Transportation Engineering Laboratory (TEL)

Department of Civil Engineering (CED)

UNIVERSITY OF ENGINEERING & TECHNOLOGY (UET)

LAHORE - 54890 (PAKISTAN)





Date:----

Engr. Ghulam Rasool

Ref.----

Resident Engineer, NESPAK, MCL Nishtar Zone, Lahore.

Subject: Testing of Aggregate (Granular Sub-base)

Rehabilitation/Improvement of Streets (PCC), Sewerage/Drainage

UC-237, 238 & 239 Nishtar Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/103/LDP/NZ/04/128 dated 16-01-2025. Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 20-01-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	1 1/2"	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	84.54	51.57	28.06	20.16	14.26

2. Los Angeles Abrasion Value Test (ASTM C-131/535)

Grading Used		Los Angeles Abrasion Value
		(%)
A	V	25.34

3. Flakiness & Elongation Index (BS 812: Part 105)

Sieve Size		Individual Weighted		Individual	Weighted	
Passing Retained		Flakiness Flakiness		Elongation	Elongation	
(in.) (in.)		Index (%)	Index (%)	Index (%)	Index (%)	
1 ½	1	10.81	1.95	12.99	2.34	
1	3/4	7.87	3.03	10.39	4.00	
3/4	1/2	12.13	3.33	14.65	4.02	
1/2	3/8	12.18	1.12	14.84	1.37	
3/8	1/4	11.59	0.80	14.02	0.96	
		Flakiness Inc	dex = 10.23%	Elongation Ind	$ex = 12.\overline{69\%}$	

If you have further query, please do not hesitate to contact the undersigned.

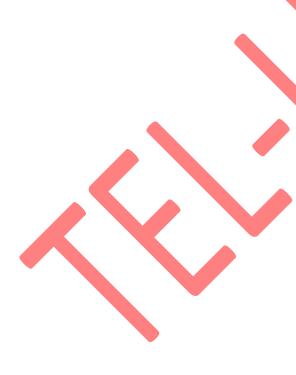
Best Regards,

Director

Transportation Engineering Laboratory

Note:

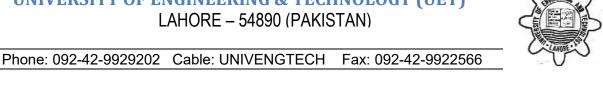
- 1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
- 2. Sampling has not been performed by Transportation Engineering Laboratory (TEL), UET and TEL-UET does not accept the responsibility that the sample(s) supplied is/are truly representative sample(s) of any batch or stock or entire project.
- 3. While TEL-UET agrees to take every reasonable precaution to ensure validity of its test results, it assumes no liability thereof beyond the amount of the fee charged for the analysis or test.
- 4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
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Engr. Ghulam Rasool Resident Engineer, NESPAK, MCL Nishtar Zone, Lahore.

Ref.----

Subject: <u>Testing of Sand</u> (Ravi)

Rehabilitation/Improvement of Streets (PCC), Sewerage/Drainage

UC-237, 238 & 239 Nishtar Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/103/LDP/NZ/04/129 dated 16-01-2025. Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 20-01-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	3/8"	#4	#8	#16	#30	#50	#100	#200
%age Passing	100	99.91	99.73	99.57	99.08	83.65	10.50	1.86

2. Percentage of Fines (ASTM D-1140) Wet Sieving

Silt and	Clay (%)	3.51
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3. Fineness Modulus (ASTM C-142)

Fineness Modulus (%)	1.08

If you have further query, please do not he sitate to contact the undersigned.

Best Regards,

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Director

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The Executive Officer, Five Star Corporation, Bahawalpur.

Subject: **Testing of Bitumen**

Amina Girls Degree College (AGDC), Lodhran Project:

Dear Sir,

It is with reference to your letter No. AGDC/105/25/LD dated 22-02-2025. Please find below the results of tests conducted on the bitumen sample provided to this laboratory through your representative.

Sr.#	Laboratory Tests			Results
1	Penetration (ASTM D-5)			80 Units
2	Ductility (ASTM D-113)			Above 100 cm
3	Softening Point (ASTM D-3	6)		45.0°C

If you have further query, please do not hesitate to contact the undersigned.

Best Regards,

Director

Transportation Engineering Laboratory

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