

Transportation Engineering Laboratory (TEL)

Department of Civil Engineering (CED)

UNIVERSITY OF ENGINEERING & TECHNOLOGY (UET)

LAHORE – 54890 (PAKISTAN)



Phone: 092-42-9929202 Cable: UNIVENGTECH Fax: 092-42-9922566

Ref.:-----

Date:-----

Mr. Muhammad Sohail Akhtar
Resident Engineer,
NESPAK,
Allama Iqbal Zone.

Subject: **Testing of Granular Sub-base**

Rehabilitation/Improvement of Street (P.C.C), Sewerage/Drainage UC-109
Maragzaar Colony (Gulshan-e-Abbas Scheme No. 1, No. 2, Rana Town, Mahand
Town etc.) in Allama Iqbal Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/LDP/103/MSA/04/100 dated 02-09-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory 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	82.88	64.36	44.63	31.45	23.63

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

Grading Used	Los Angeles Abrasion Value (%)
A	28.52

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

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Ref.:-----

Date:-----

Mr. Muhammad Sohail Akhtar
Resident Engineer,
NESPAK,
Allama Iqbal Zone.

Subject: **Testing of Sand for Concrete/Mortar**
Rehabilitation/Improvement of Street (P.C.C), Sewerage/Drainage UC-109
Maragzaar Colony (Gulshan-e-Abbas Scheme No. 1, No. 2, Rana Town, Mahand
Town etc.) in Allama Iqbal Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/LDP/103/MSA/04/104 dated 02-09-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	3/8"	#4	#8	#16	#30	#50	#100	#200
%age Passing	100	99.18	98.07	96.69	95.62	79.94	10.45	2.15

2. Fineness Modulus (ASTM C-142)

Fineness Modulus (%)	1.20
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3. Specific Gravity & Water Absorption (ASTM C-128)

Specific Gravity (OD)	2.63
Specific Gravity (SSD)	2.65
Apparent Specific Gravity	2.68
Water Absorption (%)	0.76

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Ref.:-----

Date:-----

Mr. M. Sohail Akhter
Resident Engineer,
NESPAK,
Allama Iqbal Zone.

Subject: **Testing of Coarse Aggregate**

Rehabilitation/Improvement of Street (P.C.C), Sewerage/Drainage UC-109 Maragzaar Colony (Gulshan-e-Abbas Scheme No. 1, No. 2, Rana Town, Mahand Town etc.) in Allama Iqbal Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/LDP/103/MSA/04/105 dated 02-09-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	86.48	38.60	16.17	0.28

2. Specific Gravity & Water Absorption (ASTM C-127)

Specific Gravity (oven dried condition)	2.82
Specific Gravity (saturated surface dry condition)	2.83
Apparent Specific Gravity	2.85
Water Absorption (%)	0.36

3. Sodium Sulphate Soundness (ASTM C-88)

Sieve Size	Weight of Fraction Before Test. (gm)	Weight of Fraction After Test. (gm)	Percentage Passing Designated Sieve After Test.	Weighted Percentage Loss.
1/2" + 3/8"	1007.3	996.9	1.03	0.73
	Total = 0.73%			

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

Grading Used	Los Angeles Abrasion Value (%)
B	16.08

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

Sieve Size		Individual Flakiness Index (%)	Weighted Flakiness Index (%)	Individual Elongation Index (%)	Weighted Elongation Index (%)
Passing (in.)	Retained (in.)				
1	3/4	6.78	0.92	11.81	1.60
3/4	1/2	7.13	3.42	10.89	5.23
1/2	3/8	6.03	1.36	9.81	2.21
3/8	1/4	4.07	0.65	11.86	1.89
Flakiness Index = 6.35%			Elongation Index = 10.93%		

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

Best Regards,

Director
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Ref.:-----

Date:-----

The Sub Divisional Officer,
Highway Sub Division,
Mailsi.

Subject: **Testing of Bitumen**

Additional Carriageway (Dehli – Multan Road) from Pul 114/10-R to Pir Murad Morr, Length = 49.60 km, District Vehari

Dear Sir,

It is with reference to your letter No. 449/M 16-6-2025 dated 16-06-2025.

Please find below the results of tests conducted on the bitumen sample provided to this laboratory on 04-09-2025 through your representative.

Sr.#	Laboratory Tests	Results
1	Penetration (ASTM D-5)	62 Units
2	Ductility (ASTM D-113)	Above 100 cm
3	Softening Point (ASTM D-36)	49.2°C
4	Flash Point (ASTM D-92)	298°C
5	Fire Point (ASTM D-92)	336°C
6	Specific Gravity Value (ASTM D-70)	1.021

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

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