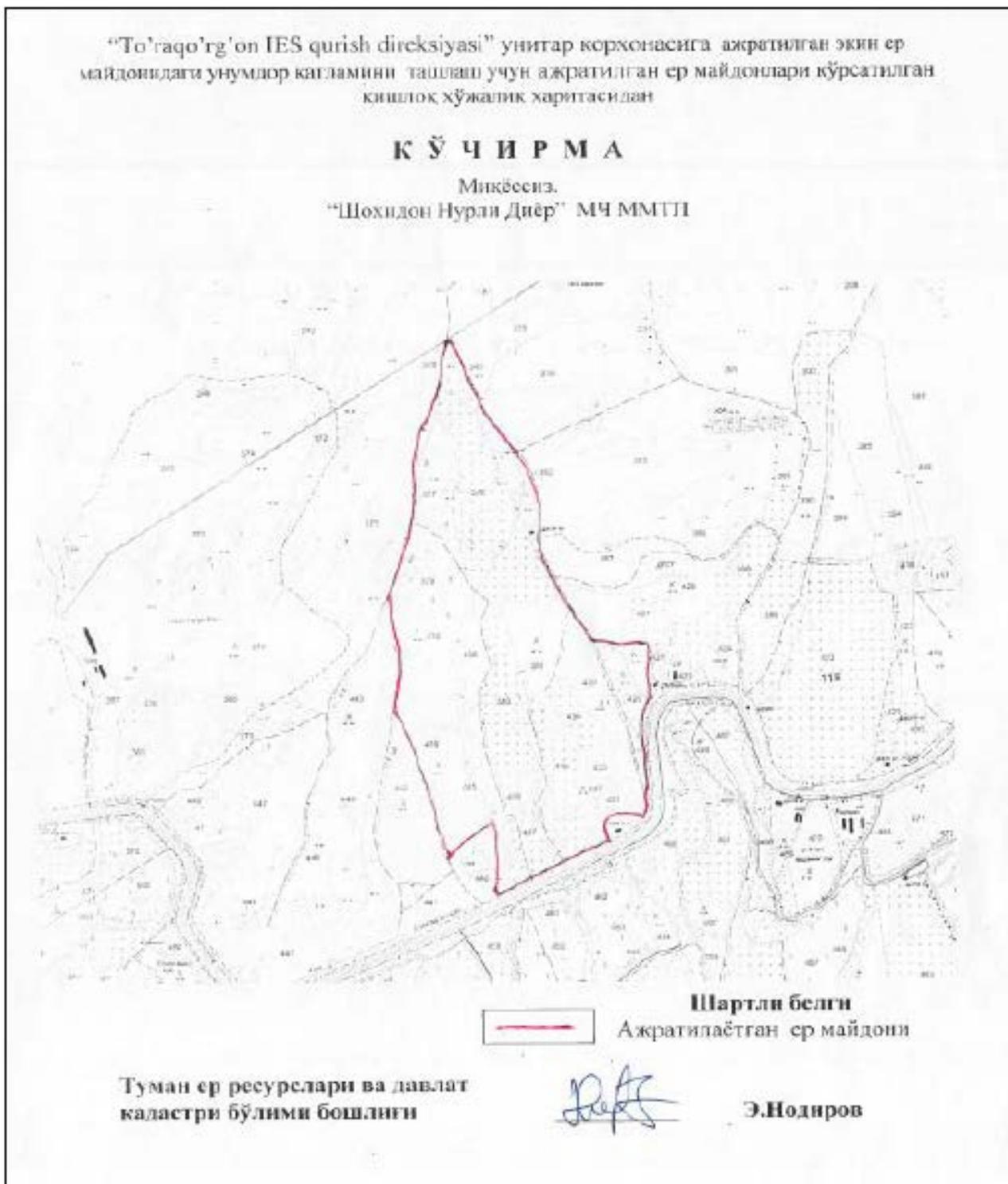
**КЎЧИРМА**  
Микёс 1: 10 000.



Туман ер ресурслари ва давлат  
кадастри бўлими бошлиғи

**А.Шодмонов**





(2) Operation phase: **NOT DUE YET – COMMISSIONING PHASE IS ONGOING**

## (a) Air pollution

&lt;Ambient air quality &gt;

Location: The project site, residential area (Decision after detail design)

Regulation: Sanitary norms, rules and hygiene normative documents of the Republic of Uzbekistan. San Pin No.0015-94

Unit mg/m<sup>3</sup>

Date	Item	Measured Value			Uzbekistan maximum permissible concentration (MPC)		IFC/WB EHC Guideline General; 2007	
		30min Min – Max	24hr Min – Max	Average	30min	24hr	1hr	1year
	NO <sub>2</sub>				0.085	0.06	0.2	0.04
	NO				0.6	0.25	-	-

&lt;Exhaust gas &gt;

Location: Gas duct

Regulation: GOST 29328-92

Parameter	Unit	Min –Max	Excess period of the standard	GOST 29328-92	IFC/ WB EHC Guideline (Thermal Power Plant; 2008)
NO <sub>x</sub>	mg/Nm <sup>3</sup>			51	51

Note dry gas base, O<sub>2</sub>=15%

## (b) Noise

Location: The project site, residential area (Decision after detail design)

Regulation: Protection from noise” (State committee of Uzbekistan for architecture and construction. Tashkent. 1996) (Norms for household construction)(KMK 2001.08-96)

Unit:dBA

Date (Period)	Location	Average	Max	Min	Uzbekistan Noise standards	IFC/ EHC Guideline (General; 2007) residential area
					Residential area Day: 55 Night: 45	Residential area Day: 55 Night: 45

## (c) Water quality

&lt; Wastewater &gt;

Location: Outlet of waste treatment facility

Regulation: Rules for protection of surface water from contamination by discharge water.(San Pin No.0056-98)

Sampling Date:

Item	Unit	Measured Value	Standard of the relevant country	IFC/WB EHS Guidelines
Temperature	°C		-	-
pH	-		6.5-8.5	6.5-9.0
SS	mg/L		500	50

Item	Unit	Measured Value	Standard of the relevant country	IFC/WB EHS Guidelines
DO	mg/L		-	-
Oil and Grease	mg/L		0.1	10
Nitrites	mg/L		3.3	-
Nitrates	mg/L		45	-
Sulfates	mg/L		500	-
Chloride	mg/L		350	-
Calcium	mg/L		487	-
Sodium	mg/L		170	-
Potassium	mg/L		-	-
Phosphate	mg/L		2.5	-
Fe	mg/L		5.0	1.0
Magnesium	mg/L		170	-
Residual chlorine	mg/L		-	0.2
Chrome trivalent Chrome hexavalent	mg/L		0.5 / 0.1	0.5
Copper	mg/L		1.0	0.5
Zinc	mg/L		1.0	0.5
Lead	mg/L		0.1	0.5
Cadmium	mg/L		0.1	0.5
Mercury	mg/L		0.01	0.005
Arsenic	mg/L		0.1	0.5

< Domestic wastewater >

Location: Discharge point of domestic wastewater

Regulation: Rules for protection of surface water from contamination by discharge water.(San Pin No.0056-98)

Sampling Date:

Item	Unit	Measured Value	Environmental standard in Uzbekistan	IFC/ EHC Guideline (General; 2007)
pH	—		6.5- 8.5	6-9
SS	mg/L		30	50
Oil and Grease	mg/L		0.05	10
BOD	mg/L		3.0	30
COD	mg/L		-	125
Total nitrogen	mg/L		-	10
Total phosphorus	mg/L		-	2
Total coliform bacteria	MPN/100mL		-	400

<River quality >

Location: GCN

Regulation: Rules for protection of surface water from contamination by discharge water.(San Pin No.0056-98)

Sampling Date:

Item	Unit	Measured Value	Environmental standard in Uzbekistan
pH	—		6.5- 8.5
DO	mg/L		Summer: 4.0 or higher Winter: 6.0 or higher
BOD	mgO <sub>2</sub> /L		3.0
SS	mg/L		30
Oil	mg/L		0.05

Item	Unit	Measured Value	Environmental standard in Uzbekistan
Ammonia	mg/L		0.08
Nitrite	mg/L		0.08
Nitrate	mg/L		40
Sulfate	mg/L		100
Phenol	mg/L		0.001
Chloride	mg/L		300
Calcium	mg/L		180
Sodium	mg/L		120
Potassium	mg/L		50
Phosphate	mg/L		0.01
Fe	mg/L		0.5
Cu	mg/L		0.001
Zn	mg/L		0.01
Cr	mg/L		0.5
Pb	mg/L		0.03

## (d) Waste

Location: Project site and associated facilities

Regulation: RD 118,0027714.60-97 Nature protection. Treatment of waste from production and consumption. Terms and definitions. Goskompriroda of Uzbekistan. Tashkent. 1997.

## Reporting Date;

Item	Hazardous Class	Place of generated waste	Storage amount (Unit: t or kg)	Disposal amount (Unit: t or kg)	Disposal method and place

## (e) Labor and working conditions

Location: Construction area

## Reporting Date;

Construction Contents	Inspection Item	Contents	Status	Provision	Remarks

## (f) Grievances

Location: The project site

Date	Name	Contents	Status	Results	Remarks

(g) Electric magnetic field (EMF)

Location: Control room, electrical room

Reporting Date;

Date	Location	Status	Provision	Remarks

**II. Transmission Line & Substation: TO BE FILLED IN BY EMPLOYER**

(1) Construction phase

(b) Air pollution

Location: The project site, residential area (Decision after detail design)

Regulation: Sanitary norms, rules and hygiene normative documents of the Republic of Uzbekistan. San Pin No.0015-94

Unit mg/m<sup>3</sup>

Date	Item	Measured Value (30min)			Uzbekistan maximum permissible concentration (30min)	IFC/ EHC Guideline General;2007
		Average	Max	Min		
	NO <sub>2</sub>				0.085	0.2(1hour)
	NO				0.6	-
	Dust				-	0.15(24hours)

(c) Noise

Location: The project site, residential area (Decision after detail design)

Regulation: Protection from noise” (State committee of Uzbekistan for architecture and construction. Tashkent. 1996) (Norms for household construction)(KMK 2001.08-96)

Unit:dBA

Date (Period)	Location	Average	Max	Min	Uzbekistan Noise standards	IFC/ EHC Guideline (General; 2007) residential area
					Residential area Day: 55 Night: 45	Residential area Day: 55 Night: 45

(d) Waste

Location: Project site and associated facilities

Regulation: RD 118,0027714.60-97 Nature protection. Treatment of waste from production and consumption. Terms and definitions. Goskompriroda of Uzbekistan. Tashkent. 1997.

Reporting Date;

Item	Hazardous Class	Place of generated waste	Storage amount (Unit: t or kg)	Disposal amount (Unit: t or kg)	Disposal method and place

## (d) Geology and soil

Location: Excavation site and soil storage

## &lt;Well, Excavation site&gt;

Date	Locations	Status	Excavation amount (Unit: t or kg)	Provision	Remarks

## &lt;Soil storage&gt;

Date	Locations	Status	Storage amount (Unit: t or kg)	Provision	Remarks

## (e) Labor and working condition

Location: Construction area

## Reporting Date;

Construction Contents	Inspection Item	Contents	Status	Provision	Remarks

## (f) Grievance

Location: The project site

Date	Name	Contents	Status	Results	Remarks

## Land Acquisition and Resettlement Monitoring Form

### Monitoring Form for Thermal Power Station

#### 0. Update of LARAP

Date	Main points of revision
March 31, 2020	No changes made

Notes: If LARAP is updated/revised, please fill in.

#### 1. Compensation for land acquisition

December 2016

	Name	Status	Agreement was acquired	Date of compensation		Remarks
				Land	Trees	
1	Person 1	legal	Y	Process is completed *1	January 2015	
2	Person 2	legal	Y	Process is completed *1	January 2015	
3	Person 3	legal	Y	Process is completed *1	April 2015	
4	Person 4	legal	Y	Process is completed *1	January 2015	
5	Person 5	NH	Y	Process is completed *2	January 2015	
6	Person 6	legal	Y	Process is completed *1	January 2015	
7	Person 7	NH	Y	Process is completed *2	January 2015	
8	Person 8	legal	Y	Process is completed *1	January 2015	
9	Person 9	NH	Y	Process is completed *2	January 2015	
10	Person 10	legal	Y	Process is completed *1	January 2015	
11	Person 11	legal	Y	Process is completed *1	April 2015	
12	Person 12	NH	Y	Process is completed *2	January 2015	
13	Person 13	NH	Y	Process is completed *2	February 2015	
14	Person 14	legal	Y	Process is completed *1	February 2015	
15	Person 15	NH	Y	Process is	January 2015	

				completed *2		
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Notes: "NH" means person who has no right for land use

## 2. Grievances

Location: The project site

Frequency: Regularly

Date	Name	Contents	Status	Results	Remarks
<b>There are not any grievances</b>					

## 3. Livelihood Restoration

Item	Number of Participants	Contents	Remarks
Employment of PAPs*			The livelihood restoration plan will be conducted after the construction starts
Job training			
(Others if any)			

\*PAPs (Project-Affected Persons) of Land Acquisition

## Monitoring form for Transmission lines and Substation

### 1. Compensation for land acquisition

#### (a) Transmission Line

##### (i) Land and Trees

December 2016

	Name*	Status	Agreement was acquired	Date of compensation			Remarks
				Temporary	Permanent		
				Trees	Land	Trees	
1.	Person 1	legal	Y	January 2015	Process is completed *1	January 2015	
2.	Person 2	legal	Y	January 2015	Process is completed *1	January 2015	
3.	Person 3	NH	Y	January 2015	Process is completed *2	January 2015	
4.	Person 4	legal	Y	January 2015	Process is completed *1	January 2015	
5.	Person 5	legal	Y	January 2015	Process is completed *1	January 2015	
6.	Person 6	legal	Y	January 2015	Process is completed *1	January 2015	
7.	Person 7	legal	Y	January 2015	Process is completed *1	January 2015	
8.	Person 8	legal	Y	February 2015	Process is completed *1	February 2015	
9.	Person 9	NH	Y	January 2015	Process is completed *2	January 2015	
10.	Person 10	NH	Y	January 2015	Process is completed *2	January 2015	
11.	Person 11	legal	Y	January 2015	Process is completed *1	January 2015	

12.	Person 12	legal	Y	January 2015	Process is completed *1	January 2015	
13.	Person 13	legal	Y	January 2015	Process is completed *1	January 2015	
14.	Person 14	legal	Y	January 2015	Process is completed *1	January 2015	
15.	Person 15	legal	Y	January 2015	Process is completed *1	January 2015	
16.	Person 16	legal	Y	January 2015	Process is completed *1	January 2015	
17.	Person 17	legal	Y	February2015	Process is completed *1	February 2015	
18.	Person 18	legal	Y	January 2015	Process is completed *1	January 2015	
19.	Person 19	NH	Y	January 2015	Process is completed *2	January 2015	
20.	Person 20	NH	Y	January 2015	Process is completed *2	January 2015	
21.	Person 21	NH	Y	February2015	Process is completed *2	February2015	
22.	Person 22	NH	Y	January 2015	Process is completed *2	January 2015	
23.	Person 23	legal	Y	January 2015	Process is completed *1	January 2015	
24.	Person 24	legal	Y	February2015	Process is completed *1	February 2015	
25.	Person 25	legal	Y	January 2015	Process is completed *1	January 2015	
26.	Person 26	NH	Y	January 2015	Process is completed *2	January 2015	
27.	Person 27	NH	Y	February2015	Process is completed *2	February 2015	
28.	Person 28	legal	Y	February2015	Process is completed *1	February2015	
29.	Person 29	legal	Y	January 2015	Process is completed *1	January 2015	
30.	Person 30	legal	Y	January 2015	Process is completed *1	January 2015	
31.	Person 31	NH	Y	January 2015	Process is completed *2	January 2015	
32.	Person 32	legal	Y	January 2015	Process is completed *1	January 2015	
33.	Person 33	legal	Y	January 2015	Process is completed *1	January 2015	
34.	Person 34	legal	Y	January 2015	Process is completed *1	January 2015	
35.	Person 35	legal	Y	January 2015	Process is completed *1	January 2015	
36.	Person 36	legal	Y	January 2015	Process is completed *1	January 2015	
37.	Person 37	legal	Y	January 2015	Process is completed *1	January 2015	
38.	Person 38	legal	Y	January 2015	Process is completed *1	January 2015	
39.	Person 39	legal	Y	January 2015	Process is completed *1	January 2015	

40.	Person 40	legal	Y	January 2015	Process is completed *1	January 2015	
41.	Person 41	legal	Y	January 2015	Process is completed *1	January 2015	
42.	Person 42	legal	Y	February2015	Process is completed *1	February 2015	
43.	Person 43	legal	Y	January 2015	Process is completed *1	January 2015	
44.	Person 44	legal	Y	February2015	Process is completed *1	February 2015	
45.	Person 45	legal	Y	January 2015	Process is completed *1	January 2015	
46.	Person 46	legal	Y	February2015	Process is completed *1	February 2015	
47.	Person 47	legal	Y	February2015	Process is completed *1	February 2015	
48.	Person 48	legal	Y	February2015	Process is completed *1	February 2015	
49.	Person 49	legal	Y	January 2015	Process is completed *1	January 2015	
50.	Person 50	legal	Y	February2015	Process is completed *1	February 2015	
51.	Person 51	legal	Y	January 2015	Process is completed *1	January 2015	
52.	Person 52	legal	Y	February2015	Process is completed *1	February 2015	
53.	Person 53	legal	Y	January 2015	Process is completed *1	January 2015	
54.	Person 54	legal	Y	February2015	Process is completed *1	February 2015	
55.	Person 55	legal	Y	January 2015	Process is completed *1	January 2015	
56.	Person 56	legal	Y	January 2015	Process is completed *1	January 2015	
57.	Person 57	legal	Y	January 2015	Process is completed *1	January 2015	
58.	Person 58	legal	Y	January 2015	Process is completed *1	January 2015	
59.	Person 59	NH	Y	February2015	Process is completed *2	February 2015	
60.	Person 60	NH	Y	February2015	Process is completed *2	February 2015	
61.	Person61	legal	Y	January 2015	Process is completed *1	February 2015	
62.	Person62	legal	Y	January 2015	Process is completed *1	January 2015	

Notes: 1. Except the lands “owned by District Khokimiyats ”

2. “HH” means “household”

3 “AC” means “agricultural company”

4.“NH” means person who has no right for land use

## (ii) Land and structure

December 2016

Name	Status	Agreement was acquired.	Date of compensation		Remarks
			Land	Structure	
Person 1	Legal	Y	02/October/2014. 0.06 ha	January 2015	
Person 2	Legal	Y	Process is completed *1	February 2015	
Person 3	Legal	Y	Process is completed *1	January 2015	
Person 4	Legal	Y	Process is completed *1	January 2015	

## (b) Kyzyl-Ravat Substation

December 2016

Name	Status	Agreement was acquired.	Date of compensation		Remarks
			Land	Trees	
Persons 1	Legal	Y	Process is completed *1	January 2015	

Notes: Except the lands "owned by District Khokimiyats "

## 2. Grievance

Location: The project site

Frequency: Regularly

Date	Name	Contents	Status	Results	Remarks
<b>There are not any grievances</b>					

## 3. Livelihood Restoration

Item	Number of Participants	Contents	Remarks
Employment of PAPs*			The livelihood restoration plan will be conducted after the construction starts
Job training			
(Others if any)			

\*PAPs (Project-Affected Persons) of Land Acquisition

\*1 Uzbekenergo made announcement in the local and regional newspaper on May 8<sup>th</sup> 2015 that Uzbekenergo will accept the final objections and complains on land allocation by 15:00 June 5<sup>th</sup>, 2015.

As there were no objections and complain by that time, the all procedures for land acquisition were officially completed.

\*2. Uzbekenergo had no obligation to provide any compensation by the Law of the Republic of Uzbekistan for the persons defined as "person who has no right for land use (indicated in the table as "NH"), however as a good will they agreed to compensate (and provided actually compensation) for trees and expressed readiness to consider application for land allocation. Since no objections and complain were received by 15:00 June 5<sup>th</sup> 2015 (deadline set by the announcement in newspaper) all procedures for land acquisition were officially completed.