# Initial Environmental Examination

Annex (3b) Project Number: 48404-004 July 2020

## PAK: Central Asia Regional Economic Cooperation Corridor Development Investment Program (Tranche 2)

Shikarpur–Rajanpur Section of N55

Prepared by the National Highway Authority Pakistan for the Asian Development Bank.

### **CURRENCY EQUIVALENTS**

(as of 2 June 2020)

Currency unit	_	Pakistan Rupee/s (PRe/PRs)
PRe1.00	=	\$0.0061
\$1.00	=	PRs164.25

## UNIT CONVERSIONS

1 gallon	_	3.785 liter
1 gallon/day	_	0.00455 m³/day
1 m³/day	_	0.041 m <sup>3</sup> /hour
1 cusec	_	28.31 liters
1 kilometer	_	1,000 meters
1 foot	_	12 inches
1 acre	_	4,046.8 meter <sup>2</sup>

#### ABBREVIATIONS

AAD	_	average annual daily
AADT	_	average annual daily traffic
AASHTO	_	American Association of State Highway and
		Transportation
AASHTO ASM	-	American Association of State Highway and
400		Transportation Officials
ABC	-	aggregate base course
ACBC	-	asphaltic concrete base course
ACW	-	additional carriageway
ACWC	_	asphaltic concrete wearing course
ADB	-	Asian Development Bank
AKM	_	avenue kilometer
APHA	_	American Public Health Association
AP	_	affected person
ASR	_	air sensitive receiver
ASTM	_	American Society of Testing Materials
BDL	_	below detection limit
BHU	_	basic health unit
BOD	_	bio-chemical oxygen demand
BP	_	Bank Policy
OO	_	degree Centigrade/Celsius
CAREC	_	Central Asia Regional Economic Corridor
CC	_	construction contractor
CO	_	carbon monoxide
COD	_	chemical oxygen demand
CSR	_	composite schedule rates

dB (A) DCR DC DD DMC DO EA EE EIA EMP EPA EPD EPO ESR FCC FI GHG GOP GRC GRM HSIP IEE ILO km kph LAC LAeq		decibel district census report design consultant deputy director developing member countries dissolved oxygen environmental assessment environmental engineer environmental impact assessment environmental impact assessment environmental management plan Environment Protection Agency Environment Protection Department Environment Protection Ordinance Environmental Sensitive Receiver Forest Conservation Committee financial intermediary greenhouse gas Government of Pakistan grievance redress committee grievance redress mechanism Highway Sector Improvement Program initial environmental examination International Labor Organization kilometer kilometer per hour land acquisition collector equivalent continuous sound level, 'A weighting' = correction by factors that weight sound to correlate with the sensitivity of the human ear to sounds at different frequencies
m MFF MGDs MVE NEQS NESPAK NGO	- - - -	meter multitranche financing facility Millennium Development Goals motor vehicle examiner National Environmental Quality Standards National Engineering Services Pakistan nongovernment organization
NHA NO NOC NSL NSR NTC OP OSHA PAP		National Highways Authority nitrogen oxide no-objection certificate natural surface level noise sensitive receiver National Trade Corridor operational policy Occupational Safety and Health Administration project affected person
PEPA PEPC PM PNCS POP	- - - -	Pakistan Environmental Protection Act Pakistan Environmental Protection Council particulate matter Pakistan National Conservation Strategy persistent organic pollutant

PPAF	_	Pakistan Poverty Alleviation Fund
PPC	_	Pakistan Penal Code
PRC	_	People's Republic of China
RE	_	resident engineer
REA	_	rapid environmental assessment
ROW	_	right-of-way
SC	_	supervision consultant
SMART	_	self-monitoring and reporting tool
SO	_	sulfur oxide
SPS	_	Safeguard Policy Statement
SSEMP	_	site specific environmental management plan
ТА	_	technical assistance
TOR	_	terms of reference
TSS	_	total suspended solids
UBC	_	Uniform Building Code
UC	_	Union Council
UNFCCC	_	United Nations Framework Convention on
		Climate Change
USEPA	_	United States Environmental Protection Agency
WHO	_	World Health Organization

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Reference Number	KS-P/ENV/01-787-2020		0.0107	I CENTON/USE
Project Name:	Shikarpur-Rajanpur Road	Site Address:	Rajanpur, District Rajanpur	Transferra area
-	Section Project (N55)			In FUALOULISO
Monitoring Date:	08-07-2020	Reporting Date:	13-07-2020	
Source:	Ambient Air	Monitoring	AQM65, Serial # 1310	Furionman
Location:	Rajanpur, District Rajanpur	Instrument:		P
GPS Coordinates:	29° 2' 25.884" N			E DVID TO BE
	70° 19' 57.962" E			Thereicon

			Equironment Laboratory			
Sr.	Time	CO	NO	NO <sub>2</sub>	SO <sub>2</sub>	and the second construction
No				its	Internation	Environment Laboratory
	Hours	(mg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m³)	(µg/m³)	Elw/onment Laboratory
1	09:00 A.M	0.98	<u>12.5</u>	15.7	16.99	C WEININGH COURTAIN
2	10:00 A.M	1.15	13.06	16.06	14.88	Environment Laboratory
3	11:00 A.M	1.13	13.46	16.71	14.23	-
4	12:00 P.M	1.08	12.77	17.06	15.19	Environment Laboratory
5	01:00 P.M	1.33	14.25	17.54	13.25	Fruirmment Laboratory
6	02:00 P.M	1.21	14.03	17.71	14.63	
7	03:00 P.M	1.05	13.79	16.51	13.03	"Elonanivent Laborator
8	04:00 PM	1.1	13.74	16.75	13.88	- Trevisionment Laborator
9	05:00 PM	0.99	13.26	14.04	13.93	
10	06:00 PM	1.05	12.57	14.39	13.88	DErvirdinment Laborator
11	07:00 PM	1.07	12.38	15.06	13.96	Equironment Laborator
12	08:00 PM	1.03	13.06	14.82	13.66	The second second second second
13	09:00 PM	1.02	12.07	13.81	14.32	El crohment Laborator
14	10:00 PM	1.01	11.94	13.79	13.92	Enurgoment Laborator
15	11:00 PM	1.01	12.26	14.04	13.64	and the second second second
16	12:00 AM	1.02	12.04	14.3	13.23	Environment Laborator
17	01:00 AM	1.01	12.3	14.07	13.63	Environment Laborator
18	02:00 AM	1.03	13.38	13.82 .	13.88	Contraction Colloration
19	03:00 AM	1.02	13.26	14.11	13.03	·Environment Laborator
20	04:00 AM	1.01	13.16	13.62	13.36	- Environment Laborator
21	05:00 AM	1.01	13.6	13.82	12.66	C ENTRONOMIC CADE ALON
22	06:00 A.M	1.04	12.37	13.68	12.82	e Environment Laborator
23	07:00 A.M	1.05	12.79	, 13.36	13.03	E lange and lakes the
24	08:00 A.M	1.03	11.26	13.72	13.77	<del>o Ed</del> Aronment Laborator
	e Concentration	1.05	12.88	14.93	13.86	<ul> <li>Environment Laborator</li> </ul>
	PEQSAA	05 (08 hr)	40 (24 hr)	80 (24 hr)	120 (24 hr)	d Environment Laborator

PEQSAA: Punjab Environmental Quality Standards for Ambient Air Note:

Selected measurement units were mg/m<sup>3</sup> & µg/m<sup>3</sup> otherwise stated. .

Quality was assured through self calibration of the instrument. .

The values were representing of monitoring conditions prevailing during the monitoring hours. .... The measurements were carried out on client request. The client is responsible lawful usage of reported data in future. The report is not valid for court.

#### Signature of Analysis R ENVIRONMENTAL MONITORING, ANALYSIS & SURVEYS

Creative House, 3rd Floor, Office # 302, Phase III Chowk, Hayatabad, Peshawar, Pakistan Tel: 091-5852913 Cell: +92 302 8462412 Email: inenvconsultants@yahoo.com www. iec-consultants.com





Reference Nu Project Name Monitoring Da Source: Location: GPS Coordina	: Sh Se ate: 02 Ar Sh ates: 27	S-P/ENV/01-78 hikarpur-Rajanp ection Project (N -07-2020 nbient Noise hikarpur /° 58' 3.920'' N I° 38' 19.672'' E	ur Road \55)	Site Address: Reporting Date: Monitoring Instrument:	Shikarpur 13-07-202 Noise Mete Type-2		Integrated Envir Integrated Envir Integrated Envir	ronment Laborato ronment Laborato ronment Laborato ronment Laborato
Sr. No.	Monito	oring Time	Unit	Minimum	Maximum	Leq	_	
1.	09:	:00 A.M		58.9	61.8	60.35		
2.	10:	:00 A.M	1	58.7	61.6	60.15		
3.	11:	:00 A.M		58.5	61.4	59.95	The State	
4.	12:	:00 P.M		58.3	61.2	59.75	C.E.D. A. Envir	
5.	01:	:00 P.M	1	58	60.9	59.45	Envi	
6.	02:	:00 P.M	1	57.8	60.7	59.25		
7.	03:	:00 P.M	1	57.6	60.5	59.05		
8.	04	:00 PM	1	57.4	60.3	58.85	Envi	
9.	05	:00 PM	1	57.2	60.1	58.65	Trop I at Envir	
10.	06	:00 PM	1	57	59.9	58.45	teres host Envi	
11.	07	:00 PM	1	56.7	59.6	58.15	Internation Enve	
12.	08	:00 PM	dB(A)	56.5	59.4	57.95		
13.	09	:00 PM	dB(A)	56.3	59.2	57.75		
14.	10	:00 PM	1	56.1	59	57.55	e de la Estivis	
15.	11	:00 PM	-	55.9	58:8	57.35	Logo Stui	
16.	12	:00 AM		55.6	58.5	57.05	Integrine Envi	
17.	01	:00 AM	1	55.4	58.3	56.85	Internet Sitter	
18.	02	:00 AM	1	55.2	58.1	56.65		
19.	03	:00 AM	1	55	57.9	56.45	Contraction Parks	
20.	04	:00 AM	1	54.8	57.6	56.2	Totage Emai	
21.	05	:00 AM		54.5	57.4	55.95	Integrated Envir	
22.	06	:00 A.M	1	54.3	57.2	55.75	Internet Envir	ronment Laborat
23.	07	:00 A.M		54.1	57	55.55		
24.	08	:00 A.M		53.9	56.8	55.35		
SEQS limi	t : 70 dB Da	ay Time					TOTE THUS Envo	rooment Laborat
	60 dB Ni	ight Time				<	integrated Edwa	ronment Laborat
SEQS: Sindh E Note:	Environmen	tal Quality Stan	dards for Am	bient Noise			tegrated Envi	
	ad moasuro	ment units were	$d \mathbf{P}(\Lambda)$ other	wise stated		$\langle \rangle$	"In Pariates Envir	
<ul> <li>Quality</li> </ul>	was assure	ed through self	calibration of	the instrument.		An.	100	
		epresenting of its were carried		nditions prevailing d	uring the monitor	bring hours.		
/ The cli	ent is respo	onsible lawful us	age of report	ed data in future.		)		
				TORING, ANALY				
ignature 6194	Mestiouse,	3rd Floor, Offic	e # 302, Pha	ase III Chowk, Haya	tabad, Peshaw	ar, Pakistan	Integrates Envi	
ei: 091-5852	913 Cell: +9	52 302 84624	2 Email: iner	nvconsultants@yal Agency (EPA-KPK)	100.com www.	iec-consulta		
		Linnonnentt	a FIOLECCION	ABEILY (EPA-KPK)	rcerujieu			





Reference Number       KS-P/ENV/01-787-7         Project Name:       Shikarpur-Rajanpun         Source:       03-07-2020         Location:       Khanpur, District SI         GPS Coordinates:       28° 0' 5.916" N         68° 43' 27.962" E		ur Road	r Road Site Address: 55)		District Shikarpur	escator Environment Labora
		,	Reporting Date: Monitoring Instrument:	13-07-2020 Noise Meter-IEC651- Type-2		egnice Environment Labora egnice Environment Labora Environment Labora
Sr. No.	Monitoring Time	Unit	Minimum	Maximum	Leq	ten der Environment Labora
1.	10:00 A.M		60.8	63.7	62.25	
2.	11:00 A.M		60.6	63.5	62.05	
3.	12:00 P.M	-	60.4	63.3	61.85	The Environment Labora
4.	01:00 P.M	1	60.2	63.1	61.65	Content Environment Labora
5.	02:00 P.M		59.9	62.8	61.35	en en Environment Labora
6.	03:00 P.M	1	59.7	62.6	61.15	
7.	04:00 PM		59.5	62.4	60.95	- Environment Labora
8.	05:00 PM	 	59.3	62.2	60.75	
9.	06:00 PM		59.1	62	60.55	- Invironment Labora
10.	07:00 PM		58.9	61.8	60.35	eg der Environment Labora
11.	08:00 PM		58.6	61.5	60.05	en Environment Labora
12.	09:00 PM		58.4	61.3	59.85	
13.	10:00 PM		58.2	61.1	59.65	
14.	11:00 PM		58	60.9	59.45	- Del Environment Labori
15.	12:00 AM		57.8	60.7	59.25	Environment Labora
16.	01:00 AM		57.5	60.4	, 58.95	Environment Labor
17.	02:00 AM		57.3	60.2	58.75	Environment Labora
18.	03:00 AM		57.1	60	58.55	Environment Labora
19.	04:00 AM		56.9	59.8	58.35	
20.	05:00 AM		56.7	59.5	58.1	eg dec Environment Labora
21.	06:00 A.M		56.4	59.3	57.85	end Environment Labora
22.	07:00 A.M		56.2	59.1	57.65	Environment Labora
23.	08:00 A.M		56	58.9	57.45	
24.	09:00 A.M		55.8	58.7	57.25	
SEQS limit :	70 dB Day Time 60 dB Night Time				le le	en Environment Labori Con Environment Labori

- Selected measurement units were dB(A) otherwise stated. Quality was assured through self calibration of the instrument. The values were representing of monitoring conditions prevailing during the monitoring hours. The measurements were carried out on client request. The client is responsible lawful usage of reported data in future.

The report of the MANENTAL MONITORING, ANALYSIS & SURVEYS

<u>Signature Greatarest</u>ouse, 3rd Floor, Office # 302, Phase III Chowk, Hayatabad, Peshawar, Pakistan Tel: 091-5852913 Cell: +92 302 8462412 Email: inenvconsultants@yahoo.com www. iec-consultants.com

Integrated Environment Laboratory





		ur Road	Site Address:	Kund Kot, E	District Kashm	nore	Environment I
	Section Project (N5 ponitoring Date: 04-07-2020 purce: Ambient Noise pocation: Kund Kot, District H PS Coordinates: 28° 14' 3.525'' N 69° 11' 14.139'' E		Reporting Date: Monitoring Instrument:		13-07-2020 Noise Meter-IEC651- Type-2		
Sr. No.	Monitoring Time	Unit	Minimum	Maximum	Leq	lot of the	
1.	11:00 A.M		61.5	64.4	62.95	internation	
2.	12:00 P.M	1	61.3	64.2	62.75		
3.	01:00 P.M	1	<sup>°</sup> 61.1	64	62.55		
4.	02:00 P.M	1	60.9	63.8	62.35	1010 mil	
5.	03:00 P.M	1	60.6	63.5	62.05	length (	
6.	04:00 PM		60.4	63.3	61.85	less -	
7.	05:00 PM	]	60.2	63.1	61.65		
8.	06:00 PM	]	60	62.9	61.45		
9.	07:00 PM		59.8	62.7	61.25	1000	
10.	08:00 PM	1	59.6	62.5	61.05	CU.	
11.	09:00 PM		59.3	62.2	60.75	(Complete)	
12.	10:00 PM	dB(A)	59.1	62	60.55		
13.	11:00 PM		58.9	61.8	60.35		
14.	12:00 AM		58.7	61.6	60.15		
15.	01:00 AM		58.5	61.4	59.95	_	
16.	02:00 AM		58.2	61.1	59.65	1000	
17.	03:00 AM		58	60.9	59.45	10-01-04	
18.	04:00 AM		57.8	60.7	59.25		
19.	05:00 AM		57.6	60.5	59.05		
20.	06:00 A.M	_	57.4	60.2	58.8		
21.	07:00 A.M		57.1	60	58.55	11492	
22.	08:00 A.M		56.9	59.8	58.35	Internal Inter	
23.	09:00 A.M		56.7	59.6	58.15	Sec. 10	
24.	10:00 A.M		56.5	59.4	57.95		
SEQS limit	: 70 dB Day Time 60 dB Night Time				$\frown$	·	Anvironment

The values were representing of monitoring conditions prevailing during the monitoring hours.

The measurements were carried out on client request. The client is responsible lawful usage of reported data in future.

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#### The report of the Marken Monitoring, ANALYSIS & SURVEYS

Signature Granting House, 3rd Floor, Office # 302, Phase III Chowk, Hayatabad, Peshawar, Pakistan Granting Tel: 091-5852913 Cell: +92 302 8462412 Email: inenvconsultants@yahoo.com www.iec-consultants.com

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Reference Number     KS-P/ENV/01-787       Project Name:     Shikarpur-Rajanp       Source:     05-07-2020       Source:     Ambient Noise       Jocation:     Kashmore, Distric       SPS Coordinates:     28° 26' 10.003" N		Rajanpur Road ject (N55) vise District Kashmore	uur Road Site Address: N55) Reporting Date: Monitoring ct Kashmore Instrument:		Kashmore, District Kashmore 13-07-2020 Noise Meter-IEC651- Type-2	
	69° 34' 46.8	310" E	1 7	8	104 th	nover Environment Labor
Sr. No.	Monitoring Tin	ne Unit	Minimum	Maximum	Leq	nered Environment Labor
1.	11:30 A.M		63.5	66.4	64.95	Ster Environment Labor
2.	12:30 P.M		63.3	66.2	64.75	eres Environment Labor
3.	01:30 P.M		63.1	66	64.55	
4.	02:30 P.M		62.9	65.8	64.35	and Environment Labo
5.	03:30 P.M		62.6	65.5	64.05	Environment Labo
6.	04:30 PM		62.4	65.3	63.85	Environment Labo
7.	05:33 PM		62.2	65.1	63.65	- Emuleon menti Labo
8.	06:30 PM		62	64.9	63.45	
9.	07:30 PM		61.8	64.7	63.25	Emiron Trent Labe
10.	08:30 PM		61.6	64.5	63.05	Con Environment abo
11.	09:30 PM		61.3	64.2	62.75	Environment/Lanc
12.	10:30 PM	dB(A)	61.1	64	62.55	
13.	11:30 PM		60.9	63.8	62.35	
14.	12:30 AM		60.7	63.6	62.15	The Environment Labo
15.	01:30 AM		60.5	63.4	61.95	Environment Labo
16.	02:30 AM		60.2	63.1	61.65	Enveronment Labo
17.	03:30 AM		60	62.9	61.45	Environment Labo
18.	04:30 AM		59.8	62.7	61.25	
19.	05:30 AM		59.6	62.5	61.05	Environment Labo
20.	06:30 A.M		59.4	62.2	60.8	er Casi Environment Labo
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22.	08:30 A.M		58.9	61.8	60.35	ontool Environment Labo
23.	09:30 A.M		58.7	61.6	60.15	
24.	10:30 A.M		58.5	61.4	59.95	Her Environment Lado
SEQS limit	: 70 dB Day Time 60 dB Night Time				i i i i	Environment Labo
EQS: Sindh E lote:	nvironmental Qualit	y Standards for Am	bient Noise	1		n neo Environment Labo n neo Environment Labo
<ul> <li>Quality</li> </ul>	d measurement unit was assured throug ues were representi	h self calibration of	the instrument.	uring the monit	oring hours.	Environment Labo

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The report of the MURENTAL MONITORING, ANALYSIS & SURVEYS

<u>Signature Graniulesti</u>ouse, 3rd Floor, Office # 302, Phase III Chowk, Hayatabad, Peshawar, Pakistan Tel: 091-5852913 Cell: +92 302 8462412 Email: inenvconsultants@yahoo.com www. iec-consultants.com Meyrared Environment Laborator

Environmental Protection Agency (EPA-KPK) Certified

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eference Number roject Name: lonitoring Date: ource: ocation: iPS Coordinates:	Shikarpur-Rajanpu Section Project (N5 06-07-2020 Ambient Noise	Ambient Noise Rojhan, District Rahim Yar Khan 28° 42' 54.555" N		Rojhan, Dis Khan 13-07-2020 Noise Mete Type-2	r-IEC651-	Environment Laborat ar Environment Laborat Environment Laborat Environment Laborat Environment Laborat Environment Laborat
Sr. No.	Monitoring Time	Unit	Minimum	Maximum	Leq	Environment Laborat
1.	11:30 A.M		60.4	63.3	61.85	The Strin Environment Laborat
2.	12:30 P.M		60.2	63.1	61.65	hter of Environment Laborat
3.	01:30 P.M		60	62.9	61.45	Iner old Environment Laborat
4.	02:30 P.M		59.8	62.7	61.25	Environment Laborat
5.	03:30 P.M	1	59.5	62.4	60.95	
6.	04:30 PM	1	59.3	62.2	60.75	Environment Laborat
7.	05:33 PM	1	59.1	62	60.55	Intergrand Environment Laborat
8.	06:30 PM	1	58.9	61.8	60.35	I Remark Environment Laborat
9.	07:30 PM	1	58.7	61.6	60.15	
10.	08:30 PM	dB(A)	58.5	61.4	59.95	
11.	09:30 PM		58.2	61.1	59.65	Environment Labora
12.	10:30 PM		58	60.9	59.45	2000 Environment Labora
13.	11:30 PM		57.8	60.7	59.25	the period Environment Labora
14.	12:30 AM	1	57.6	60.5	59.05	Environment Labora
15.	01:30 AM	1	57.4	60.3	, 58.85	
16.	02:30 AM	1	57.1	60	58.55	
17.	03:30 AM	1	56.9	59.8	58.35	Cristian Environment Labora
18.	04:30 AM	1	56.7	59.6	58.15	Intelligent Environment Labora
19.	05:30 AM		56.5	59.4	57.95	holege ten Environment Labora
20.	06:30 A.M		56.3	59.1	57.7	Environment Labora
21.	07:30 A.M	1	56	58.9	57.45	
22.	08:30 A.M		55.8	58.7	57.25	an and the Environment Labora
23.	09:30 A.M	1	55.6	58.5	57.05	Interations Environment Labora
24.	10:30 A.M		55.4	58.3	56.85	Interesting Environment Labora
PEQS: Punjab En Note: Selected n Quality wa The value The measa	70 dB Day Time 50 dB Night Time vironmental Quality Sta measurement units wer as assured through self s were representing of urements were carried of PERVAIDONNER t is not valid for court	e dB(A) other calibration or monitoring co out on client	rwise stated. f the instrument. onditions prevailing request. ted fata in futura L	SIS & SURV	EYS	Environment Labor Environment Labor Environment Labor Environment Labor Environment Labor Integrative Environment Labor





erence Num ect Name: hitoring Dat rce: ation: 6 Coordinat	Shikarpur-Rajanpu Section Project (N e: 08-07-2020 Ambient Noise Rajanpur, District F	Ambient Noise Rajanpur, District Rajanpur 29° 2' 25.884'' N		13-07-2020	Rajanpur, District Rajanpur 13-07-2020 Noise Meter-IEC651- Type-2	
Sr. No.	Monitoring Time	Unit	Minimum	Maximum	Leq	thed Environment La
1.	09:00 A.M		63.4	66.3	64.85	und Environment La
2.	10:00 A.M	1	63.2	66.1	64.65	
3.	11:00 A.M		63	65.9	64.45	ise : Environment La
4.	12:00 P.M		62.8	65.7	64.25	it. Environment La
5.	01:00 P.M		62.5	65.4	63.95	utra Environment La
6.	02:00 P.M	1	62.3	65.2	63.75	en Environment La
7.	03:00 P.M		62.1	65	63.55	
8.	04:00 PM		61.9	64.8	63.35	1.5. Environment La
9.	05:00 PM		61.7	64.6	63.15	See Environment La
10.	06:00 PM		61.5	64.4	62.95	S Environment La
11.	07:00 PM		61.2	64.1	62.65	Environment La
12.	08:00 PM	dB(A)	61	63.9	62.45	Environment La
13.	09:00 PM		60.8	63.7	62.25	
14.	10:00 PM		60.6	63.5	62.05	Environmentila
15.	11:00 PM		60.4	63:3	61.85	Enviranment La
16.	12:00 AM		60.1	63	61.55	rel Environment La
17.	01:00 AM		59.9	62.8	61.35	
18.	02:00 AM		59.7	62.6	61.15	Environment La
19.	03:00 AM		59.5	62.4	60.95	
20.	04:00 AM		59.3	62.1	60.7	nter Environment La
21.	05:00 AM		59	61.9	60.45	une Environment La
22.	06:00 A.M		58.8	61.7	60.25	Lon Environment/La
23.	07:00 A.M		58.6	61.5	60.05	aust Environment La
24.	08:00 A.M		58.4	61.3	59.85	
PEQS lim	it : 70 dB Day Time 60 dB Night Time					and Environment La
QS: Punjab	Environmental Quality Sta	andards for A	mbient Noise	(	1	-
ote:						
	ed measurement units wer				$\langle Q \rangle$	rolivo Environment La
<ul> <li>The value</li> </ul>	y was assured through self alues were representing of easurements were carried	monitoring co	onditions prevailing of	during the monit	oring hours.	also Covinonment La
	ient is responsible lawful u				Y	

Signature Gravitalesticouse, 3rd Floor, Office # 302, Phase III Chowk, Hayatabad, Peshawar, Pakistan Environment Laboratory, Tel: 091-5852913 Cell: +92 302 8462412 Email: inenvconsultants@yahoo.com www. iec-consultants.com Environmental Protection Agency (EPA-KPK) Certified

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Integrated Environment Laboratory



	WATER ANALYSIS REPORT						
Γ	Reference Number Project Name:	KS-P/ENV/01-787-2020 Shikarpur-Rajanpur Road	Site Address:	Shikarpur	hileitile	Environ	
L.	Project Name.	Section Project (N55)		•		- Environment Labor Environment Labor - Environment Labo	
	Sampling Date: Source:	02-07-2020 Ground Water	Reporting Date Monitoring	e: 13-07-2020 APHA/USEPA St	andard		
	Location:	Shikarpur	Method:	Methods	hearda		
	GPS Coordinates:	27° 57' 49.841" N 68° 39' 33.252" E					
L.		00 00 00.202 2			lingtic	Enviran	
Sr. No.	Parameters	Analysis Method	Units	SEQS	Results		nent Labor
1	рН	APHA-4500H+ B		6.5-8.5	6.3	Environ	nént Labo
2	Taste & Odor	In-house		Non Objectionable	Salted	Environ	nent Labo
3	Color	APHA-2120 B/C	TCU	<15	8		merit Labo
4	Turbidity	APHA-2130 B	NTU	<5	5	e Environ	ment Labo
5	Total Coliform	APHA:9222 B	Number/100 mL	0 Number/100 mL	0	Eovilen	nent Labo
6	E-Coli	APHA:9222 D	Number/100 mL	0 Number/100 mL	0	0 Environ	ment Labo
7	Total Dissolved Solids (TDS)	APHA-2540 C	mg/L	<1000	861	e Environ	nentilabo
8	Total Hardness	APHA-2340 C	mg/L	<500	119	s Environ	nent Labo
9	Nitrate	APHA-4500NO3 B	mg/L	≤50	4.7	Errancon	henilabo
10	Nitrite	APHA-4500NO2 B	mg/L	≤3	0.06	Endlion	nent Labe
11	Ammonia	APHA-4500-NH3-B	mg/L		0.58	Enviros	nintLabo
12	Arsenic	APHA-3500As B	mg/L	<0.05	N.D.	Departar	nent Labo
13	Antimony	APHA-3500Sb B	mg/L	<0.005	N.D.	-	
14	Barium	APHA-3500Ba B	mg/L	0.7 ·	N.D.	EINER	
15	Chloride	APHA-4500CI- B	mg/L	250	102	Environ	nent Labo
16	Fluoride	APHA-4500F- C	mg/L	<1.5	0.49	Environ	nentLabo

SEQS: Sindh Environmental Quality Standards for Drinking Water N.D: Not Detected Note:

Selected measurement units were mg/L otherwise stated. .

Quality was assured through self calibration of the instrument. . The values were representing of monitoring conditions prevailing during the monitoring hours. .

The measurements were carried out on client request.

. The client is responsible lawful usage of reported data in future. .

The report is not valid for court. .

Signature of Analyst:

#### FOR ENVIRONMENTAL MONITORING, ANALYSIS & SURVEYS

Creative House, 3rd Floor, Office # 302, Phase III Chowk, Hayatabad, Peshawar, Pakistan Tel: 091-5852913 Cell: +92 302 8462412 Email: inenvconsultants@yahoo.com www.iec-consultants.com Environmental Protection Agency (EPA-KPK) Certified

nt Laboratory





		WATE	R ANALYSIS REPO	RT		
1	Reference Number Project Name: Sampling Date: Source: Location: GPS Coordinates:	KS-P/ENV/01-787-2020 Shikarpur-Rajanpur Road Section Project (N55) 03-07-2020 Ground Water Khanpur 28° 0' 8.283" N 68° 43' 25.503" E	Site Address: Reporting Dat Monitoring Method:	Khanpur, District e: 13-07-2020 APHA/USEPA S Methods	t Shikarpur	vironment Laborato vironment Laborato vironment Laborato vironment Laborato
Sr. No.	Parameters	Analysis Method	Units	SEQS	rioounio	vironment Laborate
1	рН	APHA-4500H+ B		6.5-8.5	5.9	
2	Taste & Odor	In-house		Non Objectionable	Salted	viron nent Laborati
3	Color	APHA-2120 B/C	TCU	<15	7	
4	Turbidity	APHA-2130 B	NTU	<5	6	wronment Laborati
5	Total Coliform	APHA:9222 B	Number/100 mL	0 Number/100 mL	0	vironment Laborali
6	E-Coli	APHA:9222 D	Number/100 mL	0 Number/100 mL	0	vironment Laborati
7	Total Dissolved Solids (TDS)	APHA-2540 C	mg/L	<1000	942	wron nerit Laborati
8	Total Hardness	APHA-2340 C	mg/L	<500	106	vitoiment Laborah
9	Nitrate	APHA-4500NO3 B	mg/L	≤50	4.1	wiron tient Laborat
10	Nitrite	APHA-4500NO2 B	mg/L	≤3	0.05 Er	wiron nent Laborat
11	Ammonia	APHA-4500-NH3-B	mg/L		0.72	virma ment Laborat
12	Arsenic	APHA-3500As B	mg/L	<0.05	N.D.	winen nent Laborat
13	Antimony	APHA-3500Sb B	mg/L	<0.005	N.D.	
14	Barium	APHA-3500Ba B	mg/L	0.7	N.D.	
15	Chloride	APHA-4500CI- B	mg/L	250	117	Winnin nemt Laborat
16	Fluoride	APHA-4500F- C	mg/L	<1.5	0.61	n (Anment Laborat

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