

ANNEX

regarding the interpretation of environmental monitoring results
carried out for

The Project for the Rehabilitation of the Road Network along Corridor R7 R14 Drochia – Costești – Romanian Border and Road R14.1 Soroca – Ukrainian Border.



București
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1. GENERAL INFORMATION

This annex provides a concise overview of the environmental monitoring activities for abiotic environmental factors carried out *in situ* in May 2026 for the Project for the Rehabilitation of the Road Network along Corridor R7 R14 Drochia–Costești–Romanian Border and R14.1 Soroca–Ukrainian Border, pursuant to Service Contract No. 14P dated 13 May 2026, concluded between GEOSTUD S.R.L., acting as the Service Provider, and MM CONSULTING & ENGINEERING S.R.L., acting as the Beneficiary.

The environmental monitoring activities were performed by the specialized personnel of GEOSTUD S.R.L. through its Environmental Studies Department and Environmental Laboratory. The activities included *in situ* measurements and sample collection by field personnel, physicochemical analyses, data processing, and the reporting of monitoring results.

The assessment of environmental quality through monitoring activities is necessary for establishing the baseline environmental conditions prior to the commencement of the rehabilitation and upgrading works on National Road R7. The monitoring results will serve as a reference for quantifying the subsequent impacts of construction activities and for implementing appropriate mitigation measures whenever significant changes in environmental conditions are identified.

Field activities were carried out in accordance with the Environmental Laboratory’s procedures for the sampling and measurement of air, soil, and noise parameters (Procedure Code: PT-18). Each test and measurement was conducted using specific methodologies applicable to the respective environmental factor.

2. ENVIRONMENTAL CONDITIONS

2.1. Air Quality

In order to determine the ambient air quality, air samples were collected and analyzed as fugitive emissions present in the surrounding air (ambient air concentrations).

Due to their nature, road rehabilitation and upgrading activities generate pollutants that may affect air quality through dust generation and the emission of pollutants such as SO₂, NO₂, NO, and suspended particulate matter of various sizes (PM_{2.5}, PM₁₀, and total suspended particulates – TSP). Therefore, assessing baseline air quality conditions is essential for determining the potential impacts of construction activities on abiotic environmental factors.

Ambient air concentrations

The laboratory analysis results for gaseous pollutants (SO₂, NO₂, and NO) and suspended particulate matter (PM_{2.5}, PM₁₀, and total suspended particulates – TSP) are presented in test reports no. 3087–3090 and no. 3142–3145 dated 04 June 2026.

The concentrations of air pollutants, the sampling locations, and the applicable limit values established under Law No. LP98/2022 on Ambient Air Quality are presented in Table 1.1.

Table 1.1. Ambient Air Pollutant Concentrations in Relation to the Limit Values Established under Law No. LP98/2022

Monitoring points	Analyzed parameters	Measurement units	Measured Values	Limit values according to Law no. LP98/2022	Reference documents
Ambient air concentrations GPS Coordinates: 48°10'36,58"N, 28°06'40,98"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2.5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
Ambient air concentrations GPS Coordinates: 48°07'58,07"N, 28°00'42,22"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2.5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
Ambient air concentrations GPS Coordinates: 48°03'56,54"N, 27°54'16,89"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2.5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003

Ambient air concentrations GPS Coordinates: 48°02'16,91"N, 27°50'11,96"E	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	SR EN 13528-3:2004
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2,5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
Ambient air concentrations GPS Coordinates: 47°58'36,16"N, 27°41'50,13"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2,5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
Ambient air concentrations GPS Coordinates: 47°57'34,63"N, 27°36'45,88"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2,5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
Ambient air concentrations GPS Coordinates: 47°58'03,59"N, 27°32'51,62"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2,5}	μg/m ³	<1	25	SR EN 16450:2017
	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	
Ambient air concentrations GPS Coordinates: 47°55'21,94"N, 27°20'52,59"E	Sulfur dioxide (SO ₂)	μg/m ³	<100	350	SR EN 13528-1:2003 SR EN 13528-2:2003 SR EN 13528-3:2004
	Nitrogen dioxide (NO ₂)	μg/m ³	<100	200	
	Nitric oxide (NO)	μg/m ³	<500	-	
	Suspended particulate matter PM _{2,5}	μg/m ³	<1	25	SR EN 16450:2017

	Suspended particulate matter PM ₁₀	μg/m ³	<1	50	
	suspended particulate matter PM _{total}	μg/m ³	<1	-	

Results reported with the symbol “<” indicate concentrations below the method detection limit.

Based on the data presented in the table above, all monitored atmospheric pollutants were found to be below the applicable limit values established under Law No. LP98/2022 on ambient air quality. Therefore, no exceedances of the regulatory thresholds were identified at any of the monitoring locations.

2.2. Soil

To assess soil quality within the investigated areas, three soil samples were collected. Sampling activities were carried out in accordance with the Environmental Laboratory's specific procedures for collection, storage, identification, labeling, preservation, and transportation of samples from the field to the laboratory

The laboratory analysis results are presented in Test reports no. 3186–3188.

The analyzed parameters were compared against the reference values established in the regulatory document “Maximum Admissible Concentrations (MAC) in soil and their negative impact on the environment and public health.” The obtained results are presented in Table 1.2.

Tabele 1.2. Assessment of soil sample concentrations against the Maximum Admissible Concentrations (MACs)

Monitoring points	Analyzed physicochemical parameters								
	pH	Cd	Cu	Ni	Pb	Zn	Hg	Hydrocarbon / Petroleum Product Content	Humidity
	pH units	mg/kg s.u.	mg/kg s.u.	mg/kg s.u.	mg/kg s.u.	mg/kg s.u.	mg/kg s.u.	mg/kg s.u.	%
Soil GPS Coordinates: N-48°00'34,63" E-27°48'34,57"	7,9	0,99	26,52	41,92	20,91	78,76	0,52	44	8,53
Soil GPS Coordinates: N-48°00'58,30" E-27°46'51,23"	7,8	0,94	27,64	37,83	19,44	77,02	0,22	35	9,57
Soil GPS Coordinates: N-47°55'03,91" E-27°20'36,32"	7,9	0,97	27,00	37,55	21,69	73,75	0,22	38	8,48
SHS¹ - Maximum Admissible Concentrations (MACs) in soil and their negative impact on the environment and public	6,5 - 9,5	1,0	132,0	80,0	32,0	220,0	1,0	100	-
Reference documents	SR ISO 10390:2015	SR EN 16170:2017 ISO 2203:2008 (R2017)						EPA 8440:1996	SR ISO 11465:1998

Results reported with the symbol “<” indicate values below the method detection limit.

¹ SHS – State Hydrometeorological Service

The analysis results indicate that, for all investigated locations, pollutant concentrations are below the maximum admissible limits. No soil decontamination or remediation measures are required.

2.3. Noise

Measurements for the determination of noise pollution levels were carried out using a Class 1 integrating sound level meter with microphone, as well as a Class 1 acoustic calibrator.

The measurement results are presented in Test Reports No. 3091–3094 and No. 3146–3149 dated 04.06.2026.

Meteorological conditions were measured using a portable weather station. Noise level measurements were conducted at sensitive receptors located within the areas corresponding to the project-specific works. At each monitoring point, five measurements were performed, with durations ranging from 12 to 15 minutes, resulting in the values presented in Table 1.3.

Table 1.3. Assessment of measured noise levels against the permissible limit value established under NCM E.04.02:2014

No.	Measurement / Monitoring points	Noise level (Equivalent continuous sound pressure level – Leq)	GPS Coordinates	Permissible Noise Limit Value According to NCM E.04.02:2014	Reference Document
		[dB]		[dB]	
1.	Near a private residence, Solcani village, Soroca District, Republic of Moldova	49,84	48°10'36.8"N 28°06'41.5"E	55 dB(A)	SR 6161-1:2022 SR ISO 1996-1: 2016 SR ISO 1996-2: 2018
2.	Near a private residence, Zgurița village, Drochia District, Republic of Moldova	49,74	48°07'43.3"N 28°00'12.4"E		
3.	Near a private residence, Chetrosu village, Drochia District, Republic of Moldova	51,55	48°03'56.54"N 27°54'16.89"E		
4.	Near a private residence, Drochia town, Drochia District, Republic of Moldova	49,00	48°02'16.91"N 27°50'11.96"E		
5.	Near a private residence, Nicoreni village, Drochia District, Republic of Moldova	50,70	47°58'36.16"N 27°41'50.13"E		
6.	Near a private residence,	49,12	47°57'34.63"N		

	Rămăzan village, Rîșcani town, Rîșcani District, Republic of Moldova		27°36'45.88"E		
7.	Near the Rîșcani Agro- Industrial College, Rîșcani town, Rîșcani District, Republic of Moldova	49,97	47°58'03.59"N 27°32'51.62"E		
8.	Forest boundary, Șaptebani village, Rîșcani District, Republic of Moldova	49,12	47°55'21.94"N 27°20'52.59"E		

According to NCM E.04.02:2014 on Noise Protection, the permissible daytime equivalent sound level for areas adjacent to residential buildings is 55 dB(A), while the permissible daytime maximum sound level is 70 dB(A).

The analysis of the measurements carried out at the monitoring locations indicates that the noise levels determined in situ are below the permissible limit value of 55 dB(A).

3. CONCLUSIONS

This annex has been prepared to present the results obtained from the monitoring of air, soil, and noise environmental factors for the project “Rehabilitation of the Road Network along Corridor R7 R14 Drochia–Costești–Romanian Border and R14.1 Sorooca–Ukrainian Border”, conducted in May 2026.

Based on the review of the *in situ* measurements and the analyses performed on the collected samples, as detailed in the previous sections, the following conclusions can be drawn:

- The monitored areas do not exhibit atmospheric pollution, as no exceedances of the permissible limit values were recorded for the analyzed air quality parameters, in accordance with Law no. LP98/2022 on ambient air quality.
- The level of soil contamination by heavy metals and petroleum products is low, with the concentrations of the analyzed parameters remaining below the maximum admissible concentrations established in the regulatory document “Maximum Admissible Concentrations (MACs) in soil and their negative impact on the environment and public health.”
- Regarding noise levels, the comparison of the measured daytime equivalent sound levels with the threshold value of 55 dB(A), established under NCM E.04.02:2014 on Noise Protection, indicates that noise levels at all monitoring locations situated near sensitive receptors remain below the permissible limit value.