





# Aqua Xplore

(Groundwater Assessment & Allied Services)

243/5, New Colony Jiyamau, Hazratganj, Lucknow – 226001  
Mob. 9918202546 / 9889323322, Email-aquaxploreko@gmail.com

Advisor- Dr. R. A. Yadav, ex- Manager(Groundwater), U. P. Jal Nigam

Ref. 410 – B / AX - 2022 Date 10.04.2022

## Geophysical Borehole Logging Report

Name of the site : Belsari deep, Block- Barhalganj

District : Gorakhpur

Date : 10.04.2022

Depth logged : 142.0 mbgl

Depth drilled : 167.0 mbgl- as reported

Logged by : Aqua Xplore

Presence : Representative of M/S NCC Limited, Gorakhpur - South

Based on the interpretation of geophysical logs, following information may be deciphered, particularly with respect to salinity of the formation water;

Sl.No.	Depth range(mbgl)	Thickness(m)	Remarks
1	23.0---35.0	12.0	Good all
2	40.0---60.0	20.0	
3	73.0---77.0	4.0	
4	89.0---93.0	4.0	
5	107.0---135.0	28.0	

Note. Sl. Nos. 3 & 4 are fine sand.

*verified as per logs provided.*

for Aqua Xplore

CC;

1. Executive Engineer, C.D. (Rural), U.P. Jal Nigam, Gorakhpur.
2. M/S NCC Limited, Gorakhpur –South, SWSM.

*G.S.*  
ASSISTANT HYDROGEOLOGIST  
U.P. JAL NIGAM (RURAL)  
PRAYAGRAJ



# TECHPRO ENGINEERS PVT. LTD.

(Laboratory Division)

Lab Add. 131, Ram Ganga Housing Society, Naramau, Kanpur- 209217,

Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com

e-mail: tepllab@gmail.com, info@techproindia.com,

Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No. : 01, Rev. Date: 10/12/2020

TEPL/MT/2022/136/R1

Dated: 05-03-2022

## TEST REPORT

Name of Customer	:	Jal Nigam, Gorakhpur
Project	:	SWSM-JJM Project (Har Ghar Jal Mission) at Gorakhpur U.P.
Reference No.	:	SWSM-UP/GKP/QC/77
Sample supplied to Lab by	:	Customer representative
Name of Contractor/ Agency	:	NCC Ltd.
Sample Particulars	:	Pea-Gravel

Sample Receipt Date	:	03/03/2022	Job No.	:	MT136
Condition of sample	:	Satisfactory	SRF No.	:	2022/29
Type of Sample	:	Pea-Gravel	ULR No.	:	NA
Source of sample	:	Lalkuan (Uttarakhand)	Period of Testing	:	03/03/2022 to 05/03/2022

### Terms & Conditions:

1	Results relate only to the test sample provided by customer.
2	This report is under copyright of Techpro Engineers Pvt. Ltd. (Laboratory Division) and is not to be reproduced, copied, handed over third party or used for any purpose other than for which it has been loaned.
3	The tested samples are retained for three months after issue of test report (if not collected by customer).
4	The unique identification of sample is as Job No. / Chainage No. /BH. No./SI. No. But only SI. No is mentioned in results.



Checked By:

*Alok Chauhan*

Alok Kumar Chauhan  
(Technical Manager)



Approved By:

*Arvind Kumar Garg*

Arvind Kumar Garg  
(Quality Manager)



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## 1. PHYSICAL TEST RESULT OF PEA GRAVEL

Sample Unique ID: MT136/TEPL/02

Sl. No.	Particular of Test	Test Passing %	Specification As Per IS (383 & 4097)	Test Method	Remarks	
1.0	Sieve Analysis (% by weight)	12.5 mm	100	-	IS 2386 (Part-1) 1963, RA-2016	-
		8.0 mm	100			
		6.30mm	100			
		4.75 mm	80.90			
		3.35 mm	14.40			
		2.00 mm	8.60			
2.0	Combined Flakiness & Elongation Index (% by weight)	0.0	40 Max	IS 2386 (Part-1)-1963, RA-2016	Partical Size >6.3	
3.0	Water Absorption (% by weight)	0.90	5 Max	IS 2386 (Part-3)-1963 RA-2016	-	
4.0	Specific Gravity	2.66	2.1 - 3.2	IS 2386 (Part-3)-1963 RA-2016	-	
5.0	Hardness Test (Number)	7.3	5 Min	IS 13630 (Part-13)-2006	-	
6.0	Bulk Density , Kg/litre			IS 2386 (Part-3)-1963 RA-2016	-	
	a) Compacted	1.59	NA			
	b) Loose	1.49	NA			



Checked By:

*Alok Chauhan*

Alok Kumar Chauhan  
(Technical Manager)



Approved By:

*Arvind Kumar Garg*

Arvind Kumar Garg  
(Quality Manager)



# TECHPRO ENGINEERS PVT. LTD.

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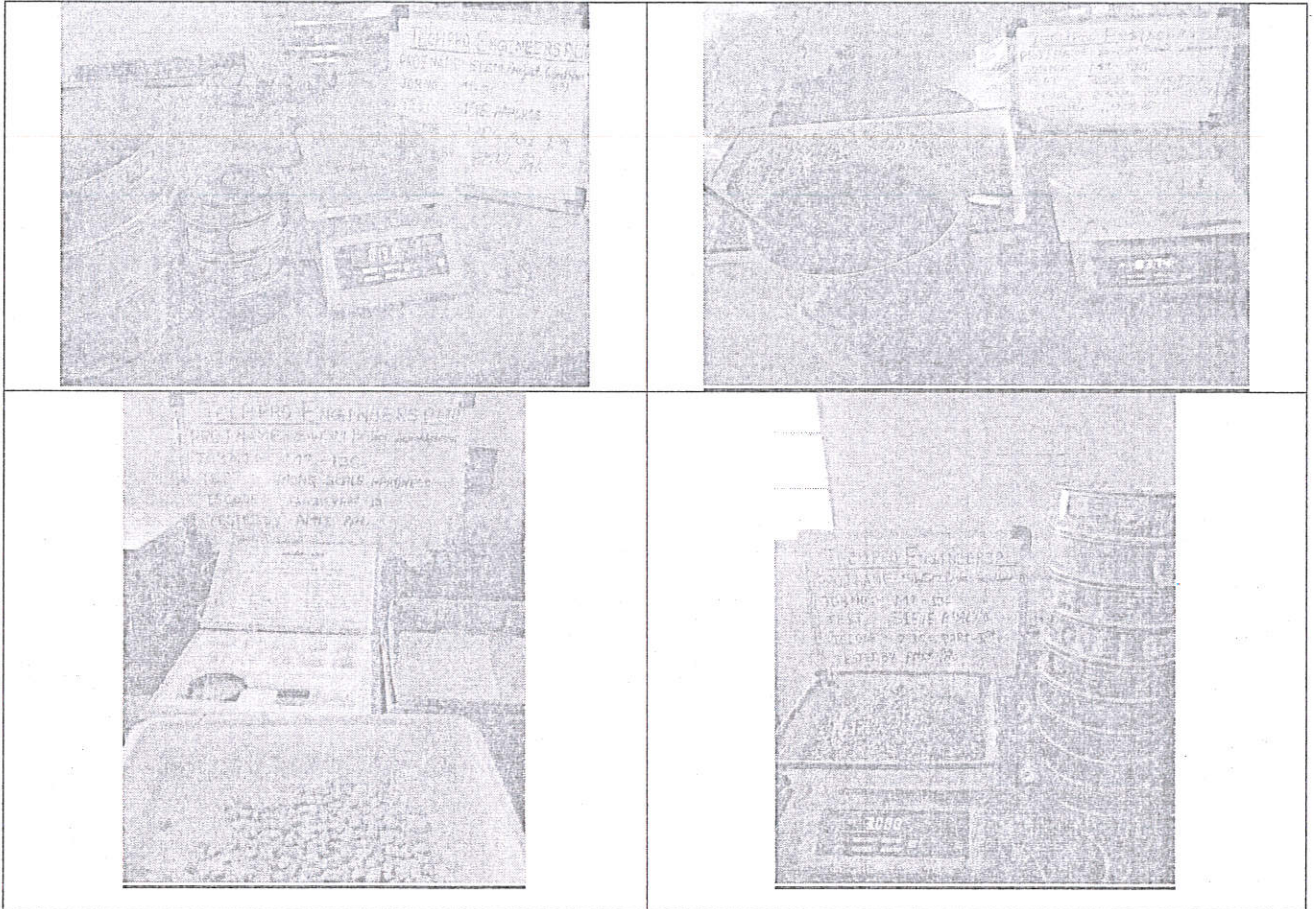
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## PHOTOGRAPHS



END OF REPORT

प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमिटेड

PROJECTS & DEVELOPMENT INDIA LIMITED



Certificate/Report No. 1500-005000049309-C  
Dated 14.02.2022

### Inspection Report/Certificate

Client /Purchaser	M/S SWSM UP/ M/S NCC LIMITED	Inspection office	INSP NOIDA
P.O. No. & Date	NCC/SWSM-GORAKHPUR-SOUTH/218/21-22 05.02.2021	Start Date of Inspection	12.02.2022
Supplier /Manufacturer	M/S DADU PIPES (P) LTD.	End Date of Inspection	12.02.2022
Sub Supplier	NA	PDIL Job no	4004006945
Sub supplier P.O.No & date	NA	PDIL Sales Order No.	NA
Project Name	NA	Total P.O. value	NA
Client Reference	NA	Total inspected item value	NA
P.O. Status	COMPLETE	Inspection Status	FINAL

SI No.	P.O./BOM/Item No.	Description (Nomenclature, Size, Final Specification)	Unit	Ordered Qty	Offered Qty	ICIR Status			Status	Accepted Qty	Cumulative Qty	Document Ref.	Heat no./batch No./Earlier certificate NO./material identification etc.
						Inspected Qty	Inspected Qty	APPROVED					
01	01	150 MM DIA 5 MM THICK MS ERW PIPE AS PER IS4270:2001	MTR	462	474	474	462	A	462	462	AS PER PO & IS 4270:2001	BATCH NO.: 22B04	

#### Inspection/Test:

INSPECTION CARRIED OUT AS PER APPROVED QAP & IS4270

1) VISUAL & PHYSICAL INSPECTION FOR QUANTITY, MARKING, FINISHING AND FOUND OK.

2) DIMENSION CHECKED AND FOUND WITHIN TOLERANCE LIMITS.

3) TENSILE TEST, ELONGATION, FLATTENING & HYDRO TEST WITNESSED OF RANDOMLY SELECTED SAMPLES AND RESULTS FOUND

SATISFACTORY.

4) INTERNAL REPORT, MTC AND CALIBRATION CERTIFICATES REVIEWED AND FOUND IN ORDER.

5) FOR IDENTIFICATION MATERIAL STAMPED AS "P&D/117".

Enclosure:

1) MATERIAL TEST CERTIFICATE (2) CALIBRATION CERTIFICATE (3) INSPECTION VISIT REPORT

Remarks:

MATERIAL RELEASED FOR DISPATCH AS PER TERMS & CONDITIONS OF PURCHASE ORDER.

Status Code (for details refer remarks): A- Accepted, C- Customer Clearance Required, D- Deviated, P- Partial Accepted, R- Rejected, S- Stage, W- Rework, X- Refer Remarks

Signature

Name

Company/Organization

Client/Purchaser

Supplier/Manufacturer

Sub Supplier

PDIL (Inspection & NDT)

Approved By (HOD Insp.)

Customer Clearance Required

PDIL

NoIDA

Inspection & NDT

Inspection & NDT

Inspection & NDT

Inspection & NDT

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Inspection & NDT

\* This Inspection Certificate is issued without prejudice of contractual obligation of the supplier and does not relieve him from the guarantees and obligations set forth in purchase order and attachment.

Estimate for Behari Gram Panchayat Water Supply Scheme Under - SWSM Block - Bahalpanj, District - Giridihpur
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BOQ Item No.	Description	Unit	Qty	Rate	Amount
	Survey, Design & Preparation of DPR				
1.01	All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR.	LS	1.00	305561.00	305561
2.00	Drilling of Borehole for Tubewell construction by DC/RC DTH Rig Machine including transportation, erection, dismantling of Rig and associated T&P complete in all respect including required all material labour etc.				
2.01	RIG Transportation for Tube Well Construction Transportation, Installation Dismantling of Rig machine and logging of bore hole	Job	1.00	159478.88	159479
2.03	Tube Well Construction-Drilling of Borehole				
2.04	DC/RC Drilling up to 100Mtr.	Mtr.		1638.27	
2.05	450 MMØ	Mtr.		1834.20	
2.06	500 MMØ	Mtr.	60.00	2012.00	120720
2.07	600 MMØ	Mtr.	40.00	2422.00	96880
2.08	DC/RC Drilling from 101 Mtr. To 200 Mtr.Deep				
2.09	450 MMØ	Mtr.		1900.88	
2.10	500 MMØ	Mtr.	67.00	2144.00	143648
2.11	600 MMØ	Mtr.		2510.25	
2.12	DC/RC Drilling from 201 Mtr. To 300 Mtr.Deep				
2.13	450 MMØ	Mtr.		2231.63	
2.14	500 MMØ	Mtr.		3014.75	
2.15	600 MMØ	Mtr.		3381.00	
2.16	DC/RC Drilling from 301 Mtr. To 400 Mtr.Deep & above				
2.17	450 MMØ	Mtr.		3319.35	
2.18	500 MMØ	Mtr.		3502.48	
2.19	600 MMØ	Mtr.		3808.72	
2.20	DTH Drilling upto 200.0 Mtr.Deep				
2.21	200/165 MMØ (in over burden Hard Rock)	Mtr.		1250.00	
2.22	Development / Flushing of tubewell Tubewell Assembly (Supply + Fittings & Specials)	Hr.		2900.00	
3.01	MSERW plain pipe, As per IS 4270				
3.02	100 MMØ	Mtr.		927.50	
3.03	150 MMØ	Mtr.	84.00	1900.00	159600
3.04	200 MMØ	Mtr.		2550.00	
3.05	300 MMØ	Mtr.	36.00	3500.00	126000
3.06	MSERW Pipe slotted pipe as per IS 8110				
3.07	100 MMØ	Mtr.		1366.85	
3.08	150 MMØ	Mtr.	30.00	2800.00	84000
3.09	200 MMØ	Mtr.		3633.80	
3.10	300 MMØ	Mtr.		5183.59	
3.11	MS fittings such as clamp, ball plug, reducer, well cap, girder & support structure	LS	1.00	32295.00	32295
3.12	MS fittings such as ring & centre guide Tubewell Assembly Lowering Works	RM	150.00	471.68	70752
	Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.				
4.01	Lowering up to 100 Mtr. Deep				
4.02	100 MMØ MSERW Plain/Slotted Pipe	Mtr.		129.45	
4.03	150 MMØ MSERW Plain/Slotted Pipe	Mtr.	64.00	281.00	17984
4.04	200 MMØ MSERW Plain/Slotted Pipe	Mtr.		376.50	
4.05	300 MMØ MSERW Plain/Slotted Pipe	Mtr.	36.00	472.00	16992
4.06	Lowering from 101 Mtr. To 200 Mtr. Deep				
4.07	150 MMØ MSERW Plain/Slotted Pipe	Mtr.	50.00	376.00	18800

BOQ Item No.	Description	Unit	Qty	Rate	Amount
4.08	200 MM MSERW Plane/Slotted Pipe	Mtr.		499.19	
4.09	300 MM MSERW Plane/Slotted Pipe	Mtr.		745.58	
4.10	Lowering from 201 Mtr. To 300 Mtr. Deep				
4.11	150 MM MSERW Plane/Slotted Pipe	Mtr.		385.19	
4.12	200 MM MSERW Plane/Slotted Pipe	Mtr.		459.00	
4.13	300 MM MSERW Plane/Slotted Pipe	Mtr.		606.62	
4.14	Lowering from 301 Mtr. To 400 Mtr. Deep & above				
4.15	150 MM MSERW Plane/Slotted Pipe	Mtr.		426.53	
4.16	200 MM MSERW Plane/Slotted Pipe	Mtr.		499.00	
4.17	300 MM MSERW Plane/Slotted Pipe	Mtr.		643.94	
	Supply and Packing of Gravel Works				
5.00	Supply and unconsolidated packing of gravel with suitable size	Cum	48.00	7500.00	360000
	Development of Tube well				
6.01	Transportation, Installation Dismantling of 150 PSI Compressor	Job		42120.00	
6.02	Charges for Development by 150 PSI Compressor per hour	Hr.		2544.52	
6.03	Transportation, Installation Dismantling of 250/400/600 PSI Compressor	Job	1.00	42120.00	42120
6.04	Charges for Development by 250 PSI Compressor per hour	Hr.	60.00	3027.00	181620
6.05	Charges for Development by 400 PSI Compressor per hour	Hr.		3154.10	
6.06	Charges for Development by 600 PSI Compressor per hour	Hr.		4062.20	
6.07	Transportation, Installation Dismantling of 0.5 Cusec OP Unit and Yield test, water test	Job		22321.28	
6.08	Charges for Development of TW by 0.5 Cusec OP Unit	Hr.		785.42	
6.09	Transportation, Installation Dismantling of 1 Cusec to 3 Cusec OP Unit and Yield test, water test	Job	1.00	67225.00	67225
6.10	Charges for Development of TW by 1 cusec OP Unit	Hr.	100.00	959.00	95900
6.11	Charges for Development of TW by 3 cusec OP Unit	Hr.		1196.00	
6.12	Transportation, Installation Dismantling of 2 Cusec OP Unit and Yield test, water test	Job		89317.00	
6.13	Charges for Development of TW by 2 cusec OP Unit	Hr.		1119.00	
	<b>Pumping Plant:-</b>				
7.00	SITC of Pumping plant including pumps with motors starter, pannel, cable, complete in all respect with all required material T&P labour etc.				
7.01	1 HP	Nos		32518.98	
7.02	2 HP	Nos		35843.14	
7.03	3 HP	Nos		46249.21	
7.04	5 HP	Nos		65037.95	
7.05	7.5HP	Nos		228500	
7.06	10 HP	Nos		230200	
7.07	12.5 HP	Nos		238800	
7.08	15 HP	Nos		252100	
7.09	17.5 HP	Nos	1.00	276504.56	276505
7.10	20 HP	Nos		295500	
7.11	25 HP	Nos		334043.48	
7.12	30 HP	Nos		366163.04	
7.13	35 HP	Nos		393723.7	
7.14	40 HP	Nos		426547.83	
7.15	Variation in HP due to change of site locations increased/decreased in per HP of the proposed pumping plants.	Rate/HP		30467	
8.00	Pressure Transmitter	Nos	1.00	43120	43120
	<b>Electrically operated Sluice Valve:-</b>				
9.00	Electrically operated Sluice Valve PN 1.0 dia 100 mm	Nos	2.00	125000	250000
9.01	Electrically operated Sluice Valve PN 1.0 dia 150 mm	Nos	1.00	125000	125000
9.02	Electrically operated Sluice Valve PN 1.0 dia 200 mm	Nos		150000	
	<b>Check Valve:-</b>				
9.03	Check Valve PN 1.0 DPCV dia 100 mm	Nos	1.00	27519.8	27520
9.04	Check Valve PN 1.0 DPCV dia 150 mm	Nos		51145.45	
9.05	Check Valve PN 1.0 DPCV dia 200 mm	Nos		73485.9	
	<b>Dismantling Joint :-</b>				
9.06	Dismantling Joint PN 1.0 dia 100 mm	Nos	4.00	3923.92	15696
9.07	Dismantling Joint PN 1.0 dia 150 mm	Nos	3.00	5605.6	16817

*[Signature]*