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MINISTRY OF ENVIRONMENT, WATER AND FORESTS

THE NATIONAL AGENCY FOR ENVIRONMENTAL PROTECTION

LOCAL ENVIRONMENTAL PROTECTION AGENCY CONSTANȚA

ENVIRONMENTAL AGREEMENT
No. 14 of 28.06.2024

Following the request submitted by **OMV PETROM S.A. and ROMGAZ BLACK SEA LIMITED NASSAU (BAHAMAS) BUCHAREST BRANCH,** with the office in Bucharest, 1st district, 22 Coralilor Str., registered with Local Environmental Protection Agency Constanța under no. 8923/11.05.2021, based on the provisions of Government Emergency Ordinance no. 195/2005 for environmental protection, approved as amended and supplemented by Law no. 265/2006, as further amended and supplemented, Law no. 292/2018 for the assessment of the impact of certain public and private projects on the environment and Government Emergency Ordinance no. 57/2007 for the regime of natural protected areas, preservation of natural habitats, wild flora and fauna, approved as amended and supplemented by Law no. 49/2011, as further amended and supplemented, as applicable, we hereby issue:

ENVIRONMENTAL AGREEMENT

For the project **"NEPTUN DEEP – INSTALLATION OF PIPELINE AND COMMUNICATION CABLE, BEACH UNDERCROSSING, SEAFRONT, ROADS AND RAILWAYS; COMPLETION OF TEMPORARY RAILWAY GRADE CROSSING; BUILDING OF ADJUSTMENT AND MEASURING STATION - SRM, CONTROL CENTRE – CCR, FENCING, LIGHTING, CAR PARKS, GREEN AREAS, PLATFORMS AND INNER ROADS; SITE ORGANIZATION, ENSURANCE OF AND CONNECTION TO UTILITIES NETWORKS, in Tuzla Commune, Constanța County; DOMINO AND PELICAN SOUTH INFRASTRUCTURE (DRILLING CENTRES, WELLS, MANIFOLDS, UMBILICAL SYSTEMS, RISERS, SUPPLY/SUCTION PIPELINES, AUXILIARY EQUIPMENT), PRODUCTION PLATFORM LOCATED IN SHALLOW WATERS, NATURAL GASES PRODUCTION PIPELINE, CABLE WITH OPTICAL FIBRE, UNDERCROSSING OF SHORE, UTILITIES, on the continental platform of the Black Sea"**, for the purpose of establishing the conditions and measures for environmental protection which must be observed for the accomplishment of the project, which provides:

I.1. The project is within the scope of Law no.. 292/2018 for the assessment of the impact of certain public and private projects on the environment, Annex 2 item 10, letter b.
- the project proposed **falls** under the scope of Law no. 292/2018. for the assessment of the impact of certain public and private projects on the environment, being integrated in Annex no. 1, item 14; annex 2, item 10 let. i, item 10, let. a;

- the project proposed **falls** under the scope of art. 28 of Government Emergency Ordinance no. 57/2007 for the regime of natural protected areas, preservation of natural habitats, wild flora and fauna, approved as amended and supplemented by Law no. 49/2011, as further amended and supplemented – the project partially overlaps with the sites Natura 2000: ***ROSPA0076 Black Sea and ROSAC0273 Maritime Area from Cape Tuzla and it is at a distance of approx. 1.2 km from the limit of Natura 2000 site ROSCI0311 Viteaz Canyon and at approx.. 2.3 km from the limit of site ROSCI0293 Costinești –23 August.***
- the project proposed **falls** under the scope of provisions of articles 48 and 54 of Waters Law no. 107/1996, as further amended and supplemented,

• the project **falls** under the scope of Law no. 22 of 22 February 2001 ratifying the Convention for the assessment of the impact on the environment under transboundary context, adopted in Espoo on 25 February 1991, as further amended and supplemented, being integrated in Annex 1, item 15;

2. Description of the project and all the features of works set out by the design, including the installations, equipment and natural resources used.

2.1 Project site

The site proposed for the ashore building/installation of facilities of Neptun Deep Project, is located in the southern area of the administrative territory of Tuzla Commune, Constanța County, near the northern limit of the administrative territory of Costinești Commune.

OMV Petrom S.A. owns three plots of land located in and out of perimeter of Tuzla Commune:

- Built-up land S1 with total area of 85,000 m^2, recorded under cadastral no. 109216;
- Land out of town perimeter S3 with total area of 70,880 m^2, recorded under the cadastral no. 109659;
- Land out of town perimeter S4 with total area of 67,304 m^2, recorded under the cadastral numbers 109729 and 100819.

The vicinities of the site on dry land of the project are represented by:

- **North**: service road De 229/1, private property (plot A259/89, cadastral no. 108838), private property (plot A259/91);
- **East**: service road De269, cliff on dry land, beach and the Black Sea (at approx. 60 m);
- **South**: private property (plot A289/3b), vegetal protection curtain (cadastral no. 109189) private property (plot A259/105, cadastral no. 100794 and plot A259/106, cadastral no. 107526);
- **West**: private property (plot A289/1a, Lot 2/1, cadastral no. 109365 and Lot 2/2, cadastral no. 109364).

The STEREO 70 system coordinates of the lands owned by OMV Petrom SA which will be impacted by the construction works/installation of dry land facilities of the project and the microtunnel for undercrossing of shore described in this documentation are shown in the table below:

The inventory of STEREO 70 system coordinates of the lands affected by the realization of the project in onshore area

Land name	Cadastral	Total area	Coordinates in Stereo 70

	no.	(m^2)	Point no.	North (X) m	East (Y) m
S1 – site proposed for SRM, CCR and related facilities	109216	85.000	56	281.679,30	792.252,52
			57	281.610,29	792.478,52
			5	281.440,02	792.476,37
			6	281.452,29	792.426,28
			7	281.282,95	792.384,74
			8	281.358,35	792.149,48
			9	281.657,24	792.245,43
S3 – site proposed of a section of the gas production pipeline and optical fibre cable (onshore section) and of the manhole of the station shut-off valve	109659	70.880	1	281.628,59	792.510,22
			2	281.625,47	792.881,61
			3	281.576,74	792.881,12
			4	281.522,81	792.880,57
			5	281.511,08	792.880,45
			6	281.491,87	792.880,26
			7	281.482,67	792.880,16
			8	281.473,46	792.880,07
			9	281.464,25	792.879,98
			10	281.439,75	792.879,73
			11	281.434,02	792.879,67
			12	281.437,12	792.510,41
			13	281.442,86	792.510,41
			14	281.467,35	792.510,39
			15	281.476,56	792.510,41
			16	281.485,77	792.510,41
			17	281.494,98	792.510,32
			18	281.514,19	792.510,50
			19	281.514,19	792.510,41
			20	281.525,91	792.510,52
			21	281.579,86	792.510,75
			22	281.579,86	792.510,37
S4 – site proposed of a section of the gas production pipeline and optical fibre cable (onshore section) and of the entry to microtunnel	100819 109729	67.304	2	281.520,10	793.350,93
			3	281.514,69	793.352,43
			4	281.508,32	793.354,20
			5	281.503,30	793.355,60
			6	281.495,57	793.357,74
			7	281.488,80	793.359,62
			8	281.484,41	793.360,84
			9	281.479,41	793.362,23
			10	281.470,07	793.364,83
			11	281.460,78	793.367,41
			12	281.460,74	793.367,42
			13	281.457,28	793.368,38
			14	281.435,88	793.374,33
			15	281.433,15	793.375,09
			16	281.430,17	793.375,92
			17	281.434,30	792.883,68
			18	281.440,00	792.883,74
			19	281.464,84	792.883,99
			20	281.474,11	792.884,08
			21	281.483,43	792.884,18

Land name	Cadastral no.	Total area (m^2)	Coordinates in Stereo 70		
			Point no.	North (X) m	East (Y) m
			22	281.492,79	792.884,27
			23	281.499,55	792.884,34
			24	281.512,27	792.884,47
			1	281.524,02	792.884,59
			28	281.577,03	792.885,14
			27	281.573,25	793.335,25
			26	281.565,69	793.337,60
			25	281.539,48	793.345,55

Location of SRM and CCR sites and shut-off valve station

On the land S1 will be built/installed the Adjustment and Measuring Station (SRM) and the Control Centre/Centralized Control Room (CCR) and other related facilities included in the sites SRM and CCR.

SRM will be a metering installation for custody transfer of natural gas to the national transmission system (SNT) operated by Transgaz, automatically, without staff. The total area occupied by the SRM site will be of approx. 23,183 m^2.

CCR Site will be fenced-in with an estimated area of approx. 3,459 m^2.

A shut-off valve, surrounded by a perimetral protection fence, will be located east of the railway.

Stereo 70 system coordinates and WGS (World Geodetic System) 84 TMC0NE of the surrounded site of SRM, CCR, shut-off valve are shown in the table below:

Inventory of STEREO 70 system coordinates of the perimeter SRM and CCR

Construction name	Coordinates in Stereo 70			Coordinates WGS84/TMC0NE	
	Pt. no.	North (X) m	East (Y) m	North (m)	East (m)
Adjustment and Measuring Station (SRM)	1	281.533,00	792.257,49	4.869.931,31	391.124,62
	2	281.435,89	792.257,49	4.869.741,83	391.112,97
	3	281.415,00	792.243,38	4.869.749,80	390.983,32
	4	281.343,00	792.243,38	4.869.821,60	390.987,74
	5	281.343,00	792.373,38	4.869.841,57	391.003,09
	6	281.533,00	792.373,38	4.869.938,42	391.009,04
Centralized Control Room (CCR)	1	281.633,83	792.324,46	4.870.034,87	391.082,01
	2	281.583,98	792.310,68	4.870.012,32	391.145,55
	3	281.566,01	792.375,72	4.869.964,09	391.128,98
	4	281.615,21	792.389,31	4.869.985,99	391.065,21
Perimeter of shut-off valve	1	281513,41	792976,46	4.869.874,79	391.724,86
	2	281493,13	792976,46	4.869.873,56	391.744,97
	3	281493,13	792996,62	4.869.853,33	391.743,72
	4	281513,41	792996,62	4.869.854,57	391.723,62

The location of the route onshore and microtunnel of the production pipeline and optical fibre cable

The production pipeline and optical fibre cable will have a total length of 160 km of which about 1,772 km is in onshore area of the project.

The production pipeline and the optical fibre cable onshore will be installed adjacently in microtunnel and the ditch onshore.

Considering the shore configuration and the presence of the natural protected area ROSAC 0273 Marine Area of Cape Tuzla, to minimize the impact, the project opted for the undercrossing of the protected area, the beach and the cliff through a microtunnel cemented on a length of approx. 890 m.

The microtunnel will have the entry point onshore located on the land S4 and will undercross the Exploitation Road De 269 (cadastral number 109115), the cliff (cadastral number 110670) and the beach (cadastral number 106571), located adjacently to the Eastern side of the onshore site of the project. The exit point from microtunnel will be located in the coast waters of the Black Sea.

Between the entry point to microtunnel and the go-devil station from entrance SRM, the production pipeline and the optical fibre cable will be installed underground, on a length of 882 m. The onshore section will be installed underground mainly on the lands S4, S3 and will undercross the communal road DC4, the service road De 259/4 and the railway line Constanța - Mangalia.

The coordinates Stereo 70 and WGS84/TMC0NE of the route of production pipeline and optical fibre cable onshore and microtunnel are shown in the table below:

Inventory of system coordinates STEREO 70 of the route of production pipeline onshore

Construction name	**Coordinates in Stereo 70**			**Coordinates WGS84/TMC0NE**	
	Pt. no.	**North (X) m**	**East (Y) m**	**North (m)**	**East (m)**
Route of production pipeline and optical fibre cable onshore (section between undercrossing and SRM) KP 156,965÷157,847	1	281.507,90	792.349,10	4.869.907,77	391.098,85
	2	281.507,70	792.374,70	4.869.905,99	391.124,37
	3	281.506,60	792.519,60	4.869.896,01	391.268,81
	4	281.506,20	792.566,60	4.869.892,73	391.315,66
	5	281.503,70	792.880,40	4.869.871,00	391.628,45
	6	281.503,00	792.973,70	4.869.864,58	391.721,46
	7	281.502,30	793.067,10	4.869.858,15	391.814,56
	8	281.501,70	793.136,40	4.869.853,30	391.883,64
	9	281.501,10	793.212,30	4.869.848,05	391.959,30
	10	281.500,00	793.215,70	4.869.846,75	391.962,62
Microtunnel KP 156,075÷156,965	1	281.493,00	793.234,30	4.869.838,50	391.980,75
	2	281.495,30	793.235,00	4.869.841,00	391.981,59
	3	281.234,20	794.081,40	4.869.528,50	392.809,69
	4	281.231,90	794.080,70	4.869.526,50	392.808,84

The coordinates in Stereo 70 system of the onshore entry point and offshore exit point of microtunnel are shown in the table below:

Coordinates of entry and exit points of microtunnel

Location	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
Onshore entry point	281.495,40	793.230,70	4.869.841,70	391.977,73
Offshore exit point	281.233,00	794.081,70	4.869.527,71	392.810,30

Location of site organizations

The temporary railway grade crossing will be located east of the site SRM and CCR. Coordinates in Stereo 70 System and WGS84/TMC0NE of the area affected by the temporary railway grade crossing are shown in the table below:

Coordinates of temporary crossing at level with railway

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	281.611,30	792.478,50	4.870.004,90	391.232,31
2	281.589,60	792.478,30	4.869.983,27	391.230,78
3	281.576,70	792.525,60	4.869.967,50	391.277,16
4	281.598,50	792.525,60	4.869.989,25	391.278,49

The site organization for SRM and CCR will be located on the area S1 (cadastral no. 109216) owned by OMV Petrom. Coordinates in Stereo 70 System and WGS84/TMC0NE of the area affected by the site organization are shown in the table below:

Coordinates of site organization SRM and CCR

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	281.621,00	792.384,60	4.870.020,33	391.139,26
2	281.594,80	792.476,00	4.869.988,60	391.228,80
3	281.515,60	792.476,00	4.869.909,61	391.223,95
4	281.516,30	792.364,00	4.869.917,18	391.112,29
5	281.566,70	792.364,00	4.869.967,44	391.115,38
6	281.566,70	792.374,20	4.869.966,82	391.125,55
7	281.592,00	792.381,10	4.869.991,62	391.133,99
8	281.593,20	792.377,10	4.869.993,07	391.130,07

The facilities and temporary works (site organization of microtunnel and access roads) necessary for building the microtunnel and installation of gas production pipeline and the optical fibre cable will be made mainly on the areas S3 (cadastral no. 109659) and S4 (cadastral no. 109792 and 100819) owned by OMV Petrom. The service road De 259/4 will be partially affected by the temporary works.

Coordinates in Stereo 70 System and WGS84/TMC0NE of the surrounded site of the site organization for microtunnel are shown in the table below:

Coordinates of site organization for microtunnel

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	281.522,90	793.181,60	4.869.873,62	391.928,08
2	281.522,40	793.246,70	4.869.869,13	391.992,97
3	281.432,50	793.245,90	4.869.779,53	391.986,66
4	281.433,10	793.180,70	4.869.784,12	391.921,67

Coordinates in Stereo 70 System and WGS84/TMC0NE of the temporary access roads for site organization for the microtunnel and the assembling and storage areas for pipelines are shown in the table below:

Coordinates of temporary access roads

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	281.590,50	792.525,80	4.869.981,25	391.278,20
2	281.583,50	792.525,80	4.869.974,27	391.277,77
3	281.580,90	792.535,60	4.869.971,08	391.287,39
4	281.580,60	792.536,60	4.869.970,78	391.287,37
5	281.580,50	792.537,60	4.869.970,56	391.289,36
6	281.579,50	792.545,90	4.869.969,05	391.297,57
7	281.574,50	792.586,40	4.869.961,58	391.337,66
8	281.573,50	792.590,30	4.869.960,35	391.341,49
9	281.570,90	792.594,50	4.869.957,50	391.345,52
10	281.568,10	792.597,10	4.869.954,54	391.347,94
11	281.565,10	792.598,80	4.869.951,45	391.349,45
12	281.559,70	792.600,20	4.869.945,98	391.350,51
13	281.556,60	792.600,30	4.869.942,88	391.350,42
14	281.462,90	792.600,40	4.869.849,43	391.344,78
15	281.460,70	792.600,50	4.869.847,23	391.344,74
16	281.458,40	792.600,80	4.869.844,91	391.344,90
17	281.455,20	792.601,60	4.869.841,67	391.345,50
18	281.451,70	792.603,10	4.869.838,09	391.346,78
19	281.448,40	792.605,10	4.869.834,68	391.348,57
20	281.446,00	792.607,30	4.869.832,15	391.350,62
21	281.443,30	792.610,50	4.869.829,26	391.353,65
22	281.441,70	792.613,00	4.869.827,51	391.356,04
23	281.440,10	792.616,90	4.869.825,68	391.359,83
24	281.439,30	792.620,90	4.869.824,63	391.363,77
25	281.439,10	792.623,30	4.869.824,29	391.366,15
26	281.439,10	792.624,70	4.869.824,20	391.367,55
27	281.439,10	792.628,10	4.869.823,99	391.370,94

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
28	281.439,10	793.161,60	4.869.791,28	391.902,99
29	281.439,10	793.164,90	4.869.791,08	391.906,29
30	281.439,20	793.168,10	4.869.790,98	391.909,48
31	281.439,90	793.172,30	4.869.791,42	391.913,71
32	281.440,80	793.175,70	4.869.792,11	391.917,16
33	281.442,10	793.179,00	4.869.793,20	391.920,53
34	281.442,90	793.180,80	4.869.793,89	391.922,38
35	281.451,10	793.180,90	4.869.802,06	391.922,98
36	281.450,30	793.179,60	4.869.801,34	391.921,63
37	281.449,60	793.178,40	4.869.800,72	391.920,39
38	281.448,60	793.176,60	4.869.799,83	391.918,54
39	281.448,00	793.175,00	4.869.799,33	391.916,90
40	281.447,50	793.173,50	4.869.798,93	391.915,38
41	281.446,90	793.171,60	4.869.798,44	391.913,45
42	281.446,50	793.169,30	4.869.798,19	391.911,13
43	281.446,20	793.167,60	4.869.797,99	391.909,41
44	281.446,10	793.166,00	4.869.797,99	391.907,81
45	281.446,10	793.162,10	4.869.798,23	391.903,92
46	281.446,10	792.624,40	4.869.831,20	391.367,68
47	281.446,40	792.620,60	4.869.831,73	391.363,91
48	281.447,40	792.617,30	4.869.832,93	391.360,68
49	281.450,20	792.612,90	4.869.835,99	391.356,46
50	281.452,40	792.610,90	4.869.838,31	391.354,60
51	281.456,70	792.608,50	4.869.842,75	391.352,47
52	281.460,70	792.607,50	4.869.846,80	391.351,72
53	281.462,80	792.607,40	4.869.848,90	391.351,75
54	281.466,10	792.607,40	4.869.852,19	391.351,95
55	281.556,00	792.607,40	4.869.941,84	391.357,47
56	281.559,20	792.607,40	4.869.945,04	391.357,66
57	281.561,00	792.607,20	4.869.946,84	391.357,57
58	281.565,00	792.606,40	4.869.950,88	391.357,02
59	281.567,90	792.605,30	4.869.953,84	391.356,10
60	281.569,80	792.604,40	4.869.955,79	391.355,32
61	281.570,90	792.603,70	4.869.956,93	391.354,69
62	281.571,30	792.603,60	4.869.957,34	391.354,61
63	281.571,70	792.603,70	4.869.957,73	391.354,74
64	281.572,00	792.603,90	4.869.958,02	391.354,96
65	281.572,30	792.604,20	4.869.958,30	391.355,27
66	281.572,30	792.604,60	4.869.958,27	391.355,67

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
67	281.572,20	792.605,40	4.869.958,12	391.356,47
68	281.509,50	793.122,40	4.869.863,89	391.868,22
69	281.506,30	793.148,80	4.869.859,08	391.894,35
70	281.504,50	793.163,50	4.869.856,38	391.908,90
71	281.504,00	793.167,90	4.869.855,62	391.913,26
72	281.503,50	793.170,60	4.869.854,95	391.915,92
73	281.502,90	793.172,90	4.869.854,21	391.918,18
74	281.501,90	793.175,60	4.869.853,05	391.920,81
75	281.501,10	793.177,40	4.869.852,14	391.922,55
76	281.500,00	793.179,40	4.869.850,92	391.924,48
77	281.498,80	793.181,40	4.869.849,60	391.926,40
78	281.506,90	793.181,50	4.869.857,67	391.927,00
79	281.507,50	793.180,30	4.869.858,35	391.925,84
80	281.508,20	793.178,80	4.869.859,14	391.924,38
81	281.508,70	793.177,50	4.869.859,71	391.923,12
82	281.509,10	793.176,40	4.869.860,18	391.922,05
83	281.509,60	793.175,00	4.869.860,76	391.920,68
84	281.510,00	793.173,50	4.869.861,26	391.919,21
85	281.510,50	793.171,20	4.869.861,26	391.919,21
86	281.510,70	793.169,90	4.869.862,17	391.915,66
87	281.510,90	793.169,00	4.869.862,43	391.914,78
88	281.511,20	793.166,70	4.869.862,87	391.912,50
89	281.587,60	792.536,60	4.869.977,70	391.288,80
90	281.590,50	792.525,80	4.869.981,25	391.278,20

Location of the offshore site

The development area of the Neptun Deep Project is located in the perimeter of Neptun XIX of the Western Black Sea, in the exclusive economic zone of Romania. (EEZ).

Marine production platform Neptun Alpha

The marine production platform hereinafter referred to as Neptun Alpha Platform to which will be connected the infrastructures of Domino and Pelican South reservoirs is located on the continental platform of the Black Sea, at approx. 160 km East of Tuzla town, Constanța County.

The coordinates in the Stereo 70 system and WGS84 of the production platform site are shown in the table below:

Coordinates of Neptun Alpha Platform

Location	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
Marine Production	298.534,29	947.751,25	4.877.318,00	547.062,00

Location	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
Platform				

Drilling centres

In the perimeter of Neptun, for the 2 reservoirs Domino and Pelican South we propose 2 drilling centres, one drilling centre in Pelican South and 2 drilling centres in Domino.

The drilling centre Pelican South (PSDC1) is located on the continental platform of the Black Sea at approx. 160 km East of Tuzla town and at approx. 2 km North – East of production platform.

The drilling centres Domino (DODC1 and DODC2) are located on the continental slope of the Black Sea, at approx. 175 km East of Tuzla town and at approx. 24 km South-West of the production platform.

A selection of coordinates in the Stereo 70 system and WGS84 for the drilling centres is shown in the table below:

Coordinates of drilling centres

Location	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
PSDC1	299.471,11	948.682,68	4.878.194,00	548.048,00
DODC1	280.058,98	964.335,02	4.857.884,92	562.445,99
DODC2	279.072,99	959.245,90	4.857.216,52	557.314,55

Gas production wells

The project provides the drilling of 10 gas production wells, which are:

- 6 wells will be drilled up to 3,000 m vertical depth from the drilling centres DODC1 and DODC2 (3 wells/drilling centre) in the Domino reservoir, at a water depth of 800 – 1.100 m;
- 4 wells will be drilled up to 3.400 m vertical depth from a single drilling centre (PSDC1) in the Pelican South reservoir, at a water depth of 120 - 130 m;

Coordinates of production wells Domino and Pelican South

Drilling Centre	Well ID	Coordinates Stereo 70		Coordinates WGS84 TMC0NE	
		North (m)	East (m)	North (m)	East (m)
DODC1	VXT581006	280086.50	964329.44	4857912.23	562441.87
DODC1	VXT581007	280032.87	964341.32	4857858.06	562450.40
DODC1	VXT581008	280050.92	964309.35	4857878.02	562419.66
DODC2	VXT581010	279046.42	959252.03	4857189.21	557318.67
DODC2	VXT581011	279100.05	959240.15	4857243.38	557310.14
DODC2	VXT581012	279082.00	959272.12	4857223.42	557340.88

Drilling Centre	Well ID	Coordinates Stereo 70		Coordinates WGS84 TMC0NE	
		North (m)	East (m)	North (m)	East (m)
PSDC1	VXT581001	299445.21	948674.49	4878168.27	548037.99
PSDC1	VXT581002	299460.49	948708.22	4878181.41	548072.55
PSDC1	VXT581003	299482.62	948657.58	4878206.59	548023.45
PSDC1	VXT581004	299497.90	948691.31	4878219.73	548058.01

Pelican South and Domino Supply/adduction pipelines

The supply/adduction pipelines are electrically heated to prevent the formation of hydrates inside the pipelines.

The route of the supply/adduction pipelines was determined based on the results of a route study performed by a specialized contractor. The route study included the evaluation of data for investigation of the route (for example, geophysical investigations), data of the suction pipeline, details about the gas reservoir and the marine production platform as well as details of connection to manifolds.

A selection of coordinates of the route of the Domino supply/adduction pipeline with direct heating is shown in the table below:

Selection of coordinates from the route of the suction pipeline Domino

No.	Coordinates Stereo 70		Coordinates WGS84 TMC0NE	
	North (m)	Est (m)	North (m)	Est (m)
1	279025,23	959218,53	4857170,63	557284,24
2	276777,67	963127,25	4854690,05	561040,14
3	279825,01	964862,25	4857619,27	562956,87
4	281781,66	961391,27	4859783,03	559619,21
5	282876,55	960055,45	4860956,40	558355,79
6	285033,30	957585,58	4863044,50	556407,62
7	298468,42	947769,66	4877251,22	547076,27

A selection of coordinates from the route of the flexible adduction pipeline Pelican South is shown in the table below:

Selection of coordinates from the route of the suction pipeline Pelican South

No.	Coordinates Stereo 70		Coordinates WGS84 TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	298.529,48	947.778,10	4.877.311,55	547.088,43
2	298.571,46	948.025,82	4.877.338,14	547.337,97
3	299.330,15	948.715,31	4.878.051,53	548.071,82
4	299.467,24	948.686,46	4.878.189,91	548.051,54

Pelican South and Domino Control umbilical systems

The Domino and Pelican South subaquatic systems will be monitored and controlled by using electrical and hydraulic control systems connected to the Neptun Alpha Platform by dedicated umbilical control connections. The subaquatic Domino system will include two electrical and hydraulic control umbilical segments: one between the offshore production platform and the drilling centre DODC1 and one between the drilling centre DODC1 and the drilling centre DODC2. The subaquatic Pelican South system will include an umbilical system of electric and hydraulic control between the Neptun Alpha Platform and the drilling centre PSDC1.

A selection of coordinates across the routes of the Domino and Pelican South umbilical systems is shown in the table below:

Selection of coordinates from the route of umbilical systems Domino

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	279.121,45	959.273,77	4.857.263,07	557.345,25
2	278.877,80	963.092,03	4.856.784,79	561.134,75
3	280.010,52	964.307,35	4.857.838,13	562.415,66
4	286.370,59	955.974,01	4.864.690,13	554.504,48
5	279.121,45	959.273,77	4.857.263,07	557.345,25
6	278.877,80	963.092,03	4.856.784,79	561.134,75
7	280.010,52	964.307,35	4.857.838,13	562.415,66

Selection of coordinates from the route of umbilical system Pelican South

No.	Coordinates Stereo 70		Coordinates WGS84/TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	298.546,51	947.776,63	4.877.328,61	547.088,04
2	298.616,90	947.858,51	4.877.393,70	547.173,99
3	298.600,03	948.011,18	4.877.367,45	547.325,08
4	299.466,47	948.684,77	4.878.189,25	548.049,81

Location of offshore route of the production pipeline and of the optical fibre cable

The route of the production pipeline and of the optical fibre cable has a total length of 160 km of which approx. 1,772 km mounted in the onshore area of the project and in microtunnel.

The offshore section of the production pipeline of 762 mm (30 inches) and of the optical fibre cable will occupy a subaquatic area of approx. 638,080 m^2.

The optical fibre cable will be installed parallel to the gas production pipeline near the vicinity of shore.

A selection of coordinates of the offshore route of the production pipeline, in Stereo 70 system and WGS84/TMC0NE is shown in the table below:

Selection of coordinates of the offshore route of the production pipeline

No.	Coordinates Stereo 70		Coordinates WGS84 TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	281.233,00	794.081,70	4.869.527,71	392.810,30
2	280.514,69	796.410,36	4.868.668,52	395.088,50
3	291.750,12	871.995,75	4.875.227,04	471.141,24
4	292.997,32	884.786,55	4.875.682,74	483.968,06
5	293.912,28	888.135,82	4.876.388,46	487.362,89
6	294.566,70	899.038,30	4.876.369,01	498.270,08
7	299.913,63	916.468,31	4.880.623,45	515.971,83
8	298.791,36	933.715,27	4.878.440,74	533.090,74
9	299.142,90	936.628,57	4.878.611,23	536.015,69
10	298.950,56	940.460,87	4.878.182,97	539.822,79
11	299.299,92	944.046,66	4.878.309,71	543.417,67
12	298.595,21	947.777,93	4.877.377,05	547.092,35

A selection of coordinates of the offshore route of the optical fibre cable, in Stereo 70 system and WGS84/TMC0NE is shown in the table below:

Selection of coordinates from the offshore route of the optical fibre cable

No.	Coordinates Stereo 70		Coordinates WGS84 TMC0NE	
	North (m)	East (m)	North (m)	East (m)
1	281.233,00	794.081,70	4.869.527,71	392.810,30
2	280.514,69	796.410,36	4.868.668,52	395.088,50
3	291.750,12	871.995,75	4.875.227,04	471.141,24
4	292.997,32	884.786,55	4.875.682,74	483.968,06
5	293.912,28	888.135,82	4.876.388,46	487.362,89
6	294.566,70	899.038,30	4.876.369,01	498.270,08
7	299.913,63	916.468,31	4.880.623,45	515.971,83
8	298.791,36	933.715,27	4.878.440,74	533.090,74
9	299.142,90	936.628,57	4.878.611,23	536.015,69
10	298.950,56	940.460,87	4.878.182,97	539.822,79
11	299.299,92	944.046,66	4.878.309,71	543.417,67

Location of project towards the borders

The nearest national border to the onshore site of the project is represented by the border of the Republic of Bulgaria, located more than 25 km to the South.

The gas production pipeline has a length of approx. 160 km in West-East direction, from the shore to the site of the Neptun Alpha Platform from the continental platform. The pipeline is generally parallel to the Southern limit of EEA of Romania. The distance between the production pipeline and the limit of EEA varies between 25 km in shore area and 46 km in production platform area.

The production platform is located at approx. 46 km north to the southern limit of the EEZ of Romania (at the border of Bulgaria with the EEZ) in the Black Sea.

The Drilling Centre PSDC1 is located at approx. 47 km North to the Southern limit of the EEZ of Romania, and the drilling centres DODC1 and DODC2 are located at approx. 35 km North from the Southern limit of the EEZ of Romania (at the border of Bulgaria with the EEA) in the Black Sea.

Location of the project to the towns

To the south and south-east of the site limit, dwellings were identified, the closest to the site being located approximately 100 m south of the microtunnel entry point, respectively approximately 700 m south of the boundary of the proposed site for the construction of SRM.

The Neptun Alpha platform is located on the continental shelf of the Black Sea, at approx. 160 km east of Tuzla, Constanta County.
Drilling Centre Pelican South (PSDC1) is located on the continental shelf of the Black Sea, at approx. 160 km east of Tuzla and at approx. 2 km northeast of SWP.
The Domino drilling centres (DODC1 and DODC2) are located on the continental slope of the Black Sea, at approx. 175 km east of Tuzla and at approx. 24 km southeast of SWP.

Location of the project to the archaeological sites

In the area of implementation of the project, both on land and at sea, archaeological diagnostic studies were carried out.
The conclusions of the Archaeological Diagnosis Report prepared by the Museum of National History and Archaeology of Constanta (MINAC) were that the land site of the project is located in an area with low archaeological potential and without conclusive archaeological traces.
The site in the offshore area of the project is partially located in the archaeological protection area of the Romanian continental shelf on the Black Sea coast, **LMI Code, Underwater Archaeological Site "Continental Shelf of the Romanian Black Sea Coast", CT-l-s-A-02561.**

Location of the project in relation to the protected areas
The project intersects the Natura 2000 sites: ROSPA0076 the Black Sea and ROSAC0273 the Marine Zone at Cape Tuzla and is located at a distance of approx. 1.2 km from the limit of the Natura 2000 site ROSCI0311 Viteaz Canyon and approx. 2.3 km from the limit of the ROSCI0293 Costinești – 23 August site. Thus:

- the organization of the construction site for the microtunnel is located at approx. 161 m from the limits of the sites ROSPA0076 the Black Sea and ROSAC0273 the Marine Area of Cape Tuzla.
- the SRM site organization is located at approximately 920 m from the boundaries ROSPA0076 the Black Sea and ROSAC0273 the Marine Zone at Cape Tuzla.
- the pipeline route between the SRM and the infrastructure and the production platform intersect the Natura 2000 sites ROSPA0076 the Black Sea and ROSAC0273 the Cape Tuzla Marine Area and is located at a distance of approximately 2.3 km from the site boundary ROSCI0293 Costinești – 23 August and approximately 1.2 km from the site ROSCI0311 Viteaz Canyon. The site ROSAC0273 The marine area of Cape Tuzla is undercrossed for a length of 586 m. The site ROSPA0076 the Black Sea is undercrossed for a length of approximately 2,533 km.
- the 10 wells in the two drilling centres are located at a distance of approx. 14.4 km from the site limit ROSCI0311 Viteaz Canyon.

In order to obtain an increased stability of the barge involved in the pipeline installation works, an anchoring plan will be implemented that involves the successive change of the position of the 8 anchors used

-19 anchor points intersect with ROSPA0076
-7 anchor points intersect with ROSAC0273
-6 points intersect with ROSPA0076 and with ROSAC0273
-7 points do not intersect with natural protected areas of community interest.

Anchor points proposed inside ROSAC0273 Cape Tuzla Marine Area

Anchors	Location	X	Y	Depth (m)
T3.1	Barge anchoring point Inside ROSAC0273	795625.573	281892.106	19
T3.5	Barge anchoring point Inside ROSAC0273	796382.003	281657.859	24
T1.1	Barge anchoring point Inside ROSAC0273	793925.193	281496.752	4
T2.1	Barge anchoring point Inside ROSAC0273	794126.080	281980.385	4
T8.4	Barge anchoring point Inside ROSAC0273	793819.448	281259.624	3
T1.5	Barge anchoring point Inside ROSAC0273	794272.821	281387.774	7
T2.5	Barge anchoring point Inside ROSAC0273	794872.512	281745.523	13

The potentially affected ANPICs are the following NATURA 2000 sites:
- ROSAC0273 Marine Area from Cape Tuzla;
- ROSCI0293 Costinești-23 August;
- ROSCI0311 Viteaz Canyon;
- ROSPA0076 the Black Sea.

The sites are entirely in the bio-geographical region of the Black Sea.

- The **site ROSAC0273** the Marine Area of Cape Tuzla has a Management Plan approved by Order No. 1433/2016 of the Minister of Environment, Water and Forests. However, the plan only covers the old site (before the extension) with an area of 1,738 ha. ROSAC0273 The marine area of Cape Tuzla overlaps with the Black Sea special bird protection area on an area of approx. 7.74 km². The site is not related to ecological corridors identified at national level within the Natur Regio project, developed by ICAS and the Apuseni NP Administration.
- The site of community importance **ROSCI0311 Viteaz Canyon** does not have an approved Management Plan and Regulation. The area of the site is 35,376.70 ha and is located entirely in the marine biogeographical area. ROSCI0311 does not have a connection with other protected natural areas or with the other area in the Black Sea where there is still the unique combination of habitats, 1180 and 1170, which is positioned in the waters of the exclusive economic zone of Ukraine.
- The site of community importance **ROSCI0293** Costinești-23 August is located south of the project site in the marine area, the surface of the site is 4883.60 ha, being at the same time 100% marine. ROSCI0293 Costinești- 23 August overlaps with the Black Sea special avifauna protection area on an area of approx. 10,388 km2. The site does not have an

approved Management Plan and Regulation. The site is not in relation to ecological corridors identified at national level within the Natur Regio project, developed by ICAS and the Apuseni NP Administration.

- The Black Sea **ROSPA0076** site is a site of community importance, according to the Birds Directive 79/409/EEC, it was declared a special protection area for birds by GD No. 1284/2007 on the declaration of protected avifauna areas as an integral part of the European ecological network Natura 2000 in Romania. The site has a Management Plan approved by Order No. 1197/2016 of the Minister of Environment, Water and Forests.

In the project area, areas of ecological corridors have been identified, represented by the connections between the Natura 2000 sites in the project area, respectively the site possibly affected ROSPA0076 the Black Sea and other neighbouring special bird protection areas, respectively: ROSPA0061 Lake Techirghiol, ROSPA0067 Lake Siutghiol, ROSPA0066 Limanu Herghelia, which constitutes a corridor for bird species in the area. The maps below indicate that no ecological barriers have been identified in the area of the Neptun Deep project that could disrupt the movement of species.

Description of project site
Description of onshore site

For the onshore component, the project owner developed the Zonal Urban Plan (PUZ) for the "*Establishment of the Natural Gas Metering Station and Control Center, Construction of the road and route of underground natural gas transmission pipelines*", for which the Approval Decision No. 100 of November 16, 2020 issued by the Tuzla Local Council was obtained.

Following the approval of the PUZ documentation by the Tuzla City Hall, the private land owned by OMV Petrom registered under cadastral number 109216 (area S1, with a total area of 85,000 m2) which is proposed for the construction/installation of SRM, CCR and other related facilities included in the SRM and CCR sites, was introduced in the built-up area of Tuzla Commune.

Currently, the onshore site of the project is used for agricultural purposes, and no industrial activities have been identified on the site or in its immediate vicinity.

The onshore site of the project is crossed, from west to east, by the following transport routes:

• DC4 Communal Road located to the east of the S1 area (cadastral no. 109216);

• The Constanta – Mangalia railway (cadastral no. 109182) located between the communal road DC4 and the service road De277;

• The De277 service road located between the Constanta – Mangalia Railway and the S3 area (cadastral no. 109659);

• Exploitation road De 259/4 located between areas S3 and S4 (cadastral numbers 109729 and 100819).

All these roads and the railway line will be crossed by the production pipeline and the optical fibre cable.

The Black Sea is located approximately 60 m east of the eastern boundary of the project site.

The Tuzla Airport is located at approx. 2 km in a north-western direction from the western limit of the site.

To the south and south-east of the site limit, dwellings have been identified, the closest to the site being located approximately 100 m south of the limit of the proposed area for the installation of the natural gas production pipeline and the entry point into the microtunnel, respectively approximately 350 m southeast of the limit of the proposed site for the installation of SRM.

In the vicinity of the western limit of the site, there is an orchard owned by private owners.

Description of offshore site

The proposed development is part of the XIX Neptun block. The production pipeline and fiber optic cable will be located in the sea, for an approximate length of 160 km.

The route of the proposed production pipeline at sea crosses 3 faults and several possible cables.

There are no other exploitation platforms in the area. The Ana production platform of the Midia Natural Gas Development project is located approximately 50 km west from the production platform of the Neptun Deep project and approximately 4 km north distance from the production pipeline.

The water depth varies from 700 – 1,100 m in the area of the Domino deposit, to 120 – 130 m on the continental shelf in the area of the Pelican South deposit and the Neptun Alpha Platform. The slope of the basin separates the Domino and Pelican South deposits. Along the route of the gas production pipeline from the continental shelf to the shore, the water depth decreases from 120 m to 10-15 m at the proposed place for undercrossing the shore.

The approximate depth of sea water in the area of the Neptun Deep project is as follows:

• Production platform: 120 –130 m;
• Pelican South Drilling Centre: 120–130 m;
• Domino 1Drilling Centre: 970 – 980 m;
• Domino 2Drilling Centre: 945 – 955 m.

Access to project area

Currently, the access to the project area is made on the public roads (communal road, service roads) existing in the project area, as follows:

- The S1 area can be accessed via the DC4 communal road (4 m wide), located to the east, and via the De229/1 service road (4 m wide), located to the North. The access to both roads can be made from the national road DN39;
- The S3 area can be accessed from Tuzla or Costinesti, through the De277 service road (4 m wide), located to the west;
- The S4 area can be accessed from Tuzla or Costinesti, through the De269 service road (4 m wide), located to the east.

The access to the onshore area of the project, during the life of the project, will be provided from the European Road E87 (National Road DN 39) through a new access road of approximately 2 km

in length, which will connect the European Road E87 (National Road DN 39) located west of the SRM and CCR site and the DC4 communal road located east of the SRM and CCR site.

The new permanent access road will support the construction and operation of the onshore facilities of the project. For the construction of this road, Tuzla Commune issued Building Permit No. 27/12.02.2022 with extended validity until 11/05/2025.

2.2 Physical characteristics of the project

The proposed objective of the Neptun Deep project is to develop the natural gas reserves from the Pelican South and Domino reservoirs and to deliver the gas treated within the production platform to the NTS operated by Transgaz.

The purpose of the concession agreement holders is to sustainably develop the gas resources in the Neptun Deep perimeter, with a focus on environmental protection during the development and operation of the facilities, an objective aligned with Romania's Energy Strategy 2019-2030, with prospects until 2050. The gas identified is a very clean gas, with a high methane gas content and a low content of carbon dioxide (CO2), sulphur and other hydrocarbons (ethane, propane, butane, etc.).

Building/installation of onshore infrastructure

The main stages of construction/installation activities on land will include:

- Construction/installation of the temporary site organization from SRM and CCR (including site preparation, earthworks, construction of storage spaces, installation of containers, etc.) and other temporary works (e.g. the work corridor

for the installation of pipelines, temporary railway grade crossing, temporary construction roads, etc.);

- Construction/installation of SRM and CCR (including site preparation, earthworks, civil works, installation of buildings/offices and equipment, utilities, etc.) and other related facilities (utilities, roads and indoor platforms, parking, fencing, landscaping, etc.);
- Installation of the onshore section of the gas production pipeline (including shut-off valve) and optic fiber cable, including the execution of the undercrossing of local roads, railways and existing utilities (e.g. the existing RAJA water pipeline);
- Decommissioning of temporary constructions and facilities (site organization, temporary railway level crossing, temporary construction roads, etc.) and restoration of the land affected by the construction/installation works.

The SRM and CCR sites will consist of a prepared surface, foundations, skid and individual equipment and prefabricated and assembled structures (prefabricated structural steel components), buildings (e.g. CCR building, LER, shelter for the gas chromatograph and moisture analyser), equipment packages (e.g. electric heaters, Godevil station, separator/filter, transformers, backup diesel generator with built-in diesel storage tank) and pipe assemblies (including pipelines, fittings and taps) and inland roads, parking and platforms.

The installation of the production pipeline and the onshore fibre optic cable (including the shut-off valve and underpasses) will be managed in such a way as to avoid conflicts of simultaneous operations with the other installations on land.

Upon completion of the construction/installation works, the temporary works will be decommissioned, and the sites affected by the construction/installation works will be returned to their original state.

Construction/installation of shore undercrossing by gas production pipeline and optic fibre cable

An estimated total duration of the construction of approximately 10 months was established, considered from the beginning of the execution works of the shore undercrossing and until the end of the land restoration works. The tunnelling works will be executed in 3 shifts, 24/7, respectively 10 hours of work / day for other construction works related to micro tunnelling.

The execution plan for the shore undercrossing will include both onshore and sea works, as outlined below.

- Works carried out on land:
  - Construction of temporary access roads, site organization and restoration of the areas occupied by the temporary access roads, organization of the site from the microtunnel to the completion of the construction works;
  - Works related to the launch manhole, including the construction of the launch manhole, the conversion of the launch manhole and the removal of the launch manhole;
    - Tunnel construction works, including mobilization, tunnel digging (launch, operation and arrival), tunnel preparation (removal of equipment, installation of pipelines, flooding of tunnel) and demobilization of equipment
  - Pipeline construction, including delivery, stringing, welding, non-destructive testing, hydrotesting (pre-installation);
  - o Tunnel filling, including equipment mobilization, equipment filling and demobilization.
- Works executed offshore:
  - Execution of the outlet manhole of the drilling machine;
  - Drilling machine recovery;
  - Excavation of the ditch near the shore;
  - Filling (partial) of the ditch near the shore;
  - Pulling the pipelines to the shore.

Upon completion of the construction and installation works related to the shore undercrossing, the site organization will be decommissioned, and the areas on land and sea affected by the works will be restored to their original conditions.

For certain operations, seasonal restrictions on the execution of works and mitigating measures during the construction period and the period of decommissioning of temporary works and land restoration will be considered, given the proximity of the project site to residential and tourist areas.

After the construction of the microtunnel, the section of pipe that will be in the microtunnel must be pulled through it from the sea to the shore, the ship and implicitly a part of the anchors, moving from the shore to the sea. For this activity, the ship building the pipeline must position itself in alignment with the microtunnel, using the dynamic positioning system, but for additional stability when pulling the pipeline through the microtunnel, the anchors of the ship must also be used.

The ship is equipped with 8 anchors, 4 in the front and 4 in the rear. The launching of the anchors is assisted by a support ship, also equipped with a dynamic positioning system, which takes each anchor in turn with the help of a winch and a guide cable. Each anchor retrieved in this way is transported to the predetermined location, where it is lowered at constant speed vertically to the seabed with the help of the winch and the guide cable. Guide cable remains attached to anchor and terminal and is provided with a buoy for identification and subsequent retrieval. During this operation, the support ship will not anchor in its turn, using only the dynamic positioning system to perform the activity. Similarly, upon completion of the work, the support vessel will lift each anchor from position and transport it back to the pipeline construction vessel.
Each anchoring location will be used only once.

The anchors used for this activity, within the Neptun Deep project, are steel metal structures, consisting of a trapezoidal-shaped sole, with the approximate dimensions of 6.8 m x 6.3 m, which are placed on the seabed and to which a movable steel arm is attached, to which the chain connecting the anchor and the ship is connected. The weight of 15 tons of the anchor is evenly distributed on the surface of the seabed through the anchor sole.

In the execution of this microtunnel pipeline pulling activity, which has an estimated duration of approximately 2 weeks, the ship will occupy several positions on the pulling alignment. At the beginning of the activity, the first position is closer to the microtunnel, and as the pipeline advances through it, the ship retreats out to sea, on the respective alignment to the next positions, to continue and complete the pulling of the pipeline through the microtunnel.

Each new position of the ship does not involve 8 new anchor points, because the ship can move its position by extending and shortening the anchor chains, without having to change the location of some anchors. Thanks to this optimization, the total anchor points for all ship positions is 27 points, as certain anchor points remain unchanged, even if the ship changes its position.

Due to the limitations caused by the presence of the Costinesti wreck on the ship's working corridor, out of the total of 27 anchor points, 7 of them overlap with the natural area protected ROSAC0273 the Cap Tuzla Marine Area, and there is no other possibility of positioning the anchors outside the protected natural area, in order to stabilize the ship (barge).
In evaluation of impact we took into account the type of anchor presented and the effects of activities described above.

Building/installation of offshore infrastructure

According to the current schedule, it is expected that the construction/installation works of the infrastructure at sea will be completed in several seasons. The main stages of offshore installation activities will include:

• Installation of the offshore gas production pipeline (including the operations of the vessels used for installation):

- Installation of prefabricated pipe assemblies – the section of the pipe from the open sea to the connection point of the pipe near the shore, the pipe end assembly and the riser to the connection reel;
- Execution of the foundation for the pipe end assembly;
- Reinforcement with gravel/coarse aggregate for rock berms at the faults on the seabed;
- Installation and testing of the prefabricated pipe;

• Offshore installation of the Domino supply/adduction pipelines (including operations of vessels used for installation):

- Installation of prefabricated pipe assemblies – pipe end assembly, in-line T-assembly, riser reel, supply/adduction pipe connection pipelines, underwater go-devil station and direct electric heating components on the line;
- Execution of the foundations for the pipe end assembly, the in-line T assembly and the underwater go-devil station;

- Installation and testing of prefabricated supply/adduction pipelines;
- Offshore installation of the Pelican South prefabricated supply/adduction pipeline and testing (including installation vessel operations);
- Installation at sea of the Pelican South and Domino umbilical control systems;
- Installation at sea (including installation vessel operations) of underwater equipment (manifold foundations, manifolds, connection pipelines to supply/adduction pipelines, well connection pipelines, connecting pipelines and cables, reels, risers, supply/adduction pipelines, including:
  - Suction pile foundations for the underwater production manifolds for the Domino and Pelican South drilling centres;
  - Installation of underwater production manifolds (conservation fluid testing) for the Domino drilling centres (DODC1 and DODC2) and the Pelican South Drilling Centre – PSDC 1
  - Installation of rigid connection pipelines to the supply/adduction pipelines from DODC1 and DODC2;
  - Installation of rigid connection pipelines to the wells from DODC1 and DODC2;
  - Installation of the reels of the risers of the gas production pipeline and the Domino supply/adduction pipeline to the marine production platform;

- Installation of the connecting reeds of the gas production pipeline between the offshore and near-shore sections

- Installation and testing of prefabricated support equipment;

• Offshore installation of the jacket and superstructure of the production platform, including the operations of the vessels used for installation and connection works;

• Installation of the optical fibre cable offshore between the shore underpass and the marine production platform.

Drilling campaign execution plan

The total drilling and completion period is estimated to take approximately 800 days (10 wells, 80 days/well), 4 wells at Pelican South and 6 Domino wells. All wells will be drilled in a continuous drilling and completion campaign using a propellant-assisted and anchored mobile marine drilling unit – MODU.

Description of the main components of the project

The Neptun Deep project represents a proposal for the development of natural gas resources in the deep Black Sea area within the XIX Neptun exploration-exploitation-development block.

The capacity of the installation is 19,000,000 cubic meters/day of natural gas.

The main offshore and onshore components of the project are as follows:

- **Underwater infrastructure of the Domino and Pelican South reservoir fields**, including underwater production wells, supply/adduction pipelines connected to the Neptun Alpha Platform at the Domino and Pelican South fields, umbilical electrical and hydraulic control systems from the production platform to the Domino and Pelican South drilling centres, and other underwater equipment;
- **The unmanned Neptun Alpha platform** for the processing of natural gas from the Domino and Pelican South fields, located in waters with a depth of approximately 130 m, and underwater control equipment located on the production platform;
- **Natural gas production pipeline** approximately 160 km long and with an outer diameter of 762 mm (30 inches) from the production platform to the SRM on land, including a shore undercrossing section (micro tunnelling);
- **Optical fibre cable** approximately 160 km, installed parallel to the production pipeline from the production platform to the CCR, including a shore undercrossing section (micro tunnelling);
- **The Onshore unmanned SRM** for measuring and delivering the processed gas to the NTS;

- **The onshore CCR** located adjacently to the SRM site which will serve as the main operations monitoring and control centre for all Neptun Deep project facilities (underwater systems, production platform, production pipeline and SRM);
- **Other permanent onshore facilities/areas included in the area of SRM and CCR sites** (e.g. fencing, lighting, parking, landscaping, internal roads, technology platforms and utilities)

Underwater infrastructure of Domino and Pelican South reservoirs

The main components of the Domino reservoir infrastructure consist of:

- 2 separate DODC1 and DODC2 drilling centres connected by a 14-inch supply/adduction pipeline and an electro-hydraulic umbilical system. The drilling centres consist of 6 gas production wells (3 wells/centre) connected to 2 underwater manifolds (1 manifold/centre).
- 14-inch (355.6 mm)/18-inch (457.2 mm) diameter steel supply/adduction pipeline approximately 36.5 km long that connects the drilling centres with the marine production platform. In order to prevent the formation of hydrates, the 18 inches/14-inch variable diameter supply/adduction pipeline is provided with a direct electric heating (DEH) system, and will be insulated;
- 2 segments of the electro-hydraulic umbilical control system: one segment between the Neptun Alpha Platform and the DODC1 Drilling Centre; and a segment between the Drilling Centre DODC1 and the Drilling Centre DODC2. Umbilical systems will also supply chemicals to underwater facilities. The connecting pipes will then connect the umbilical system from the underwater distribution unit (SDU) at the Drilling Centre, to the wells and manifolds;
- Underwater go-devil stations will be installed in the Domino area to allow the cleaning of the supply/supply pipes to the marine production platform;
- The manifolds will have pilot foundations installed by suction;
- Support platforms will be used for the umbilical system termination assembly/underwater distribution unit;
- 18" SSIV system at the production platform.

The main components of the Pelican South reservoir infrastructure consist of:

- A PSDC1 drilling centre consisting of 4 gas production wells and connected to a single underwater production manifold
- Flexible heated supply/adduction pipeline with a diameter of 10.75 inches (273 mm), with a length of approximately 1.5 km from the Neptun Alpha Platform to the PSDC1 Drilling Centre; the pipeline will be buried for protection against fishing activity;

- Electro-hydraulic umbilical control system between the Neptun Alpha Platform and the PSDC1 Drilling Centre.
- The umbilical system will also supply the production chemicals to the underwater facilities. The umbilical system will be buried for protection against fishing activity. The connecting pipelines will then connect the umbilical system from the SDU in the Drilling Centre to the wells and manifolds;

a) Drilling centres

The drilling centres will be arranged as groups of traditional deepwater wells. The completion of the drilling centres takes into account the considerations during installation and commissioning, together with the possibilities for future expansion.

The configuration of the drilling centres will include a multiplex electro-hydraulic control system with dual pressure, communication system and power supply to the communication system.

The DODC1 and DODC2 drilling centres will be provided with SDU and umbilical end-of-system assembly (UTA) at each drilling centre that has the same foundation structure. The connection between UTA and SDU will be made by connection cables.

The Drilling Centre PSDC1 will be equipped with hydraulic and chemical lines from the umbilical system, connected directly to a manifold with several connections. The distribution of hydraulic, chemical, electrical power and control signals will be integrated into the manifold.

b) Gas production wells

The current drilling plan consists of drilling and securing 10 gas production wells, namely:

- 6 wells are planned to be drilled up to 3000 m vertical depth from the DODC1 and DODC2 drilling centers (3 wells / drilling center) in the Domino field, at a water depth of 945 - 980 m;
- 4 wells will be drilled up to 3400 m vertical depth from a single drilling center (PSDC1) in the Pelican South field, at a water depth of 120 - 130 m

The wells will be drilled using two types of drilling fluid and one preservation fluid:

- Water-based drilling fluid for the first 2 sections (42" and 26" section).
- Non-aqueous drilling fluid on intermediate, reservoir and production sections (171/2", 121/4" or 141/2" and 91/2" sections).
- Saline solution

The seawater pumped from the Black Sea and/or the drilling water supplied from the shore will be used to prepare the water-based drilling fluid for the upper sections.

The composition of the drilling fluid is a mixture of water and several chemicals. The water-based drilling fluid will be used to drill the first two sections of each well. While these upper sections are drilled with water-based drilling fluid, an attempt will be made to use a tubing-free fluid recovery system (RMR) in order to recover the water-based drilling fluid. A pump will transfer the mud back

to the drilling rig, where it will be separated from the debris and recirculated into the rig's circulation system and borehole. The detritus (pieces of broken rock) carried by the water-based drilling fluid is discharged back to the seabed.

Prior to drilling the last upper section at each drill center, the RMR system will need to be removed to allow for the installation of the riser and eruption preventer. In this case, the last section of the upper hole will be drilled conventionally with pumping and discharging, which means that both water-based drilling fluid and detritus flow from the borehole directly to the seafloor. The benefit of using the RMR system is that it reduces the total volume of water-based drilling fluid lost to the sea. If the RMR underwater pump fails and needs to be recovered, the drilling process will continue conventionally with the return of the water-based drilling fluid and detritus from the borehole directly to the seabed. The RMR system is a technology developed and used specifically on deep-water floating platforms. Reduces environmental impact during drilling of upper hole sections.

It should be understood that this technology is not designed and applicable for drilling wells in shallower waters, drilled with jacket platforms or modular platforms.

Once the blowout preventer and tubing are installed, a closed loop is created and the water-based drilling fluid will be exchanged for the non-aqueous drilling fluid. The non-aqueous drilling fluid is recovered at the level of the drilling rig. There, the mud is separated from the debris with the help of separation equipment (sieves and centrifuges). After separation, the recovered solid material will still contain a percentage of non-aqueous drilling fluid, as the recovery process cannot completely remove it. For this reason, this debris will be transported to shore for disposal at an authorized economic operator. For equipment operations, the wells will be dislocated to filter the inhibited salt content. At the end of the equipment operations, the tubing can be filled with a lighter fluid (e.g. nitrogen) to underbalance the wells in preparation for SWP cleaning.

The amount of drilling fluid and debris generated on each well is shown in the table below:

Well	Interval	Column sizes (in)	Length of interval (m)	Type of drilling fluid	Density of drilling fluid (ppg)	WBM Volume (m^3)	NAF Volume (m3)	Detritus WBM (m3)	Detritus and WBM unloaded from the bottom of the sea (m3)	Detritus (NAF) carried to the shore (m3)
Domino 1-1	42"	36"	100	WBM	8,7/12,0	437		357	795	
	26"	20"	542	WBM	8,7/12,0	6.526		464	6.990	
	17-1/2"	13-3/8"	489	NAF	9,6/9,8		660			117
	14"	9-5/8"	555	NAF	10,3/10,8		768			85
	9-1/2"	5-1/2"	652	NAF	11,3/11,6		608			46
	Total:					6.963	2.035	821	7.785	248
Domino 1-2	42"	36"	100	WBM	8,7/12,0	437		357	795	
	26"	20"	542	WBM	8,7/12,0	6.526		464	6.990	
	17-1/2"	13-3/8"	643	NAF	9,6/9,8		703			154
	14"	9-5/8"	926	NAF	10,3/10,8		965			142
	9-1/2"	5-1/2"	665	NAF	11,3/11,6		641			47
	Total:					6.963	2.310	821	7.785	342
Domino 1-3	42"	36"	100	WBM	8,7/12,0	437		357	795	
	26"	20"	542	WBM	8,7/12,0	6.526		464	6.990	
	17-1/2"	13-3/8"	519	NAF	8,7/12,0		668			124
	14"	9-5/8"	768	NAF	8,7/12,0		876			117
	9-1/2"	5-1/2"	825	NAF	8,7/12,0		655			58

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Well	Interval	Column sizes (in)	Length of interval (m)	Type of drilling fluid	Density of drilling fluid (ppg)	WBM Volume (m^3)	NAF Volume (m3)	Detritus WBM (m3)	Detritus and WBM unloaded from the bottom of the sea (m3)	Detritus (NAF) carried to the shore (m3)
	Total:					6.963	2.198	821	7.785	300
Domino 2-1	42"	36"	100	WBM	8,7/12,0	437		357	795	
	26"	20"	601	WBM	8,7/12,0	7.183		515	7.697	
	17-1/2"	13-3/8"	325	NAF	9,6/9,9		619			78
	14"	9-5/8"	607	NAF	10,4/10,6		778			93
	9-1/2"	5-1/2"	309	NAF	10,8/11,4		536			22
	Total:					7.620	1.933	872	8.492	192
Domino 2-2	42"	36"	100	WBM	8,7/12,0	437		357	795	
	26"	20"	601	WBM	8,7/12,0	7.183		515	7.697	
	17-1/2"	13-3/8"	1,075	NAF	9,6/9,9		833			257
	14"	9-5/8"	1034	NAF	10,4/10,6		1,058			158
	9-1/2"	5-1/2"	198	NAF	10,8/11,4		584			14
	Total:					7.620	2.474	872	8.492	429
Domino 2-3	42"	36"	100	WBM	8,7/12,0	435		356	791	
	26"	20"	601	WBM	8,7/12,0	7.183		515	7.697	
	17-1/2"	13-3/8"	635	NAF	9,7/9,9		707			152
	14"	9-5/8"	548	NAF	10,4/10,6		777			84
	9-1/2"	5-1/2"	276	NAF	10,8/11,4		544			19
	Total:					7.618	2.029	870	8.488	255
Pelican	42"	36"	126	WBM	8,7/12,0	528		449	977	

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Well	Interval	Column sizes (in)	Length of interval (m)	Type of drilling fluid	Density of drilling fluid (ppg)	WBM Volume (m^3)	NAF Volume (m3)	Detritus WBM (m3)	Detritus and WBM unloaded from the bottom of the sea (m3)	Detritus (NAF) carried to the shore (m3)
South 1-1	26"	20"	558	WBM	8,7/12,0	6.704		478	7.182	
	17-1/2"	13-3/8"	1,530	NAF	11,8/12,2		800			366
	14"	9-5/8"	1431	NAF	12,4/12,7		1.135			219
	9-1/2"	5-1/2"	204	NAF	12,8/13,4		475			14
	Total:					7.233	2.411	926	8.159	599
Pelican South 1-2	42"	36"	126	WBM	8,7/12,0	528		449	977	
	26"	20"	558	WBM	8,7/12,0	6.704		478	7.182	
	17-1/2"	13-3/8"	1,228	NAF	11,8 / 12,2		714			293
	14"	9-5/8"	1494	NAF	12,4 / 12,7		1.139			228
	9-1/2"	5-1/2"	161	NAF	12,8 / 13,4		453			11
	Total:					7.233	2.307	926	8.159	533
Pelican South 1-3	42"	36"	126	WBM	8,7/12,0	528		449	977	
	26"	20"	558	WBM	8,7/12,0	6.704		478	7.182	
	17-1/2"	13-3/8"	1,353	NAF	11,8 / 12,2		750			323
	14"	9-5/8"	1044	NAF	12,4 / 12,7		928			160
	9-1/2"	5-1/2"	589	NAF	12,8 / 13,4		514			41
	Total:					7.233	2.191	926	8.159	524
Pelican South 1-4	42"	36"	126	WBM	8,7/12,0	528		449	977	
	26"	20"	558	WBM	8,7/12,0	6.704		478	7.182	
	17-1/2"	13-3/8"	1,315	NAF	11,8-12,2		739			314

Well	**Interval**	**Column sizes (in)**	**Length of interval (m)**	**Type of drilling fluid**	**Density of drilling fluid (ppg)**	**WBM Volume (m^3)**	**NAF Volume (m3)**	**Detritus WBM (m3)**	**Detritus and WBM unloaded from the bottom of the sea (m3)**	**Detritus (NAF) carried to the shore (m3)**
	14"	9-5/8"	1528	NAF	12,4/12,7		1.164			234
	9-1/2"	5-1/2"	281	NAF	12,8/13,4		483			20
	Total:					7.233	2.385	926	8.159	568
TOTAL GENERAL						**72.678**	**22.274**	**8.784**	**81.462**	**3.989**

c) Supply/adduction pipelines of Domino and Pelican South

The main features of the supply/adduction pipelines are presented below:

- Supply/adduction pipeline with variable diameter direct heating system of approximately 36.5 km respectively: approximately 26 km long and 457.2 mm (18 inches) outside diameter between Drilling Centre DODC1 and Neptun Alpha Platform and approximately 10.5 km long and 355.6 mm (14 inches) outer diameter between Drilling Centre DODC1 and Drilling Centre DODC2, including a supply/adduction pipeline end device (FLET) at the offshore production platform, an in-line T-connection (ITA) assembly at the Drilling Centre DODC1 where the pipe diameter changes, as well as a FLET at DODC2. The route from the Domino deposit to the Neptun Alpha Platform involves crossing a slope along the continental shelf;
- Heated flexible supply/adduction pipeline with an inner diameter of 273 mm (10.75 inches), approximately 1.5 km long from the Neptun Alpha Platform to the PSDC1 Drilling Centre, including the connection to the manifold and a FLET to the marine production platform.
- The Domino supply/adduction pipeline will also have an underwater closure system (SSIV) located at a safety distance of 500m from the marine production platform, and at a depth of 120m. The system will consist of an 18-inch (457.2mm) ball shut-off valve, being designed to allow the use and movement of a go-devil pipeline "PIG") inside the pipeline, this facilitates periodic cleaning of the pipeline, internal inspections or other maintenance operations or monitoring of the condition of the pipeline.
- The shutdown system will be directly hydraulically controlled by the hydraulic unit of the platform.

The Domino supply/adduction pipeline with a direct heating system

In order to ensure the active management of hydrates with the help of electric heating, direct electric heating (DEH) supply/adduction pipelines will be used. The DEH system will include:

- Power, control and monitoring equipment (components of the Neptun Alpha and CCR Platform);
- 1 dual-core or coaxial cable, riser with traction head, bend restrictor and J tube seal (if applicable);
  - 1 underwater junction box;
  - 1 or 2 armoured power cables, depending on the cable core design;
  - Cable associated with the pipe, with a length of 37 km;
- 2 pipe-end devices (1 at the offshore platform, 1 at the Drilling Centre DODC2);

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- 2 current transfer areas with concrete mattress foundations to ensure that the transfer area is stable on the seabed.

The main features of the Domino supply/adduction pipeline are as follows:

• Carbon steel pipe;

• Thermal and anti-corrosion insulation;

• Anodes, flanges/connectors, etc.;

• Riser and connection reels;

• Direct electric heating system by cable.

The route of the Domino direct electric heating supply/adduction pipelines was determined based on the results of a route study carried out by a specialist contractor. The route study included the evaluation of route investigation data (e.g. geophysical investigations), feeding/supply pipeline data, details of the gas reservoir and offshore production platform, as well as details of connection to manifolds.

Pelican South electrically heated flexible pipeline

In order to ensure the active management of hydrates through electric heating, an electric heating supply/adduction pipeline will be used for the Pelican South. The Pelican South flexible electric heating supply/adduction pipeline will be equipped with power, control and monitoring equipment (marine production platform and CCR components).

The main features of the Pelican South supply/adduction pipeline are as follows:

- Connecting head, bend restrictor and J tube seal (if applicable);
- Feeding, control and monitoring equipment;
- Option: Combine flexible supply/adduction pipeline and Pelican South umbilical system into one integrated production package.

The route of the Pelican South electrically heated supply/adduction pipeline and the umbilical system between the Neptun Alpha Platform and the Pelican South manifold was determined based on the results of a route study carried out by a specialized contractor. The route study included investigation data on the assessment of route (e.g. geophysical investigations), supply/adduction pipeline data, details of the Pelican South gas reservoir field and offshore production platform, as well as details on the connection to the Pelican South manifold.

The supply/adduction pipeline and umbilical system routes are in a straight line for most of the length of the route, except for the area near the Pelican South Drilling Centre, with the umbilical system directed parallel to a distance of 30 m from the centre line of the route.

d) Umbilical systems Domino and Pelican South

The Domino and Pelican South underwater systems will be monitored and controlled using electrical and hydraulic control systems connected to the Neptun Alpha Platform via dedicated umbilical control connections.

The Domino underwater system will include two electric and hydraulic control umbilical segments: one between the marine production platform and the DODC1 Drilling Centre and one between the DODC1 Drilling Centre and the DODC2 Drilling Centre. The umbilical systems will also supply chemical substances for underwater installations. The connecting pipelines will then connect the umbilical system from the underwater distribution unit at the Drilling Centre to the wells and manifolds.

The Pelican South underwater system will include an umbilical electrical and hydraulic control system between the Neptun Alpha Platform and the PSDC1 Drilling Centre. The umbilical system will also supply chemical substances to the underwater facilities. The umbilical system will be buried for protection against fishing activity. The connecting pipelines will then connect the umbilical system from the underwater distribution unit at the Drilling Centre to the wells and manifolds.

The main characteristics of umbilical systems are presented below:

• Domino umbilical system inside the reservoir of approximately 6 km long, from Drilling Centre DODC1 to Drilling Centre DODC2;

• Domino umbilical system on the continental shelf of approximately 26.5 km long, from the Neptun Alpha Platform to the DODC1 Drilling Centre;

• Pelican South umbilical system approximately 1.5 km long, from the marine platform to the PSDC1 Drilling Centre.

The routes of the umbilical systems between the Neptun Alpha Platform and the Domino and Pelican South drilling centres were determined based on the results of specific route studies conducted by an authorized contractor.

The configuration of the underwater umbilical system will include the following components:

- A connecting head, used to connect the umbilical system to the platform system and pull the umbilical system to the host facility;
- A terminal assembly to support the umbilical system at the platform used to support the umbilical system at the host facility;
- Static umbilical segments;
- AHU and associated foundation structures, connected to the underwater ends of the main umbilical systems and to both ends of the umbilical system between the Drilling Centre DODC1 and the Drilling Centre DODC2;
- Bend restrictors at each umbilical system interface - UTA to prevent torsion of the umbilical system during installation and/or recovery;
- Cathodic protection system covering umbilical and AHU systems with anodes placed on the AHU;
- Funnel at the end of each J tube through which the 2 static umbilical systems will be pulled on the production platform;
- Centres in J tubes for installation and/or operation;

• Umbilical system reinforcement as needed;

The umbilical system will prevent and mitigate problems that may arise as a result of the operation of the direct electric heating system that is part of the Domino supply/adduction pipeline (corrosion due to alternating current, induced voltage, communication interference, grounding, etc.).

e) Manifolds, piles installed by suction and support platforms

Each drilling centre will contain wells grouped around a production manifold. The production wells will be connected to 2 production manifolds at the DODC1 and DODC2 drilling centres, respectively one production manifold at PSDC1.

These are mounted on support platform foundations and piles installed by suction.

f) Other underwater equipment

The following FLET, PLET and ITA will be installed:

- one FLET 457.2 mm (18 inches) of the supply/adduction pipeline Domino to the marine production platform;
- one FLET 355.6 mm (14 inches) of the supply/adduction pipeline Domino to the Drilling Centre DODC2;
- one ITA 457.2 mm (18 inches) / 355.6 mm (14 inches) of the supply/adduction pipeline Domino (with concentric expansion from 14 to 18 inches and direct electric heating cable included) at the DODC1 Drilling Centre;
- one PLET 762 mm (30 inches) of the production pipeline to the marine production platform.

Within the project, 2 risers will be installed (one for the natural gas production pipeline and one for the Domino supply/adduction pipeline) and 7 J tubes.

Auxiliary equipment includes:

• 355.6 mm (14 inches) underwater go-devil station of the Domino supply/adduction pipeline that is used for the maintenance of the multi-diameter Domino supply/supply pipe;

• 273.1 mm (10.75 inches) underwater go-devil station inside diameter of the Pelican South flexible supply/adduction pipeline (will only be used prior to commissioning).

Neptun Alpha Platform

The Domino and Pelican South infrastructure will be connected to the automated and autonomous production platform, consisting of a structural support (jacket) with the facilities located on two superstructure levels. The production platform will be located on the continental shelf, in water with a depth of between 120-130 m and will occupy a total area of approximately 3,547 m².

a) Structural support (Jacket)

The main design features of the jacket support structure are summarized below:

- The jacket is a fixed support structure with a height of 120 m;
- Estimated weight: 9,000 tons (depending on detailed design and final weight allocation)
- Integrated platform at sea level
- Fixed to the seabed with eight pillars with a diameter of 84 inches (2133.6 mm) and a length of 110 meters.

The jacket will be anchored in the substrate of the seabed, using "skirt" type pillars, over the main pillars, which will be inserted through the legs of the jacket. The use of "skirt" type pillars will allow the storage of fluids inside the legs of the jacket. The project provides for the use of 2 "skirt" pillars on each leg, for a total of eight pillars. Based on current information, the target penetration for each pillar is 90 m (mudline).

The platform jacket will support 7 caissons (1 x TEG storage, 1 x atmospheric drainage storage, 2 x methanol storage, 2 x seawater lift and 1 x produced water outlet), with the jacket legs providing storage space for various utility liquids.

The jacket will use the upper compartment of all four legs as storage tanks of 200 m^3 each for process fluids (1 tank for storing lean glycol, 2 tanks for storing methanol and 1 tank for fluids collected through atmospheric drainage), which will be used during the operation of the platform.

The pump caissons will descend vertically from sea level and will be connected to the foot storage tanks via interconnecting pipelines. A closing diaphragm will separate the storage compartment of the foot from the bottom compartment of the jacket foot, which will be flooded with seawater during the lifting of the jacket. The inner part of the jacket legs will be covered with a protective layer and will benefit from cathodic protection, with sacrificial anodes, to prevent corrosion produced by liquids stored inside the foot reservoirs.

The rainwater that falls on the surfaces of the production platform equipment will be captured and diverted into an open drainage system. Similarly, the water used for washing surfaces will also be captured and diverted into the open drainage system. All open drainage water will be directed to the 200 m3 storage tank located in one of the steel legs of the production platform.

At the production platform, 2 risers and 7 J tubes will be installed to receive the production flows and to include the placement of umbilical systems and power cables for underwater equipment. The J risers/tubes will pass through the jacket, and the top end will end on a platform located at the top of the jacket. The cables and pipelines at the top will then connect to the platform that houses these terminations and junction boxes.

The jacket will have a "Sea Deck" level near the top of the jacket. The "Sea Deck" will support the anchor flanges for risers and J tubes. The Sea Deck is designed to allow umbilicals and cables to be pulled and installed prior to mounting the platform superstructure.

This installation requires that the Sea Deck is designed to support a drum cable system which will be needed for the traction of cables and umbilicals through the J tubes.

b) Superstructure

The current concept of the production platform provides for a 2-level deck. The upper deck mainly includes process equipment and power generation equipment. The lower deck mainly includes utilities and underwater control equipment.

The jacket will be made of braided steel structure with four legs, with a "skirt". The jacket will support the superstructure, accessories and ducts. The jacket configuration will allow the installation of equipment for lifting and handling heavy materials (heavy lift).

The platform superstructure will house the process equipment, utilities, the control systems of underwater equipment and other functional requirements. Also, the upper side will house a crane with pedestal and a support arm for the LP Flare and HP Flare.

Around the platform we will establish a safety area of 500 m, where the access of unauthorized ships will be prohibited. Also, on the platform signalling, marking and guiding equipment for navigation specific to marine platforms will be installed.

The main features (processes, utilities, controls, etc.) of the platform superstructure are presented below:

- Estimated weight: 8000 tonnes (which is subject to design for the final configuration of weight);
- PCS/ SIS system (normally the SIS functions are configured for the integrity of the production platform. The process will be remotely controlled from the onshore control room by FOC and VSAT back-up;
- Water-gas biphase separation - 63 m3/normal running hour; flow of 830 m3/hour for handling the fluids during the go-devil operations;
- Damp gas cooler;
- Gas dehydration unit;
- Three-Ethylene Glycol standard regeneration technology (TEG);
- LP Flare for combustion of gases;
- HP Flare for evacuation of gases in emergencies;
- Water lifting system for cooling;
- Degasified technological wastewater (water reservoir) unloaded into the sea;
- 3x50% gas turbines (2 operation and 1 stand-by), which supply 9.2 MW power to the production platform, with a thermal efficiency of 30%;
- 1x 100% generator for essential services;
- 1x 50% back-up generator;
- Local room for electrical and control system equipment, including the subsea control system;
- The module for power supply and DEH control (Distributed Electrical Heating) is responsible for power supply and control of the DEH system.
- A separate hydraulically actuated unit will be used for underwater eruption heads/manifolds and surface valves;
- Electro-hydraulic crane platform for supporting maintenance works;
- Routine access for mooring support ships (gangway compensated according to the movements of the ship), helideck for emergency access.

Natural gas production pipeline

After processing the natural gas at the offshore platform, a gas production pipeline approximately 160 km long and 30 inches (762 mm) in diameter will transport the gas to the onshore SRM.

The production pipeline will end with a go-devil station within SRM. The route of the production pipeline from the offshore platform to the SRM includes the following components/sections:

- Go-devil station and riser installed on the marine production platform;
- The sea section of the production pipeline;
- The section related to the undercrossing of the shore;
- The onshore section of the production pipeline, including the railway underpass, the shut-off valve manhole located outside the SRM on the east side of the railway, several road underpasses; and
- go-devil station installed in SRM.

The gas production pipeline will also include a pipe end device (PLET) installed within the offshore platform and an underwater isolation valve assembly, mounted at a distance from the marine platform, within the safety zone of 500 m and at a water depth of 120 m.

The assembly will consist of a 30-inch ball valve (fully pigging) hydraulically operated and controlled directly from the hydraulic feed unit of the platform. Also, the underwater isolation valve assembly will be protected by a protective structure.

The production pipeline will have the following characteristics:

- Carbon steel pipe;
- Internally lined to ensure flow and externally coated against corrosion;
- Concrete coating for stability on the seabed;
- Anodes, flanges/connectors, etc.;
- Riser, SSIV, spool connection, shore undercrossing, onshore section of the pipeline to the SRM.

The production pipeline is sized to support the designed production rates. The main design parameters of the pipeline are shown below:

- Outer diameter: 762 mm (30 inches);
- Pipe length: about 160 km (on a length of approx. 1 km it will be mounted onshore);
- Designed pressure: 139 barg;
- Expected operating pressure: from 102 barg (at the exit from the production platform) to 55 barg (at the entrance to the shore)
- Maximum design temperature: 55°C;
- Maximum operating temperature: 45°C;

- Minimum design temperature: -29°C;
- Anti-corrosion outer coating: epoxy resin applied by fluidization and concrete coating for stability/three layers of extruded polyethylene (3LPE);
- Inner lining to ensure flow;
- Water depth range: 7 ÷ 137 m.

The system design pressure can maintain a Line Pack (the actual volume of gases in the pipeline system at any given time) of up to 110 barg in the production pipeline.

The offshore section of the production pipeline will include variations in the thickness of the steel pipe walls, concrete lining and trench positioning (limited to the area near the shore) to maintain stability on the seabed.

The production pipeline will be internally lined to ensure flow, coated externally against corrosion and partially covered with concrete for buoyancy and stability on the seabed.

In support of the installation of the pipeline and its protection during the operating period, on a sector of approximately 3375 m in length stretching from the point of exit from the sea of the microtunnel to the water depth of 35 m, the pipeline will be installed in a trench. Installing the pipeline near the shore will require an anchored vessel.

The production pipeline intersects the shoreline in an area with a high cliff. Because of this local topography and in order to keep the protected area ROSAC0273 the Capul Tuzla Marine Area unaffected, the seafront and the beach, the production pipeline and the fiber optic cable will cross the coastal area by means of a cemented microtunnel, with a length of 890 m.

The route of the pipeline on land will be located between the onshore microtunnel entry point and the

SRM site, respectively up to the first upstream connection of the go-devil receiving station.

Microtunnel

The shore crossing will be carried out over a length of 890 m between the land entry point located at kilometre point (KP) 156.965 of the pipeline route and the sea exit point located at KP 156.075 of the pipeline route. The onshore entry point of the microtunnel will be located on the private land (area S4) owned by OMV Petrom.

The exit point of the microtunnel will be located in the coastal waters of the Black Sea. The microtunnel will cross the unpaved De269 service road (belonging to the public domain), the seafront (private domain of the Tuzla Commune) and the beach (public domain of the National Administration of Romanian Waters – Dobrogea – Beach Water Basin Administration).

The main projected parameters of microtunnel alignment are:

• Length: 890 m;

• Maximum depth: 25 m;

• Range: 2,500 m;

• Exit angle: 2°;

The main specifications of production pipe and optical fibre cable protection pipe in the tunnel are:

- **Production pipeline:**
  - Diameter: 762 mm (30 inches);
  - Wall thickness: 30 mm;
  - Outer lining: 3.4 mm 3LPE.
- **The optical fibre cable protection pipeline:**
  - Diameter: 250 mm;
  - Wall thickness: 22.7 mm;

Material: High-Density Polyethylene (HDPE) /Polythylene PE100

Optical fibre cable

An optical fibre cable will be installed parallel to the gas production pipeline and will assure the communication between the offshore platform (which normally operates unmanned) and CCR with a VSAT connection for back-up and redundancy.

The optical fibre cable allows the control of offshore facilities and wells from CCR and monitoring through the cameras installed at the marine platform. Internet access will be provided in the local equipment room related to the offshore platform, and Wi-Fi will be provided on the marine platform (as part of the control system) and will allow the supervision of processes by manual devices during the presence of operation and maintenance personnel on the platform.

The optical fibre cable route includes:

• An offshore section;

• A shoreline undercrossing section;

• An underground connection box on land;

• An onshore section, including a railway underpass, several local road undercrossings and the connection to the CCR.

The fiber optic cable will be installed along and adjacent to the route of the production pipeline from the offshore platform to the CCR (located in the vicinity of the SRM site).

The optical fibre cable deployed between the CCR and the marine platform follows a route similar to the production pipeline, with a distance between them of 30 m along most of the route from the sea. The gap is increased to about 52 m when approaching the platform to access the connection points on the platform.

The onshore and nearshore sections of the fiber optic cable are positioned in close proximity to the pipeline, as the fiber optic cable will be installed in the same trench and tunnel.

The offshore section of the fibre optic cable will be buried at a proposed depth of 1 m below the seabed, with 0.5 m as the minimum depth. In areas with faults, the seabed does not have to be dug

for the construction of the trench. The solution for crossing the faults will take into account the anti-trawl protection of the cable.

At the shore underpass, the optical fibre cable will be installed in a 250 mm diameter high-density polyethylene pipe pre-installed in the shore underpass tunnel during its construction and installation.

The optical fibre cable protection pipe onshore will be installed in a trench together with the production pipe onshore.

The main design parameters of the optical fibre cable between Neptun Alpha Platform and CCR are shown below:

- Estimated length: 160 km;
- Number of pairs of optical fibres: 12 pairs (24 fibres);
- General concept: reinforced tube;
- Minimum burial depth: 0.5 m;
- Optimal burial depth: 1 m;
- Shore crossing: in pre-installed pipe;

The cable will have a designed lifespan of at least 25 years in the underwater environment in which it is installed.
A VSAT system will be used as a backup for critical internet traffic between CCR and the Neptun Alpha Platform in case of loss of optical fibre communications.

Adjustment and measuring station (SRM) onshore

SRM will be an automatic unmanned natural gas metering and custody transfer facility to the NTS operated by Transgaz, located in the vicinity of the CCR site. The SRM site will be fenced and will be located within the S1 area (cadastral no. 109216) owned by OMV Petrom. The total area occupied by the SRM site will be approximately 23,183 m².

The SRM will be designed with remote monitoring from the CCR, located in the vicinity. SRM will measure the dry natural gas, delivered to the NTS, from the Neptun Deep development. The SRM will include a combined control system for the flow and pressure of the gas delivered to the NTS.

The SRM will only include the infrastructure necessary for essential operation, with a limited number of buildings, such as the local equipment rooms (LER) and the gas/moisture analyser shelter. There are no spaces for offices, storage or workshops in the fenced area related to SRM.

For most of SRM's equipment and buildings, off-site prefabricated skids and subassemblies will be used, including for the go-devil receiving station, measuring equipment and taps.

The land on which the SRM will be built will include a fenced area dedicated to connecting to the NTS, a facility that will be separately authorized by Transgaz. ***Transgaz facilities are not part of the Neptun Deep project.***

No hydrocarbons will be processed on the SRM site. The separation and processing of natural gas will be carried out on the offshore production platform, before entering the production pipeline,

which brings the natural gas to the shore, to SRM. Even if no liquids are anticipated to accompany the processed gases arriving at the SRM during normal operations, a filter separator will be installed at the inlet of the SRM, equipped with level switches, alarms and manual purge valves, to protect the flow meters from any small amounts of water transmitted from the Neptun Alpha Platform in the event of a breakdown.

The go-devil receiving station will be installed at the entrance to the SRM to facilitate the use of the Pipeline Inspection System and the maintenance of the production pipeline. The pressure class (design pressure and maximum operating pressure) of pipelines and associated gas handling equipment in SRM shall be in compliance with that for production pipeline pressure. The design of the go-devil receiving station will also allow the use in the opposite direction (from the SRM to the marine production platform), as will be necessary for the pipeline emptying activities, prior to commissioning.

The SRM will include a combined flow and pressure control system to control gas deliveries to the NTS.

The list of the main buildings/equipment to be built/installed within SRM includes:

- Gas quality analyser chamber (Chromatograph and Moisture Analyser);
- LER for control, communication and the Integrated Control and Safety System (SICS);
    - Heaters;
    - Local Equipment Cameras (LER) for SRM control;
- 2 Inlet filters/separators (N+1);
- Go-devil reception station;
- Flow measurement skid with 5 lines (N+1) with ultrasonic flow meter, nominal diameter 300;
- 2 flow control valves (N+1);
- 1 shut-off valve (located east of the railway);
- Emergency gas dispersion system (gas dispersion chimney);
- Gas heaters (3x2MW (3x33%)) for meeting the gas temperature conditions at the entrance to the NTS;
- Rainwater collection basin;
- Technological platform;
- Protective fence;
- Personnel exit gates in case of emergency;
- Vehicle access gate.

All buildings and equipment installed on the fenced site of SRM will comply with the maximum limit of 12 m height provided by the Zonal Urban Plan in force.

The open surfaces inside the fenced SRM site (except for the technology platform and interior roads) will be covered with geotextile and coarse aggregate to prevent vegetation from appearing on the site. SRM's technological platform and the interior roads will have the top layer made of road concrete.

The rainwater collection basin will be made of reinforced concrete, installed underground, adjacent to the eastern corner of the SRM, the tank will have a total volume of 128 m³ (80 m³ usable volume).

Local equipment rooms (LER)

There are two distinct local electrical equipment rooms (LER), as follows:

- • Local equipment room for SRM control, as well as 400V power distribution in the perimeter of the site.
- • Local heater equipment room, intended for the placement of control and power panels for electric heaters

The LER buildings will be container type 1AAA (back-to-back)

Gas quality analyser

The fenced site of the SRM will also include the gas chromatograph, moisture analyzer and other gas sampling/sampling equipment. The gas quality analyzer will be skid, prefabricated, pre-wired and pre-tested; and will be mounted on a reinforced concrete foundation.

The gas chromatograph and moisture analyzer will monitor the gas quality before entering the NTS. The design provided for the capacity for remote monitoring of gas quality by the CCR operator.

Inlet separator filters

2 inlet separator filters will be included in the SRM for the protection of the downstream ultrasonic meters and control valves in case of the occurrence of liquids from the marine production platform. The separator will be equipped with level switches, alarms and manual drain valves for transferring liquids to the drain collection vessel. The inlet filter/separator will be mounted on a reinforced concrete foundation.

Go-devil receiving station

A go-devil receiving station will be installed at the entrance to the SRM. The go-devil reception station will be located on a reinforced concrete foundation.

The rated pressure for the go-devil station will be equal to that of the production pipeline. The design of the go-devil station assembly must also allow its use in the opposite direction (from the SRM to the marine production platform), as it may be necessary for the emptying of the production pipeline, prior to commissioning.

Gas measuring skid

A standard solution will be used to support the gas transfer. The measurement of the gas transferred from custody will be performed by multi-channel ultrasonic meters. A total of 5 (N+1) measuring circuits with a nominal diameter of 300mm will be installed for measuring the gas transfer from custody. The measuring skid will be placed on a reinforced concrete foundation and will be provided with a metal structure shelter, covered with metal panels, to protect the measuring equipment from direct sunlight, wind and rainfalls.

Technological pipeline systems

The process equipment will be connected by a metal piping system, and the SRM pipelines will be designed to meet the nominal pressure requirements of the upstream pipeline, being equipped with overpressure protection equipment.

The design of the SRM pipelines will include temporary connections that will allow the reception of gas from the NTS to ensure the natural gas necessary for the commissioning of the offshore production pipeline and the production platform at the time of the start of operations. This will require a flow meter dedicated to the transfer of custody, completed with moisture analyser and chromatography equipment, on the reverse pressurization line for fiscal measurement and accounting of the volumes of gases taken over by the NTS.

Control valves

The control of the gas volumes transferred to Transgaz will be done through 2 x 100% control valves (N+1), installed at SRM level, downstream of the metering equipment.

These valves will also provide the ability to maintain downstream pressure within the established operational limits. Control valves can also be used to control upstream gas production to ensure optimal system operation.

Flow control valves will be placed on slab-shaped reinforced concrete foundations.

A manual isolation valve will be located east of the railway level crossing, in the entrance area of the microtunnel, and the emergency shut-off valve inside the SRM will also serve as an isolation valve west of the railway level crossing.

The location of the isolation valve will be provided with a perimeter protection fence.

Gas dispersion chimney

Inside SRM there will be no continuous exhaust of gases to the chimney.

The gas discharges resulting from the scheduled and planned maintenance/maintenance works of the SRM pipelines that require their depressurization, will be carried out by means of a gas dispersion chimney in the atmosphere, located in the fenced enclosure of the SRM.

SRM's exhaust system will be designed to safely capture/manage the emergency depressurization of gases from the SRM plant, during the operating period as well as during maintenance activities. The size of the vent is determined by the largest volume of gas discharge in the event of a fire emergency.

The exhaust system collects both manual discharges from all process equipment and emergency discharges. The system will be provided with a drainage vessel at the lowest point, insulated to avoid freezing. The drainage vessel is provided with a level transmitter for the indicator.

The maximum height of the exhaust chimney is 12 meters, due to local height limitations. As a safety requirement, the tip of the gas chimney will be provided with rings and an electrostatic cylinder to reduce the possibility of sparks. The top of the gas chimney will be installed with flanges to allow for easy replacement during maintenance.

The gas chimney will be fitted with a silencer to meet the local noise standards required by the regulations in force.

The gas dispersion chimney shall be positioned away from any ignition source and/or overhead power line and shall be designed to ensure adequate gas dispersion. The chimney will be positioned at least 50 m away from the equipment or the fenced limit of the site.

Gas heating skids

The delivery temperature of the gas for sale downstream of SRM is set by ANRE Order 92/2018 at a minimum of 0°C. SRM's gas heaters are designed to heat natural gas to meet NTS's delivery temperature requirements, especially in the cold season.

The heating skids will be mounted on reinforced concrete foundations.

Measuring and control tools

A 230V AC UPS (Uninterruptible Power Supply System) will be installed within the SRM to power essential emergency systems such as SICS and telecommunications equipment.

For the calculation of the gas flow rate through the ultrasonic meters, a computer compatible with the specifications of custodial flow meters will be installed. The control of the general operation of the SRM will be done through the process control system. The data from the computer of the flow meters and SRM will be transmitted to the CCR through a dedicated communication link.

The flow meter calculator will also control the flow of gas through the SRM. The flow regulation point will be provided by the transmission system operator in the CCR. SRM's control system will also provide the ability to regulate downstream pressure to meet contractual requirements for the pressure of the gas delivered.

The general process control and the shutdown process of the SRM plant will be managed through the Process Control System (PCS) and the Safety Instrumentation System (SIS).

Emergency shutdown

Fire and gas detection equipment will be installed within the SRM. Fire/gas confirmation will automatically trigger a process shutdown in the station, which will isolate the SRM pipelines from the attached transmission pipeline(s) to protect neighbouring equipment and facilities. Insulating and emptying pipe sections is the most appropriate fire-fighting method at a natural gas facility.

Inside LER and other areas on the SRM site will be located fire extinguishers, fire extinguishing materials/equipment according to the requirements for onshore installations.

Control Centre/Centralized Control Room (CCR)

The CCR site will be fenced and located inside the S1 area (cadastral no. 109216) owned by OMV Petrom. It is estimated that the CCR site will have a total area of approximately 3459 m2.

The list of the main facilities within the control center includes:

• Centralized Control Room itself, including operator consoles, human-machine interface and workstations;

• Material storage area

• Backup generator;

• Interior roads and parking area;

• Security fence;

• Personnel emergency evacuation gates;

• Car access gate;

• VSAT satellite antenna mounted on a metal structure with a reinforced concrete foundation.

The fenced area of the CCR and the connection to the project's access road (separately authorized) will be made of road concrete, except for the area adjacent to the perimeter fence, which will be grassed, on a width of approximately 1m.

The buildings and equipment installed on the fenced site of the CCR will comply with the maximum limit of 12 m in height, provided by the Zonal Urban Plan in force.

The Centralized Control Room - CCR will be built as an independent building located near SRM. CCR is the main operations control center for all Neptun Deep Project facilities (underwater systems, offshore production platform, natural gas production pipeline and SRM).

The CCR building will have permanent staff for monitoring and controlling the operations of the marine installations, SRM and the production platform. The Control Room Operator will also monitor the security aspects of the SRM and the production platform.

The CCR building will mainly include: operating consoles with human-machine interface (HMI), offices, equipment room, centralized control room, work permit office, meeting room, bathroom, supply storage room, kitchen, and waiting area, materials warehouse.

The CCR building will be equipped with an HVAC air conditioning system to ensure the temperature, relative humidity and air quality necessary for reliable operation of electronic equipment and acceptable working conditions. The HVAC equipment will be located on the roof of the CCR building.

Other onshore facilities/permanent areas included in the area of SRM and CCR sites

Security and fencing

Around the SRM site, as well as the CCR, anti-cut and anti-climb security perimeter fences will be installed. The security fences will be provided with gates for vehicle access and evacuation of personnel in case of emergency.

The perimeter fence that will be installed at the SRM and CCR sites will be made of metal pillars located 2.5 m apart, anchored in concrete foundations. Galvanized steel mesh panels will be mounted between the fence posts. The car access gate will be made of steel and will have a width of 4 m. The perimeter fencing will be transparent/opaque and will have a maximum height of 2.5m.

The security system related to SRM will include closed-circuit surveillance cameras (CCTV), intrusion detection, access gates with card readers and perimeter fencing. Security systems and cameras will be connected to the CCR for remote monitoring and alarming.

The CCR will be located in the vicinity of the SRM and will share the access control area with it. Security dedicated to the CCR area will be provided (access card readers, vehicle access gate with intercom, monitored CCTV system, lighting and anti-cutting/anti-climbing security fence, etc.). The section of the Control Room within the CCR will be designated as a restricted access area, with access doors operated by means of security badges and requires separation from the space designed for other uses.

Lighting

The SRM and CCR sites will be provided with lighting installations to ensure a safe working environment for the staff, in order to meet the operating requirements and to comply with the applicable codes/standards. The design was carried out with the aim of limiting light pollution.

Parking area

Within the fenced site of the CCR and outside the fenced area, outdoor parking areas will be provided. Access to the SRM will be made by vehicles or pedestrians from the CCR.

Green areas

A perimeter green curtain composed of woody vegetation will be installed around the entire plot of land comprising SRM and CCR (area S1 with cadastral no. 109216, owned by OMV Petrom except for the gas pipeline protection area, where national regulations do not allow the planting of trees or any other plants with roots deeper than 50 cm in these areas.

The species and dimensions of the plant material used for the perimeter green curtain will be selected in order to best achieve an adequate shielding of the site. The green curtain made around the project's onshore facilities will help minimize the overall visual impact.

All areas outside the fenced sites, located on surfaces S1, S3 and S4 owned by OMV Petrom, will be covered by grass.

Internal roads and technological platforms

The following internal roads and technological platforms will be built within the SRM and CCR sites:

- Access roads to SRM and Transgaz connection point (separately authorized) will be built on a total area of approximately 1831m²;
- Internal roads and the technological platform will be built in the fenced perimeter of SRM on a total area of approximately 3493 m²;
- A concrete platform (including a car park) will be built around the CCR, inside the fenced site, on a total area of approximately 1644 m².

Site organization for the building of SRM and CCR

To support the construction/installation of SRM, CCR and other related facilities, a site organization will be required.

The main facilities included in the site organization for SRM and CCR are:

• Temporary pre-assembly area with an area of approximately 5,379 m², which also includes:

- Warehouse for storing materials installed;
- Fenced area for the storage of chemical products with an area of approximately 48 m²;
- 7.5 m³ fuel tank;

• An area of approximately 3,261 m² that includes the following facilities:

o Administrative area, including the contractor's office, customer office, dining room, first aid point, toilet and showers and security cabin;

o Temporary road for the organization of a construction site with an area of approximately 408 m²;

o Septic tank for the collection of domestic water with a volume of 20 m³;

o Water tank with a volume of 12 m³;

• Temporary parking with an area of approximately 1,130 m².

The total area occupied by the site organization (including office containers, parking lot, pre-assembly area, site road, etc.) will be approximately 9,770 m².

The infrastructure of the temporary works inside the site organization at SRM (administrative area, temporary parking, pre-assembly area, storage of materials and chemicals, site road) will include:

- Removing topsoil to a thickness of 30 cm;
- Improvement of the foundation soil by desensitization to wetting, including:

  o removal by digging about 50 cm of the loessoid layer;

  o Making the "loess cushion" by reusing the excavated material with re-installation in successive layers of 15 – 20 cm thick, after compaction;

- Installation of waterproof geotextile;

- Laying the 20 cm layer of ballast, optimal mix 0-63 mm sort;
- Laying the 20 cm layer of coarse aggregate, 0-63 mm apron;
- Laying a 10 cm layer of penetrated macadam.

Drainage slopes will be made to prevent rainwater from stagnating on the land.

A perimeter security fence will be installed around the site organization.

The security fence will have pedestrian gates and 2 car access gates, with the pillars located 4 m apart. The gates will be provided with a locking system. The car access gates will each have an emergency exit gate for staff.

c) Site organization necessary for the building of microtunnel

For the construction of the underpass (microtunnel) and the installation of the gas production pipeline and optical fibre cable in the tunnel, temporary facilities and works will be required.

The total area temporarily occupied by the facilities related to the construction organization of the microtunnel will be approximately 15,349 m2.

The main facilities required for the construction of the underpass (microtunnel) and the installation of the gas production pipeline and optical fibre cable, include:

- The main construction site for the microtunnel (including the launch manhole) with an area of approximately 5,850 m2;
- Temporary access roads to the site organization, the pipeline assembly area and the pipeline storage area with an area of approximately 9,499 m2,

The infrastructure works necessary for the construction of the temporary facilities mentioned above (site organization and temporary access roads) will include:

- Removing topsoil to a thickness of 30 cm;
- Improvement of the foundation soil by desensitization to wetting, including:

  o removal by digging about 50 cm of the loessoid layer;

  o the realization of the "loess cushion" by reusing the excavated material with the reinstallation in successive layers of 15 – 20 cm thick after compaction;

  - Installation of waterproof geotextile;
  - Laying the 20 cm layer of ballast, optimal mix 0-63 mm sort;
  - Laying the 20 cm layer of coarse aggregate, 0-63 mm apron;
  - Laying the 10 cm layer of penetrated macadam.
  - Drainage slopes will be made to prevent rainwater from stagnating on the land.

The description of each of the temporary facilities mentioned above is presented below.

Site organization for the microtunnel (launch manhole area)

The main facilities/equipment related to the fenced microtunnel site include:

- Control cabin for tunnel digging equipment
- Tunnel pipe storage area
- Pipeline loading-unloading crane
- Hydraulic power unit
- Diesel generators 3 pcs
- Recirculation unit
- 2 bentonite silos
- Mixing unit
- Buffer tank
- Water storage tank
- Pumping unit
- Workshop containers
- Equipment storage containers
- Office containers, toilets, first aid
- Personal containers
- Two containerized steel tanks with a volume of 30 m^3 each for collecting excess water resulting from the preparation of drilling fluid
- Fresh water tank, with a capacity of 12 m^3;
- Domestic wastewater collection basin with a capacity of 20m^3

A storage area of 1,100 m2 will be used for the storage of excavated topsoil from the entire site. The storage area will be built south of the pipeline installation corridor.

A storage area of 8,420 m2 will be used adjacent to the launch manhole area for the storage of the excavated soil resulting from the launch manhole construction. Of the total volume of excavated soil, part will be used to fill the manhole at the completion of construction work, and the remaining volume will be transported and disposed of at an authorized landfill.

The drilling detritus resulting from the tunnelling process will be separated from the drilling fluid in the separation facility (recycling unit) and will be temporarily stored on site in the area of the separation facility before being transported and disposed of at an authorized disposal facility.

The main construction site will be provided with perimeter security fences. The fencing system of the construction site organization from the microtunnel will be similar to the one installed at the construction site organization for SRM. The organization of the construction site at the microtunnel will be provided with a sliding gate for the access of vehicles.

Temporary access roads for construction

The temporary roads will be built of coarse aggregate and penetrated macadam and will provide access to the microtunnel execution area and the pipeline assembly and storage areas. The total area temporarily occupied by the access roads for the construction site is approximately 9,499 m2. The temporary access roads will have a total length of 1,357 m and a width of 7 m along the entire length of the road.

The temporary roads will be decommissioned after the completion of the constructions and the land will be returned to its original state.

Description of the land areas occupied by the permanent land, shore and sea undercrossing components of the project

Land area permanently occupied onshore

The permanent onshore components of the project (SRM, CCR and the shut-off valve of the station) will be located on the land owned by OMV Petrom SA, respectively Land S1, cadastral code 109216) SRM, CCR and other auxiliary components SRM and CCR) and land S3 cadastral code 109659 (the shut-off valve of the station).

The total area of land permanently occupied is approximately **28.132 m^2**, of which:

- 23,183 m^2, the area occupied by SRM;
- 3,459 m^2, the area occupied by CCR;
- 25 m^2, the area of the rainwater collection basin;
- 409 m^2, the area occupied by the shut-off valve of the station
- 1,056 m^2, inland roads to Transgaz connection point and SRM

The underground onshore section of the gas production pipeline and fiber optic cable, from the SRM to the microtunnel entry point on land, will occupy an area of approximately **2,117 m^2.**

The green areas (perimeter curtain of trees, green fence of shrubs and grassy areas) designed for the onshore site of the project will occupy a total area of approximately 20 ha.

Permanently occupied offshore area

The area permanently occupied by offshore components (the marine production platform, the Domino and Pelican South drilling centres, the umbilical systems, the supply/adduction pipelines, the gas production pipeline and other auxiliary facilities) is approximately 813,607 m2, of which approximately:

- 3,547 m^2 will be occupied by the offshore production platform;
- 8,686 m^2 will be occupied by the Drilling Centre Domino 1 (DODC1) and the related underwater equipment (manifold, eruption heads, etc.);
- 8,722 m^2 will be occupied by the Drilling Centre Domino 2 (DODC2) and related underwater equipment (manifold, eruption heads, etc.);

- 11,088 m^2 will be occupied by the Drilling Centre Pelican South (PSDC1) and related underwater equipment (manifold, eruption heads, etc.);
- 73,260 m^2 will be occupied by the Domino supply/adduction pipeline;
- 2,952 m^2 will be occupied by the Pelican South supply/adduction pipeline;
- 2,952 m^2 will be occupied by the umbilical system from the production platform to the Drilling Centre PSDC1;
- 52,280 m^2 will be occupied by the umbilical system from the production platform to the Drilling Centre DODC1;
- 12,040 m^2 will be occupied by the umbilical system from Drilling Centre DODC1 to Drilling Centre DODC2; and
- 638,080 m^2 will be occupied by the natural gas production pipeline of 30 inches (762 mm) and the optical fibre cable.

Area occupied by the shore undercrossing

The microtunnel crosses the shore, the net and the De259 service road. The entry point into the tunnel is located on the S4 land owned by OMV Petrom SA and the exit point is in the Black Sea coastal area. The underground area occupied by the microtunnel is approximately 2,136 m², of which:
• 678 m² in the land area;
• 1,458 m² in the coastal area of the sea.

Description of the land areas temporarily occupied by site organizations and other works/temporary facilities

The land areas temporarily occupied by the site organizations and other temporary works will temporarily occupy a total area of approximately 52,451 m², of which the area of approximately:

- 1,030 m² will be occupied by the temporary railway grade crossing, including the connection with local roads;
- 16,523 m² will be occupied by the installation corridor of the gas production pipeline;
- 539 m^2 will be occupied by the undercrossing of the railway and local roads by the gas production pipeline;
- 9,490 m^2 will be occupied by the site organization for SRM and CCR (including office containers, parking area and pre-assembling area) of which:
    - 5,379 m^2 the total pre-assembly area including the material storage warehouse, the fenced chemical storage area and the fuel tank;
    - 2,981 m^2 the total area occupied by containers, the administrative area, the construction site, the domestic wastewater collection basin and the water tank;
    - 1,130 m^2 will be temporary parking area.

- 5,850 m^2 will be occupied by the site organization for the microtunnel, including the launch area of pipeline;
- 9,499 m^2 will be occupied by the temporary access roads to the site organization for the microtunnel;
- 1,100 m^2 storage area of vegetal soil;
- 8,420 m^2 storage area of excavated soil;

Description of production processes necessary for the operation of the project
Description of offshore production processes

The proposed objective of the Neptun Deep project is to develop natural gas resources from the Pelican South (one drilling centre) and Domino (two drilling centres) reservoir fields. The mixture of gas and water reaches the facilities of the Neptun Alpha Platform through separate supply/adduction pipelines, from the drilling centres of the Pelican South and Domino reservoir fields. The Neptun Alpha platform will be equipped with facilities and facilities to support the gas production, separation and dehydration process, such as:

• Inlet manifold;

• Inlet separator;

• Gas dehydration unit;

• Glycol regeneration system;

• Degassing of reservoir water;

• Wet gas cooler;

• Coupling installations;

• Well cleaning facilities

Due to the expected concentration of 99.4% dry gas/methane without liquid hydrocarbons present in the gas streams from Domino and Pelican South, the process equipment in the plant is not designed for the management of liquid hydrocarbons.

a) **Production manifold**

The supply/adduction piping system incorporates an open-loop direct electric heating system that is used for continuous hydrate prevention for the Domino reservoir field, respectively a flexible electrically heated supply/adduction pipeline for the Pelican South reservoir field. The electricity generated on the platform is used to power both the heating systems of the supply/adduction pipelines.

The Domino supply/adduction pipeline will have a fixed riser, and the flexible Pelican South pipeline will go up on the jacket inside a J tube.

On the platform, the two risers pass through the boarding valves, followed by pigging T-connections. The flow route through the main line of the pigging T provides access to either the go-devil station for Domino or a temporary go-devil station for Pelican South.

A permanent go-devil station is provided for the Domino supply/adduction pipeline sized to house the largest in-line maintenance and inspection system. A space will be allocated on the platform to allow the cleaning system to be discharged.

The purging of the go-devil station will be carried out through a nitrogen system that also has the ability to extinguish the gas dispersion chimney in case of emergency and is sized to provide at least three extinguishing attempts, in addition to the maintenance purge. Nitrogen pressure cylinders along with a distribution keypad are provided to facilitate the purging of equipment such as go-devil stations.

By means of the pigging T, the flow from the well is directed to the production manifold. On both supply/adduction pipelines (Pelican South and Domino) isolation and flow and pressure control valves are mounted, before the mixing point at the manifold. The return from the go-devil station at Domino is also mixed with the flow from the wells in the production manifold, before being directed to the primary separator.

To prevent the formation of hydrates during the winter, the risers are electrically heated from the wave-breaking area to the inlet separator, including through the inlet manifold. While ambient temperatures can reach -17°C, electric heating will maintain a process temperature above the hydrate formation temperature.

b) Separation of gases

The production from the Domino and Pelican South reservoir fields will be distributed through the manifold in such a way that each flow can be directed to the inlet separator. The complete flow from the wells is then separated into produced gas and produced water, through the inlet separator.

The inlet separator is a traditional gravity-based, vertical separator designed to ensure the separation of liquid from vapor and has an overflow capacity of 23 m3.

The operating pressure of the inlet separator will be 100-110 barg in the early period of operation, but will reduce to 60 barg towards the end of its service life (low flow). Operating pressure will continue to decrease as production rates decrease as pressure in the export pipeline decreases. The average gas arrival temperature is 25 °C; however, in summer the temperature can reach up to 30°C.

The defoamer will be injected at the inlet of the primary separator to prevent the formation of foam inside the separator. The wet gas separated from the primary separator flows to the gas dehydration/drying unit (TEG Contractor).

The liquid that comes out of the bottom of the separator is composed of produced water, injected chemicals and solids (sand from the deposit). It should be noted that there will be no liquid hydrocarbons in the liquid stream.

The inlet separator and pipelines have been designed so that the sand remains captured in the aqueous phase and transmitted to the produced water separator to prevent sand build-up in the separation system and pipelines.

While the measurement of gases for allocation to wells takes place underwater at the eruption head, the measurement for the transfer of fiscal custody takes place on land, within the SRM. Also, the supervision of the level measurement for gas and water flows is provided from the separator.

The liquid level in the separator will be controlled by a level regulator and control valves mounted at the liquid outlet in the separator. The pressure is controlled by a pressure regulator located downstream at the inlet of the pipeline. The gas outlet temperature will be monitored to ensure that it operates above the hydrate formation temperature (15 oC) and below the maximum operating temperature limit of 35 oC of the gas dehydration unit, which has low performance from 30 oC. The flow rates at Pelican South (high-temperature fluids) and Domino can be adjusted as needed to keep the temperature within operating limits.

As a result of the high temperatures possible when gas arrives from Pelican, to allow production exclusively from Pelican, a wet gas cooler is included to improve the performance of the downstream gas dehydration system so that it can meet export sales specifications. The system will use a seawater lift system to supply the coolant, and the coolant is directed to the caisson for discharging the reservoir water (technological) into the sea.

Exhaust valves and safety valves for overpressure protection will be provided on the separator, which will be connected to the manifold of the high-pressure gas dispersion chimney., and the emergency manifold.

The gas from the inlet separator is directed through the Wet Gas Cooler to the gas dehydration unit. The liquid discharged from the inlet separator is discharged into the degassing vessel of the produced water where the waste gas remaining in the mixture of produced water, particles and chemicals, is removed by a flash separation at low pressure (0.5 bar). The gas thus separated is directed to the low-pressure (LP) torch, and the rest of the water effluent produced will be managed in compliance with the specific legislation in force.

c) Wet Gas Cooler

Wet Gas Cooler - tube heat exchanger type - jacket installed to ensure a constant supply temperature to the downstream TEG contactor. The wet gas cooler increases the efficiency of TEG regeneration and reduces continuous combustion volumes at low pressure. This allows for operational flexibility and increased uptime, allowing for exclusive production from Pelican and increased efficiency in plant start-up.

The gas is cooled to 25°C so that an adequate margin is maintained with respect to the hydrate formation temperature. The gas is cooled by means of cooling water in the form of treated seawater. Seawater is pumped and treated in coarse filters. The seawater flow passes through the outside of the heat exchanger and comes into contact with the tubes containing the production gas, cooling the gas to the target temperature. The seawater is then directed to the technological water caisson, and the gas enters the TEG contactor/gas dewatering unit.

A bypass will be provided on the process side of the gas to allow direct gas flow to the TEG contactor/gas dehydration unit in the event that the wet gas cooler is not operating.

d) Dehydration/drying of gases

The gas produced from the inlet separator is dehydrated/dried in the TEG unit using lean TEG. Lean TEG absorbs water during the dehydration process and becomes rich TEG glycol. The water-rich TEG stream is regenerated in a conventional glycol regeneration system. For system start-up and initial filling, lean glycol is stored in the TEG storage tank with a storage volume of 200 m3, installed in one of the legs of the jacket.

The TEG contactor uses a "chimney" tray arrangement to direct the gas upwards while preventing rich glycol from entering the vessel basin. A mist reducer is provided before the gas passes through the "chimney" to remove any captured water droplets.

A return pipe from the chimney will be used to control the level of leaked TEG, and the total volume retained above the chimney will be calculated so as to retain the entire TEG inventory of the package plus the liquid level at the high level alarm. In the event of an unplanned process shutdown, the TEG is prevented from entering the lower vessel by closing the TEG outlet.

A high-capacity structured package with a top-access glycol dispenser shall be used to ensure distribution throughout the structure so that there is no possibility of gas leakage through the TEG contactor.

In order to minimize the amount of TEG blocked in the gas flow at the exit of the contactor, two forms of liquid collection are provided:

- Buffer sieve located at the top of the TEG Column to remove larger TEG droplets.
- A separator filter at the outlet of the TEG contactor. It is located downstream of the TEG contactor and will collect finer TEG particles. The collected liquids will be directed to the TEG regeneration unit.

The dehydrated gas leaving the dewatering unit is directed through the underwater production pipeline to the onshore gas metering station and finally to the NTS for further distribution.

A wet gas analyser is installed at the pipe outlet of the TEG Contactor. Process safety valves (PSV) alarm and tripping systems will be fitted as required to facilitate the safe operation of the system.

e) Triethylene glycol regeneration (TEG)

The rich TEG from the outputs of the gas dehydration system is directed to the TEG regeneration system. The rich TEG is regenerated for reuse by low-pressure flash separation, heating and by removing combustible gas. The regenerated lean TEG is directed back to the gas dehydration system. Lean TEG from the storage tank will be added to the system to maintain optimal system operating parameters.

The TEG regeneration system is composed of (equipment listed according to the order of the technological flow):

- TEG reflow condenser: mounted at the top of the distillation column (Still);
- Rich distilled TEG tank (vertical two-phase separator);
- Rich TEG filters;

- Low/rich glycol heat exchangers;
- TEG column (vertical) mounted on the top of the TEG reheater;
- TEG (horizontal) reheater with electric resistance located inside;
- TEG electric heater (4 x 200 kW) consisting of 4 packs, each pack with 33% excess elements (not connected to the power supply) required as a backup;
- Gas stripping column (vertical);
- Lean TEG drain vessel (horizontal vessel);
- Lean TEG pumps;
- Lean TEG air cooler: unit combined with the air cooler from the reheater exhaust, using common fans; during normal operation only one fan will work; both fans will operate during peak periods;
- Cooler with evacuation of reheater air: unit combined with TEG air cooler by using common ventilators;
- Reheater exhaust separator vessel: two-phase vertical separator with outlet connected to the low pressure flare.
- The TEG Regeneration Unit is a block unit. All of the above equipment and associated piping are included in the unit skid, except for the reheater exhaust separator vessel, which is located outside the skid.

On the rich TEG inlet pipe to the regeneration unit, a control valve is used to reduce the pressure to the operating pressure of the rich TEG flash type separation vessel. The rich TEG is preheated in the TEG reflow condenser (located at the top of the Still column) by heat exchange with the vapors from the TEG reheater. From the condenser, the rich glycol flows to the flash-type separation vessel, where the glycol is distilled to remove any dissolved gases that are sent to the low-pressure flare. The role of the rich TEG flash separation vessel is to extract by depressurization and heating the remaining gas and reservoir water that have been dissolved in the TEG in the gas drying process. Since liquid hydrocarbons are not present in production fluids, therefore, their presence in the TEG regeneration system is not expected. Therefore, there is no hydrocarbon separation system in the flash separation vessel, and also no carbon filters are required for hydrocarbon adsorption. However, the TEG system is a closed circuit in which decay and corrosion residues could accumulate. The rich TEG in the flash separation vessel flows through the glycol filters to remove solids/impurities larger than 5 microns. Two filters are fitted, one for operation and the other as a backup.

After the glycol filters, the rich glycol is further heated in the low/rich glycol heat exchanger by cross-exchange with the hot lean glycol coming from the TEG reheater. After the heat exchanger, the rich glycol flows to the Still column, where the water is removed from the glycol by distillation.

The Still distillation column operates at approx. 0.5 bar. The temperature is 204°C at the bottom of the column, and the temperature of the vapors leaving the TEG Reflux condenser is maintained at approx. 100°C by the flow of cold rich TEG from the cooling radiators and their bypass.

Vapours that are not condensed by the condenser above are sent to the gas dispersion chimney. This cross-heat exchange cools the vapours from the top of the column providing reflux into the Still

distillation column to minimize glycol losses. The liquids from the Still distillation column flow to the glycol reheater located at the bottom of the Still distillation column. The TEG reheater uses electrical resistances to heat and vaporize the water in the glycol. The temperature in the TEG reheater is maintained at 204°C.

From the TEG reheater, lean glycol flows through a discharge pipe to the Stahl gas stripping column. In the column the TEG flows counter-current to a small amount of stripping gas (combustible gas) for the final removal of the water.

The concentration of lean TEG needed to dehydrate the gas is reached in this column. The stripping gas is taken from the low-pressure fuel system and is preheated by flowing through a radiator inserted into the TEG reheater. Excess stripping gas can proCOVa large TEG losses in the Still distillation column and therefore its flow rate must be controlled.

The TEG at the bottom of the Stahl's column flows through a drain vessel, while the gas from the top of the column returns to the glycol reheater. The drain vessel feeds the low/rich TEG heat exchanger where the lean glycol is cross-cooled with the rich glycol. After the heat exchanger, the lean glycol flows to the TEG drain vessel. This liquid flows by gravity. The TEG drip vessel provides a buffer volume for circulating glycol and is used to maintain an adequate amount of TEG in the system and provide a reasonable uptime before TEG is added to the system. It is also designed to maintain a sufficient volume of lean TEG and to support the change in TEG volume due to thermal expansion when the system is heated.

Lean TEG is pumped from the TEG drain vessel by the lean TEG pumps through the air cooler into the gas dehydration system. There are two lean TEG pumps, one functional and the other stand-by. When the running pump fails, the stand-by pump should start automatically. The lean TEG air cooler further reduces the temperature of the lean TEG for injection into the gas dehydration system. It should be noted that the lean TEG supply temperature will be adjusted based on the operating temperature of the gas dehydration system and the ambient temperature conditions.

The non-reflux vapors from the TEG reflux condenser are sent to the reheating exhaust air cooler and then to the reheating exhaust separator vessel. The condensed water is separated and removed through the produced water discharge box. The gas separated from the top of the exhaust separator vessel is sent to the low-pressure flare.

The temperature of the gas from the distillation column Still/Reflux Condenser is controlled by adjusting the bypass valve of the condenser's heat exchanger. The liquid level in the flash type separation vessel will be controlled by a level regulator and a control valve mounted at the liquid outlet. The pressure of the flash separation vessel is controlled by the pressure control valve located at the vapor outlet. The temperature of the rich TEG reheater is controlled by heating resistance control. The flow rate of the combustible gas (stripping gas) is controlled by a flow regulator in the fuel gas supply line. Minimal flow control is provided for the protection of the lean TEG recirculation pump.

The supply temperature of the lean TEG is controlled by the bypass mechanism of the lean TEG in the air cooler. The level in the drain vessel is controlled by turning the pump on/off from the lean TEG storage tank.

Safety valves and relief valves are provided for the protection of equipment/pipes from overpressure.

f) Transfer of gas to the shore

Downstream of the gas drying units, the combined flow of treated gas is collected and transported to shore. A back pressure control valve is provided on the combined flow to allow a constant pressure, independent of the filling of the pipe, its emptying or the rate of gas transfer to the SRM onshore. A dew point analyser is fitted to ensure that the dew point specifications are met at the gas outlet from the dehydration system to the pipeline. A small amount of gas is then picked up to feed the fuel gas system on the platform before the remaining gas leaves the platform and is transported to shore via the production pipeline.

For the maintenance of the production pipeline, a single go-devil station is provided sized to accommodate the largest adequate maintenance system of this pipeline. Sufficient space will be allocated to allow the go-devil station to be loaded, as well as the addition of an extension to receive an in-line maintenance and inspection system. The purging of the launcher is carried out from the nitrogen system. To drive the cleaning system, gas resulting from the gas drying system will be used.

g) Treatment of water produced

The flow of liquid collected in the primary separator is estimated to be in the aqueous phase only. Both Domino gas and Pelican gas are very low in hydrocarbons, and a fraction of hydrocarbons are unlikely to exist in the liquid stream.

When starting the wells, the liquid flow may contain some non-aqueous drilling fluid, methanol, and saline. At each shutdown/restart of the well, methanol is injected into the process, which reaches the liquid stream.

The aqueous fluids, normally condensed reservoir water, with the potential for subsequent production of the salt water produced, are directed to the degasser of the produced water to allow the evacuation of the absorbed gases (methane and CO2) so that the final discharged water is clean and degassed. The water is discharged into the sea through the produced water discharge caisson.

Filtering system

Flow Back oil separation filters are installed downstream of the produced water deaerator and upstream of the level control valves. Installations on the upper deck are used to filter well cleaning fluids that are transported from the wells. This operation can take several months, as Domino is at a considerable distance from Neptune Alpha and it may take time for all well cleaning fluids and any fluids associated with well completion to reach the platform.

It may also be the case that there is a staggered start-up of the reservoirs that results in the emergence of fluids from the well after start-up, although this would still be during the start-up period. Each filter can remove 99.9% of particles 50 microns and larger than 50 microns.

The circuit of the produced process water includes a passage through the oil removal filters so that the particles are removed from the water. In this mode of operation, the "treated" water is then directed to the open drain tank, where the oils in the water can be analysed.

The well cleaning fluids are processed according to procedures, using the open drain tank and then through the degasser.

The water flow load, associated with the reverse flow oil cleaning process, is sized only on the maximum water load produced from a single well. The presence of significant amounts of water produced at the beginning of the exploitation of the reservoir is not expected to be the same as the amount of fluid used to start the well.

The filters are installed for service/stand-by to meet uptime and maintenance requirements. The tools provided will indicate that blockages caused by particles (high differential pressure) are occurring, so the switch valves can be operated remotely to divert the flow to the designated backup unit.

Isolation around each set of filters allows maintenance activities to be performed.

Deaerator of the water produced

The produced water deaerator provides a pressure reduction for gas desorption and separation, before the water is removed into the sea via the produced water outlet caisson that is sized and configured to cope with normal and abnormal operating events. These are:

1. Normal water flow is expected to be low, associated with:

• Condensed water associated with gas production;

• Water produced up to a maximum equivalent of 10 barrels per MMSCF.

2. Water Flow Associated with Go-Devil Running Operations in the Domino Stream

The gas exhaust system in the deaerator of the produced water is connected to the low pressure flare system (LP Flare), therefore, the deaerator is designed to operate at a pressure that adapts to the pressure of the LP Flare system. The vessel is oriented and sized so that it can operate based on liquid flow using the static pressure of the liquid when the pressure of the LP Flare system is at atmospheric value.

The level control is provided in such a way that, during an emergency depressurization event inside the LP flare that leads to an increase in the back pressure of the system, there is no liquid loss event that results in a release of gas into the produced water outlet caisson.

Liquid retention times are based on the maximum flow rate of water produced and may deviate from the liquid retention times specified in the process design requirements. A review of the process safety time, in terms of the closure of the liquid outlet valve and the response of the level control valves, takes into account the case of gas being exhausted through the liquid outlet.

The vessel is equipped with an internal cleaning system. The fluid will be provided by temporary installations. The vessel includes instruments for measuring pressure and liquid level.

On the exhaust pipe, the produced water deaerator has an oil-in-water analysis system to meet the requirements for uptime and maintenance.

The analyser is installed downstream of all outlet lines that are directed to the produced water outlet caisson so that the water quality is confirmed prior to disposal. The regulated limit of water discharge is 15 ppmv of oils in water.

The outlet line downstream of the level control valve includes an outlet pipe directed directly to the open drain tank.

Caisson for discharge of water produced

The technological water resulting from the degassing vessel, the water collected at the open drainage system and the water recovered from the flare separators, will be directed to the vertical discharge caisson into the sea. The caisson is equipped with a ventilation valve located on the entrance line. **The caisson discharge head is located at a depth of 90m, with a diameter of 500mm.**

h) Utilities

A. Chemicals injection systems

The chemical injection system includes:

• Corrosion inhibitor tank with a volume of 21.5 m^3;

• Deposit inhibitor tank with a volume of 21.5 m^3;

• Defoaming tank with a volume of 14.4 m^3;

• Spare tank with a volume of 14.4 m^3.

The injection system consists of a tank with 4 compartments, one compartment for each of the identified chemicals and injection pumps. The capacity of each compartment is sized to ensure the necessary for 3 months, depending on the level of work between 10% and 90% of the measured level. A 25% surcharge was added to the volume calculated based on the certified capacity of 790 MMSCFD.

The chemical specifications of the defoamer require that the defoamer tank requires a heater to maintain a temperature not lower than 5°C.

The top of each tank has connections for the filling points. Chemical filling is done by gravitational drainage from the tanks located on the upper deck and properly served by the platform crane. Couplings for specific chemicals, identified by colour codes, ensure that no connections are crossed for chemicals during feeding.

The chemical injection tank, and its couplings, are located in a retention tank and without grates, so that any leaks can be retained. The bowl is sized to take over the product volume of the largest compartment. It is provided with a drain valve that is connected to the open drain system, as well as a connection point so that the leak can be collected entirely by means of a portable temporary pump.

The common tank includes a spare compartment. Nozzles are provided for all possible future connections, which are supplied shielded and are sized similarly to the anti-foaming tank.

Each pump has facilities to allow the calibration of the pump flow at the inlet, and on the discharge side each has a pulsation damper, a safety valve (1 x 100%) and an exhaust facility, so that the safety

valve will not rise in case of lack of normal flow to the designed service. There are particulate filters downstream of the pump drain line to ensure that the fluid delivered is clean. The filter will remove 99% of particles that have a size > 50 microns.

B. Open drainage system

All open leak operations are manual and require the presence of the offshore operator. Automation of these systems is not allowed. Drainage is carried out in the open drain tank.

The upper deck is provided with drainage channels. These sections collect rainwater, in collection areas sized for storm events.

The leaks from the helideck are directed directly to the open drain tank without interconnection with the leaks on the deck. The helideck drain line is sized for free venting with a three-way automatic tap so that during normal operation, rainwater can be directed to the produced water outlet caisson.

The outlet of any drain connection with "free ventilation" includes an elbow and grate to prevent rainwater from entering and to prevent birds from nesting there.

B.1 Open drainage tank

The open drain tank is located in one of the legs of the Neptun Alpha Platform. It is operated at atmospheric pressure and is therefore an "atmospheric" tank, although it will withstand the static pressure of the water maintained at the maximum level of the liquid.

B.2 Caisson of open leakage pump

The pump of the open drain caisson is adjacent to the drain tank, with a connecting pipe between the two, installed at the lowest possible height in the open drain tank.

A vent line similarly connects the air gap above the maximum fill level in the open drain tank with that of the open drain pump caisson. The size of this line ensures that suction occurs without the pressure exceeding the design pressure of the caisson. The caisson is designed to take the static water pressure maintained at the maximum liquid level, plus a system design pressure of less than 0.5 barg to negate any PED requirements.

The open drain pump (1 x 100%) is installed in the open drain pump caisson under the lower flange of the open drain tank. The height ensures that the pump is always submerged and that there is enough liquid column above the low liquid level of the pump.

The open drain pump is sized so that it can process the maximum rainwater flow rate or 11 m3/h, whichever is greater. The open drain pump is installed at the top of the tank and can be recovered, hydraulically with lifting units located on the Neptun Alpha.

The discharge pipe for the open drain pump is in the product water discharge caisson. An analysis system provided on the outlet line monitors the presence of liquid hydrocarbons in the discharged water. The evacuation line has a connection for evacuation to FSVs (support vessels) for the evacuation of contaminated water, for transport and treatment on shore by authorized economic agents.

C. Methanol system

The methanol is supplied from a common storage and supply system to three separate operations. As such, there are three separate methanol pump systems.

- Upper deck operations
- Riser and SSIV operations.
- Underwater – drill head and manifold operations

The injection of methanol is not normally continuous. It is only necessary during start-up, stop and re-start operations of production wells

The methanol storage tanks are located at the foot of the Neptun Alpha platform jacket. The total volume of methanol stored on the platform is approximately 432 m3. This is to supply methanol for shutdowns, well restarts, and any requirements on the upper deck. The volume of methanol must be verified as sufficient to provide 2 reservoir shutdowns and 3 cold restarts (10 wells) at any point during the production life before requiring methanol refilling.

The methanol is loaded via the FSV (support vessel) using a self-tapping hose connection and a suitable coupling for connection to the FSV.

The methanol storage tanks have level sensors so that the level in the tank is indicated both locally and at the CCR. The methanol level can also be monitored by operators during air-hauling operations. An audible alarm alerts the operator to possible overfilling.

Each methanol storage tank has an adjacent methanol storage box with an internal methanol pump, sized at 15 barg. The pumps are sized so that any of them can process a maximum methanol injection flow rate of 11 m3/h.

Each methanol storage pump platform. The ventilation and purge connections, together with the gas detection valve, allow confirmation that the caissons have been adequately ventilated before safe opening takes place.

The methanol pumps are configured as 2x100%, with the flow from the service pump directed to the methanol pre-filters. These are cartridge filters with top-opening flanged heads, so the internal cartridge can be removed and cleaned. Methanol pre-filters each have:

- 1 x safety valve 100%.
- Drainage connections for recovery of methanol
- Local air valve.

Remote operated control valves are provided on the inlet of each pre-filter so that the operating/standby arrangement can be activated upon detection of a dirty filter.

High-pressure methanol injection pumps, operating at 320 barges, provide a methanol cleaning at the jumper connections between the eruption heads and manifolds during a controlled shutdown of the underwater production system. Methanol is needed in this process because the jumpers are not served by the direct electric heating (DEH) (Domino) or electric heating (EH) (Pelican) system and would otherwise be vulnerable to cryohydrate formation.

High-pressure methanol is also required upstream of the underwater nozzles, at start-up, while the wells are heating up, and to equalize the pressure over the bottom safety valves (DHSVs) to allow them to open.

The methanol and SSIV injection pumps are configured as 2 x 100% and operate at 144 barg.

The methanol injection pumps on the platform are configured as 2 x 100% and operate at 105 barg. The pumps are sized to meet the maximum service identified for platform operations. These are:

- Wet gas cooler – overcooling at start-up.
- Operational exhaust – primary separator.
- Hydrate inhibition, only in Domino.

D. Flare System

Neptun Alpha has two separate flare systems:

- Low pressure system (LP Flare): gases arrive from all sources of overpressure from upstream equipment with design pressure not exceeding 45 barg; plus low flow/inventory operational emissions from the process plant that cannot tolerate excessive variable back pressure.
- High pressure system (HP Flare): gases arrive from all sources of overpressure from upstream equipment with a design pressure greater than 45 barg; plus high flow rates from pressure control functions that are part of the process start-up system and short-term operational interruptions.

Each of these systems is completely independent of the other.

D1 Low Pressure Flare System (LP Flare)

The low-pressure flare system is designed to incorporate low-pressure (wet gas) operational sources. Overpressure protection on the platform ensures that no liquid discharges are allowed into the LP combustion system. The exception to this is the discharge of rupture discs from the wet gas cooler.

The sources associated with the LP flare are directed to a KO tank dedicated to the LP flare. All liquids collected in this KO tank are directed to the deaerator of the produced water, which is then directed to the caisson for the discharge of the produced water

The KO tank is sized for maximum gas flow and is designed so that no liquid droplets larger than 450 microns are present in the ascent flow directed to the flare.

D2 High Pressure Flare System (HP Flare)

Sources associated with HP Flare are directed to a KO tank related to the HP flare. All liquids collected in this KO tank are directed to the produced water discharge caisson, based on the absence of liquid hydrocarbons.

The chimney filter is sized for maximum gas flow and is designed so that no liquid droplets larger than 600 microns are present in the exhaust flow directed to the flare. This is based on a sonic peak in which the droplets are expected to be atomized.

D3 Flare Structure, Flare Peak

The Flare system includes:

- A common support arm of the chimney for HP and LP Flare in the East side of Neptun Alpha.
- HP Flare Peak
- LP Flare Peak

The HP peak is a type of sonic equipment, so the back pressure generated in the flare boom results in the practical sizing of the flare column. The tips of the HP and LP flares are at a common altitude of 105 meters above sea level, determined by the evaluation of the arm length, flame radiation, and standard performance criteria;

The HP flare peak is designed for the maximum flow rate of 950 MMSCFD.

The LP Flare peak is designed for the maximum identified scenario of emergency overpressure release. This is identified as the flow of gas that enters from the primary separator to the produced water deaerator.

Reduction flow rate is defined as the lowest flow rate at which the selected flare peak will operate while maintaining sonic flow conditions. The flow rate below this level is subsonic, where reduced air entrainment can lead to incomplete combustion. The LP Flare is a type of subsonic equipment because it must maintain a low back pressure during the exhaust period with low flow rates.

The gas for the pilot systems of the flare is taken from the low-pressure combustible gas system. Both the HP and LP flares use the same pilot gas ignition systems. The primary pilot gas ignition source uses a high-energy electric spark system capable of multiple ignition attempts. There are flame extinguishing detection sensors that monitor HP and LP pilot gas ignition.

There is no atmospheric ventilation system interconnected with rigid ducts. The equipment is provided with local atmospheric vents where it is practical and safe.

The structure of the torch includes a vertical ship's ladder access ladder from deck level to the top, complete with rest platforms every 10 m distance, fall safety system and lockable swing gate at access to the deck of the platform.

E. Supply system with combustible gas

The fuel gas system takes sale-quality dehydrated gas from the export line. The combustible gas is supplied from the high-pressure gas and to the users from the low-pressure gas:

- Gas turbine power generators (GTG) – high pressure.
- Flare piles – low pressure.
- Flare manifold purges – low pressure.
- Covering gas for storing methanol and lean TEG - low pressure.

The combustible gas is preheated by an electric heater to prevent cold temperatures and ice formation in the combustible gas filter thanks to Joule-Thomson cooling; and to ensure that the

combustible gas is supplied according to the GTG's operating specifications (at least 15°C above the water dew point at 30 barg).

The combustible gas filter is located downstream of the combustible gas superheater and the pressure reducing control valve. The combustible gas filter can trap any liquids that may have condensed outside of the gas phase. All liquids are directed to the rich TEG vaporization tank.

F. Technological air

A permanent air generator will not be provided on the platform, but rather temporary supply of utility air will be provided when necessary. Hose drum connections supplied with disconnect couplings ensure quick release in the event of an uncontrolled disconnection.

The Neptun Alpha has a technological air distribution system with hose stations located on each deck. A connection is provided for the supply of a portable air compression unit.

Compressed air is not used on the Neptun Alpha platform.

G. Technological water

Neptun Alpha has a technological water distribution system with hose stations located on each deck. The distribution pipeline is sized based on a required flow rate of 10 m3/h for two utility stations that will operate at that time.
The technological water is supplied from the FSV. Hose drum to FSV connections supplied with disconnect couplings ensure quick release in the event of an uncontrolled disconnection.

H. Nitrogen cylinders

Nitrogen pressure cylinders together with a distribution network have the role of facilitating the purging of equipment, such as go-devil stations. Neptun Alpha has a nitrogen distribution system with hose stations located on each deck. The nitrogen is supplied in cylinder racks accessible by crane on the upper deck.

Hydraulic drive system

There are three separate hydraulic power units (HPUs) on the platform, with different types of fluids to suit the services. HPU tubing is fully welded, except for mechanical joints where maintenance is required.

I1 Underwater system

The underwater system is designed with a ventilation opening, where the used fluid is discharged locally into the sea when the valve is closed, along with reduced leakage from the underwater control modules (SCMs) A water-glycol-based hydraulic fluid is selected for the underwater HPU to minimize environmental impact when discharged into the sea.

The HPU system feeds both the HP and LP systems into the Domino and Pelican reservoirs through umbilical connections. There is redundancy within each umbilical in the event of future damage to the hydraulic fluid core. The HP power supply has a design pressure of 690 barg, and the LP power supply has a design pressure of 345 barg. Pump flow rates are sized to meet the requirements of the

underwater control system. No taps or SSIVs are connected from the platform to the underwater HPU system.

I2 Platform and SSIV

The SSIV system is a direct hydraulic system for SSIV, where the return is received through the same line in a "pressurization for opening, depressurizing for closing" configuration.

The surface part of the upper function and SSIV HPU is a closed circuit in which the return is accepted through dedicated recirculation lines or grouped in a common recirculation manifold. The return fluids are collected in a dedicated return tank, separate from the supply tank. The return fluid is cleaned and renewed before being transferred to the supply tank.

The HPU of the platform and SSIV provides a stable supply of clean hydraulic fluid, according to SAE AS4059 Rev F class 6 at a design pressure of 228 barg (operating pressure of 207 barg). Hydraulic fluid is a water-glycol-based control fluid of the same type as that used in the underwater control system.

I3 Caisson pumps

HPU caisson pumps consist of a single tank, 2 x100% service pumps, a chiller and a filter. The service pumps are rotary type, with the ability to recycle back into the tank without operating any specific pump.

The system operates at a minimum temperature with energy from the service pumps supplying the heat needed to reach that temperature in the HPU tank before initiating drive to any of the caisson pumps. An air cooler provided on the return pipe prevents overheating once the required temperature is reached.

A built-in filter in the circulation path keeps the system clean.

The four caisson pumps are 2 methanol storage pumps, 1 open drain pump and 1 TEG storage pump. Each of these pumps is located in caissons attached to the legs of the jacket and used to lift fluids stored in the associated foot of the jacket.

I. Storage of TEG

The TEG storage tank stores TEG for start-up and replenishment during normal operations. The additional capacity accommodates the total volume of TEG inventory in the dewatering and regeneration system in case of a requirement.

Lean TEG is provided by FSV. The Neptun Alpha has a dedicated self-tapping hose connection and coupling, dedicated for connecting to the FSV when TEG is supplied/refilled.

The lean TEG storage tank is equipped with a level sensor for both local and CCR reading. An audible alarm must be provided to alert the operator to possible overfilling.

The tank has a depressurization valve (1 x 100%). It also has a low-pressure combustible covering gas with input/output breath control functionality.

J. Seawater supply system

The seawater supply system for wet gas cooler consists of seawater lift pumps and coarse filters.

The pumps are installed in caissons, each including a suitably sized vent. The length of each pump reflects the NPSH requirement at the same time as the most adverse wave. Seawater lift pumps are equipped with a hypochlorite dosing ring to inhibit algae and other marine growths in the seawater supply system.

The seawater lift caisson is designed to have free venting, so that no air entrainment takes place in the discharged seawater.

The wet gas cooler also has a dedicated return line separate from the outlet line of the produced water degasser, so that gas leak detection can be provided on the free vent line, to detect any failure of the wet gas cooler (leak detection in the orifice tube).

K1 Seawater lift pumps

2 x 100% seawater lift pumps (1 active and 1 reserve) are installed to ensure the reliable operation of the wet gas chiller. The centrifugal pumps are sized for pressure drop through the cooling water filter and the respective pipelines.

The pumps are designed to suit the requirements of the cooling system and are mounted in caissons (stainless steel, internally insulated), each including a properly sized vent. Each pump provides sufficient NPSH, concurrently with the most unfavorable wave (assumed to be 12 m below the LAT).

K2 Hypochlorite dosing system

Seawater lift pumps are equipped with a hypochlorite dosing ring to inhibit algae and other marine growths in the seawater supply system. The hypochlorite system includes a hypochlorite generator plus a backup generator and a buffer tank to allow for a continuous dosing rate of 1-2 ppm and a shock dosing rate of 4-6 ppm (approximately 1 hour per day).

K. Diesel System

The diesel is fuelled from FSV and stored in a dedicated tank in the crane pedestal. Diesel is supplied in day tanks for diesel generators and also for TEMPSC. A diesel pump is provided to circulate diesel from the pedestal warehouse through a coalescer and back to the pedestal warehouse to clean any marine/biological matter from the diesel supplied. The diesel fuel line is sized at 4" to cover flow rates up to 50 m^3/h.

The storage capacity of diesel is determined to meet the needs of all diesel users, taking into account the operating time and operational intervention visits. The tank capacity has enough working volume to run the generator for 5 days at 75% of the maximum load, plus to run the generator for 6 hours every 2 weeks at stable minimum load. The calculated workload takes into account a normal replenishment period 3 months.

Sufficient free space in the tank allows breathing during replenishment operations, and the working level exceeds the lower volume in which the settling water phase accumulates at the base of the tank.

A diesel storage tank level sensor provides both local and CCR readings. An audible alarm will alert the operator to possible overfilling.

The diesel storage tank has a vent pipe that functions as a vent for fuelling operations.

A pump provides diesel power to any users for whom gravity power is not possible (e.g., essential generators). A local holding tank at the pump and coalescer filter direct any leakage/spill to the drain system. The holding tank incorporates an isolation valve that can be connected to a hose for temporary pump exhaust.

The diesel supply to TEMPSC uses a hand gun system and an isolation valve located locally on TEMPSC.

Description of onshore production processes

After processing the natural gas within the Neptun Alpha Platform in order to comply with the contractual gas transfer specifications, the production pipeline will transport the gas to the SRM from land for measurement before transfer to the downstream Transgaz pipeline supplying the NTS.

The SRM will include a combined flow and pressure control system to control gas deliveries in the NTS. The control of the gas volumes transferred to the NTS will be carried out through the two control valves installed within the SRM, downstream of the metering equipment.

Three electric heaters with a total output of 6.0 MW are used. The heaters are equipped with local control panels with PLC and installed in the LER (Local Equipment Room) of the heaters, which will control the power of the heaters to maintain the commercial requirements of natural gas delivery (minimum 3°C).

Hydrocarbons will not be processed within the SRM. The separation and processing of natural gas will be carried out within the production platform located at sea, before transport through the production pipeline to SRM. An inlet filter/separator equipped with level switches, alarms and manual discharge valves will be installed within the SRM to protect the meters at SRM from small potential amounts of water sent to the SRM as a result of process failures that may occur within the production platform.

A go-devil station assembly will be installed at the entrance to SRM to facilitate in-line inspection and maintenance of the production pipeline. The pressure (design pressure and maximum operating pressure) of the SRM pipelines and associated gas handling equipment will correlate with the nominal pressure of the production pipeline. The design of the go-devil station assembly will allow for use in the reverse direction as this may be required for pipeline emptying activities in the test phase, prior to commissioning.

The design of the SRM pipelines includes measures to allow the "temporary" reception of gas from the NTS to support the commissioning activities of the offshore production pipeline and the Neptun Alpha Platform in the initial phase of the project's operation. For the measurement and fiscal accounting of the gas volumes received from the NTS, a temporary quality meter dedicated to the

transfer of custody equipped with a moisture analyzer and gas chromatograph equipment will be installed on the reverse pressurization line.

The Custody Transfer Metering Skid ensures the measurement of export gas in the National Transmission System (NTS). This is a quantitative and qualitative measuring equipment, which consists of standard and commercially available components. The metering unit will be equipped with 5 (N+1) ultrasonic flow meters and a turbine flow meter that will be installed in series with the ultrasonic flow meters. 4 of the 5 ultrasonic flow meters will be selected as active, while the fifth will be redundant.

The turbine flow meter will have a maximum flow capacity equal to that of an ultrasonic flow meter and will be used as a reference flow meter for measurement.

An online gas chromatograph and moisture analysers will be installed on the measuring unit to check the quality of the gas delivered or received from SWP.

CCR will serve as the main operations control center for all Neptun Deep project facilities (underwater systems, production platform, production pipeline and SRM). CCR will host the equipment for remote monitoring and operation of the project facilities.

Types and quantities of raw materials necessary for the construction and functioning of the project:

Natural resources (e.g. freshwater, seawater, wood, etc.), mineral aggregates (e.g. sand, gravel, limestone, bentonite, etc.), building materials (e.g. concrete, geotextiles and other project-specific building materials), energy, fuels, chemicals and other project-specific materials and products will be used during the construction and operation of the project.

In order to ensure optimal conditions for the protection of environmental factors and the health of the population, all hazardous substances and chemical preparations to be used will be labelled and stored accordingly, in specially provided containers/containers/tanks and in specially designated spaces, with access restricted and all necessary protection measures provided.

Types and quantities of raw materials and energy necessary for the construction of the project:

Raw materials and materials will be used in the project, in compliance with the national regulations and standards in force, they will be used in the works designed according to the stages that will be carried out.

The main raw materials used in the preparation and organization period will be represented by mineral aggregates, which will be transported from the nearest authorized quarries. The other materials used in this stage will be supplied by specialized units.

The chemicals will be used to hydrotest the pipelines. The fuel supply of the means of transport will be carried out in distribution stations and not on site, and the oil change will be done in specialized units.

The raw materials/ materials used in the construction of the project are the following:

List of raw materials/materials used in the construction of the project

No.	Raw material	MU	Total quantity
1	Coarse aggregate	m^3	62,615
2	Ballast	m^3	9,665
3	Sand	m^3	2,025
4	Filling material	m^3	24,162
5	Geotextile	m^2	48,325
6	Penetrating Macadam	m^3	4,714
7	Concrete	m^3	1,945
8	Concrete steel	t	645
9	Concrete	m^3	1,945
10	Drilling fluid (microtunnel)	t	820
11	30-inch pipeline (gas production pipeline)	m	160
12	Optical fibre cable	m	160
13	14-inch pipeline (supply/adduction pipeline)	m	10,500
14	18-inch pipeline (supply/adduction pipeline)	m	26,000
15	10.75-inch pipeline (supply/adduction pipeline)	m	1,500
16	Umbilical System Domino	m	36,500
17	Umbilical System Pelican		1,500
18	Microtunnel pipe Dn 1500 mm	m	890
19	Protection pipe CFO Dn 300	m	890
20	Metallic pipeline for undercrossing protection Dn 965 mm	m	80
21	Metallic pipeline for undercrossing protection Dn 508 mm	m	80
22	Prefabricated slabs used at temporary railway level crossing	pc	46
23	Fuel (diesel)	m^3	33,745
24	Fuel for ships	m^3	31,657
25	Paint	m^3	0.20

No.	Raw material	MU	Total quantity
26	Thinner	m^3	0.03 m3
27	Hydrosure™ HD-5002	m^3	35.0
28	Chemical products used for hydro-testing pipelines	kg	18.5
29	Chemical products used for start of wells	mc	2,295
30	Sacrificial anodes	pc	1,285

The lists of chemicals used in construction/operation are presented in Annex 1 to the environmental agreement.

The table below shows the main raw materials and materials used in the execution phase of the drilling works of the wells, as well as their estimated consumption.

List of raw materials and materials used during well drilling

No.	Raw material	MU	Total quantity
1	Water-based drilling fluid	m^3	72,678
2	Non-aqueous drilling fluid	m^3	22,274
3	Cement	to	8,600
4	Cement additives	litre	369,812
5	Fuel	ton	40,000
6	Helicopter fuel	ton	76.5
7	Fuel for ships	ton	131,250

The drilling fluid will be supplied ready-made, transported to the drilling rig with support vessels and will be unloaded on the drilling platform. Here the conditioning of the drilling fluid will be carried out according to the needs.
Casing columns are metal columns of different sizes with a role in isolating the processes in the well from the geological layers crossed. They will be stored on the special ramps of the drilling rig. The following types of columns will be used:

- 36-inch casing column (914.4 mm):
- 22-inch casing column (558.8 mm):
- 13-3/8-inch casing column (339.72 mm):
- 10-3/4-inch casing column (273.05 mm):
- 5-1/2-inch filter at the base (139.7 mm):

Types and quantities of raw materials and energy required for the operation of the project

The chemicals used during the operating period are shown in the table below:

List of raw materials and materials used during the operating period:

No.	Name of chemical product	MU	Quantity
1	Methanol	mc/well	16
2	CORR12452A	m ^{3}/year	132
3	SCAL13370A	m ^{3}/year	26
4	AFMR20400A	m ^{3}/year	41
5	Triethylene glycol	-	N/A
6	Sodium hypochlorite	mc/year	5.8
7	Pelagic 100 H	mc/year	7
8	Fuel	t/year	38.5
9	Natural gas for generators	t/year	19,718

Drinking water will be provided from commercial sources (bottled water) being brought from the shore.

During the operating period, quarterly routine maintenance works are planned. Considering an average number of 40 people, 15 working days/each campaign and a water consumption of 250 liters/day/person, it was estimated that a total volume of approximately 680 m3/year of fresh water is needed during the period of routine maintenance works.

In addition to the quarterly planned routine maintenance, major maintenance campaigns will take place regularly, every 4 years, over the life of the project. Considering an average number of 40 people, 7 working days/each campaign and a water consumption of 250 liters/day/person, it was estimated that a total volume of approximately 80 m3/year of fresh water is needed during the major maintenance works.

As part of the cooling system, two seawater lift pumps (1 in service and 1 in standby) are installed to ensure the reliable operation of the wet gas chiller, and they are equipped with a hypochlorite dosing ring to inhibit the growth of marine vegetation in the seawater supply system. This operation required up to 317 m³/h for a maximum of 20 years.

The estimated annual volume of seawater needed for this operation is 2,766,920 m3/year.

Utilities:

Water supply:

No connections to the local water supply network are planned during the construction period of the project's onshore facilities. The fresh water needed during the construction period of the onshore facilities and the shore crossing microtunnel will be provided from local water sources operated by the regional water supply provider (RAJA Constanta) and stored in dedicated water storage tanks installed at the onshore site organizations. The water storage tanks will be regularly supplied by water tankers based on specific agreements signed with authorized contractors. Drinking water will be provided from commercial sources (bottled water) based on specific agreements signed with authorized contractors.

During the operation of SRM and CCR they will be connected to the local water supply and sewerage network under the administration of RAJA Constanta.

The water needs for the development of the project at sea (drilling, construction, installation, etc.) will be ensured by desalination of seawater on board or by means of support vessels powered by authorized water sources located on shore.

For the preparation of drilling fluids, desalinated seawater (pumped from the Black Sea) and specific chemicals will be used. A total volume of sea water of 54,000 m3 will be pumped from the Black Sea, desalinated and used for the preparation of drilling fluids, of which:

- A volume of sea water of 40,000 m3 will be used for the preparation of water-based drilling fluid;
- A volume of sea water of 10,000 m3 will be used for the preparation of cement;
- A volume of sea water of 4,000 m3 will be used for the preparation of non-aqueous drilling fluid.

The water requirement during the construction, installation, testing and commissioning period of the project's offshore facilities (offshore production platform, drilling centers, gas production pipeline, supply/adduction pipelines and other underwater equipment) includes:

- Fresh water (e.g. for domestic/sanitary use) for support vessels;
- Seawater for hydrotesting the gas production pipeline and the supply/adduction pipelines;
- Drinking water.

The freshwater requirement for the construction/installation works of the project facilities executed at sea (offshore platform, production pipeline, supply/adduction pipelines, umbilical systems and other underwater equipment) will be provided by the support vessels used for the construction/installation works, the water being taken from authorized water sources located onshore.

For the hydrotesting of the production pipeline from SRM's go-devil station to the offshore platform, as well as the Domino and Pelican South supply/adduction pipelines, seawater pumped from the Black Sea will be used. All hydrotest water will contain a chemical specially designed for such operations (Hydrosure 5002). The estimated total volume of seawater required for the hydrotesting process is 72,441 m3.

The offshore production platform is a stand-alone platform that normally operates unmanned and requires the presence of personnel only in case of emergency and/or for scheduled maintenance work. The crew responsible for carrying out maintenance work will be housed on the transport vessel, so there is no need for a water supply system on the production platform. The water supply will be necessary at the time of the presence of the personnel on the platform in order to carry out maintenance/maintenance operations and to supply water for hygienic-sanitary purposes for showers. The necessary water will be provided by the support vessel.

Fresh water shall be used to supplement the control fluid used to operate the subsea valves on the ends of the wells. As part of the operation of the valves, a small amount of control fluid is released into the sea, depending on the size of the valve. The discharged fluid will be replaced by pre-mixed fluids transported to the platform in portable tanks via the supply vessels.

As part of the cooling system, two seawater lift pumps (1 in service and 1 in standby) are installed to ensure the reliable operation of the wet gas chiller, and they are equipped with a hypochlorite dosing ring to inhibit the growth of marine vegetation in the seawater supply system. This operation requires up to 317 m3/h for 20 years. The estimated annual volume of seawater required for this operation is 2,766,920 m3/year.

Evacuation of wastewaters:

Wastewater generated during construction/installation works on land will either be collected on site (e.g. excess water from the drilling fluid system and from tunnel cleaning) in storage tanks that will be periodically emptied of drains, transported and disposed of at authorised disposal facilities on the basis of specific agreements signed with authorised contractors.

The excess water that is displaced by the installation of the pipeline in the tunnel, respectively the seawater displaced from the tunnel resulting from the filling of the microtunnel with mortar will be discharged into the sea.

Fresh water will be used for the hydrotesting of the production pipe section installed in the microtunnel. Hydrotesting will be performed using fresh water, usually without other additives.

The water resulting from the hydrotesting will be tested and discharged into the sea in case of compliance with the legal parameters of discharge into the Black Sea. A total volume of water of 300 m^3 is estimated to be generated by hydrotesting the microtunnel section of the production pipeline.

After the trench and exit manhole are filled, the tunnel will be filled from the shore with mortar. The operation of filling the tunnel with mortar will displace the seawater inside it. This water will be pumped and temporarily stored on site in the water storage tank for further testing and drainage into the Black Sea through the fiber optic cable protection pipeline, after the approval of the discharge parameters by the authorities. The estimated total amount of disused tunnel water (seawater) resulting from the filling of the tunnel is 3,250 m^3.

During the operating period of the project's onshore facilities, no wastewater discharges into natural outfalls will take place. The main wastewater flows during the operating period include domestic wastewater generated from the CCR and rainwater that runs on the concrete areas of the CCR's fenced premises. For the CCR area, the connection to the local sewerage network under the administration of RAJA Constanta is planned. Considering that SRM will be an unmanned automated facility, it is not necessary to build a domestic wastewater sewerage system.

Water from concrete platforms, interior roads, parking areas will be discharged through an oil separator into a buffer tank, and water from buildings will be discharged directly into the buffer tank. The buffer tank is designed with two pumps (one active, one spare) to keep the water level low in the tank and to be able to evacuate the water in a controlled manner. The pumped water will be evacuated by gravity to dedicated designed areas within the boundaries of the site on land. This system will be designed as a network of underground drainage pipes installed in coarse aggregate/gravel beds, to naturally collect and drain the water pumped from the buffer tank.

The water pumped from the buffer tank will be evacuated by gravity to drain naturally into dedicated designed areas, within the limits of the onshore site. The buffer tank will have a total volume of 128 m3 (80 m3 usable volume) and has been sized for a maximum intensity rain of 130 liters/s/ha, with a duration of 10 minutes, with a frequency of 1/1 for zone 5, according to the map with the distribution of zones for intensity/duration/frequency graphs within STAS 9470-73.

The main wastewater flows during the drilling/ construction /installation /testing/ commissioning period include:

- Water resulting from construction activities (hydrostatic test water);
- Water resulting from drilling and well start-up activities;
- Wastewater and stormwater generated by support vessels for construction/installation works.

The hydrostatic test water will be extracted from the waters of the Black Sea, filtered and treated with preservative chemicals to inhibit damage to the pipelines. The hydrostatic test water from the Black Sea will be treated with a common chemical (Hydrosure HD5002) used in the marine pipeline construction industry.

A total volume of 72,441 m³ of hydrostatic test water is expected to be discharged from the following sections:

- Domino supply/adduction pipeline: 4,794 m³;
- Pelican Pipeline: 104 m³;
- Gas production pipeline to the shore: 67,543 m³.

Upon completion of the pressure tests, the hydrostatic test water is planned to be discharged into the Black Sea, at a depth of over 950 m, using the manifold of the DODC2 drilling center that will be located in the anoxic waters of the Black Sea. This is a singular event, the volume of water being significantly high and it is not feasible to bring it to land for treatment. Discharging into the Black Sea is the only feasible option, and the discharging will be done in the anoxic layer. The water collected on the shore (300 m3) will be temporarily stored in an open basin that will be emptied periodically with drains and will be disposed of at authorized facilities based on agreements signed with certified operators.

Water-based drilling fluids and non-aqueous drilling fluids will be used for drilling production wells. Water-based drilling fluids will be used for the first two sections of the wells, where drilling is done without a riser. Water-based drilling fluids, on the other hand, are discharged directly to the seabed from the borehole during the installation of the casing.

The estimated total volume of water-based fluids used for drilling is 2,400 m³/well, respectively 24,000 m³ in total. Once the non-riser sections are drilled and the riser installed, non-aqueous drilling fluids will be used, until the total depth of the well is reached. The estimated total volume of non-aqueous drilling fluids used for drilling is 5,300 m³/well, respectively 53,000 m³ in total.

Drilling detritus (rock) and non-aqueous drilling fluids will be circulated. The non-aqueous drilling fluid returns to the drilling rig, where it is separated from the debris to be reused for drilling. The drilling detritus will be captured for transport by barge to a waste management facility on land, following the appropriate waste management processes for treatment and disposal.

After drilling is completed, the well will be filled with an inhibited clean brine to serve as a filler fluid to protect the well until production begins. Fresh water mixed with calcium chloride (CaCl2) will be used to create the well filling fluid (brine). The effluent in which this brine is found will not be discharged into the sea, being collected and transported to shore.

The effluent resulting from the start of the wells will reach the production platform together with the reservoir water. This effluent will not be discharged into the sea. It will be collected at the level of the production platform and transported to shore.

The well-starting effluent will contain the following chemicals:

- Corrosion inhibitor (effluent concentration of 3 kg/m³);
- Oxygen inhibitor (effluent concentration of 2 kg/m³);
- Biocide (effluent concentration of 1 kg/m³);
- Caustic soda (effluent concentration of 1 kg/m³);
- Monoethyl glycol MEG (effluent concentration of 500 kg/m³);
- CaCl2 brine (effluent concentration of 150 kg/m³);
- CaBr2 brine (effluent concentration of 463 kg/m³);
- Xanthan brine (effluent concentration of 15 kg/m³);
- J228 inhibitor (effluent concentration of 10 kg/m³);
- Surfactant (effluent concentration of 10 kg/m³);
- Organic acid (effluent concentration of 10 kg/m³);

The estimated volume of safety fluids (brine plus chemicals) in a well is 50 m3 for Domino wells and 70 m3 for Pelican wells.

The total volume of well starting fluids is assumed to be between 347 m3 per well.

The effluent resulting from the start of the well is planned to be transported by barge to an authorized wastewater treatment plant located on the shore.

Wastewater (e.g. greywater, black water, stormwater, etc.) generated by the drilling rig and support vessels will be collected on board, managed and discharged in compliance with the corresponding maritime regulations (e.g. MARPOL Convention, Black Sea Convention) on the disposal of wastewater.

During the drilling campaign, it is estimated that a total volume of domestic wastewater of 35,168 m3 will be generated, taking into account 194 operators, a daily volume of 200 l/day/person and a duration of 800 days.

Rainwater falling into operational areas will be collected on board, managed and discharged in compliance with the corresponding maritime regulations (e.g. MARPOL Convention, Black Sea Convention) on the disposal of wastewater. Rainwater falling outside the operational areas of the drilling rig will be discharged directly into the sea.

The bilge water from the drilling rig and support vessels will be transported by land for treatment/disposal at an authorized facility.

The main wastewater flows resulting during the operating period include:

- The effluent (produced water) resulting from operation and maintenance and the effluent resulting from the restart of the well;
- The fluid for operating the underwater valves;
- Rainwater/washing resulting from the marine production platform;
- Wastewater and rainwater resulting from support ships for operations and maintenance.
- The reservoir water (produced water) will be the largest volume of wastewater resulting in the operating period.

The water produced will contain the following chemicals:

-Corrosion inhibitor (injection concentration 50 ppm, respectively concentration in effluent 6 ppm);
-Deposit inhibitor (injection concentration 15 ppm, respectively effluent concentration 3 ppm);
-Defoamer (injection concentration 10 ppm, respectively effluent concentration 2 ppm).

During the life of the project, it is assumed that the volume of water produced will be between 50 and 1,590 m³/day.

The volume of 50 m3/day of condensed water will remain a relatively constant component of the wastewater flow from the produced water throughout the life of the reservoir. In the middle period of the project's life, the reservoir water becomes part of the produced water flow and grows to the point where the total volume of produced water can reach 1,590 m3/day in the last years of the project.

The produced water flow is expected to be discharged through the single-port discharge caisson mounted on the offshore platform at a water depth of 90 m.

The seawater used in the cooling process will be discharged into the sea and will have an annual volume of 2,766,920 m3.

The underwater valves on the eruption heads of the wells use the pressure of a control fluid to operate.

The pressure control fluid is supplied from the marine production platform through the umbilical systems. An extremely small amount of an aqueous solution of ethylene glycol will be released to the seabed, into the marine environment, when the valves at the eruption ends of the wells are closed. Releasing small amounts of water-based control fluid to operate underwater valves is a

common practice in the oil and gas industry around the world. It is estimated that there will be 22 actuations per year for each of the taps, i.e. a total volume of effluent of 0.78 m3.

Rainfall on the production platform and fresh water used during maintenance washing are two sources of water that are anticipated to result at the production platform. Precipitation falling on the open deck of the platform and on the stairs will not be collected and will run directly to the sea surface.

Rainfalls falling in the areas arranged around the production platform equipment will be captured and diverted into the open drainage system. Similarly, any wash water that falls into the landscaped areas will be captured and diverted into the open drain system. All water from the open drain system will be directed to a storage tank located in one of the steel legs of the production platform.

The tank is equipped with an oil-water separator and an analyser that allows the discharge of the water fraction, unless the maximum limit of 15 ppm of hydrocarbons is exceeded. The oil fraction will be periodically removed by a vessel and shipped ashore for treatment by certified/authorized contractors.

Based on the average rainfall and the total area of the open drainage system, it is expected that the accumulation in the storage tank over a period of 3 months will amount to approximately 53 m3. To accommodate the excess volumes, the tank will have a capacity of 200 m3. The water will be transferred to the outlet of the single port of the marine platform for discharge into the Black Sea at a nominal depth of 90 m.

In situations where the water has a hydrocarbon content that exceeds the acceptance limit approved by the regulatory authorities, the discharge of water from the open drain system will cease and all contents of the open drain system tank will be retained until a maintenance vessel can transfer the contaminated water for disposal at an approved shoreline wastewater management facility.

Wastewater (e.g. domestic water, stormwater, etc.) generated by operations and maintenance vessels will be collected on board, managed and discharged in compliance with the corresponding maritime regulations (e.g. MARPOL Convention, Black Sea Convention) on the disposal of wastewater.

Treatment system of water produced

The production flow is essentially a mixture of gas and water, with the main processing route for collecting oil-free water. The fine sands, probably present in small quantities, will be carried into the production flow and are expected to follow the path of liquid flow. Under normal operating conditions, most of the water will be collected in the primary separator, MBD62301, and is directed to the MAZ68101 degasser. The purpose of this vessel is to allow any absorbed gas to be evacuated into the water stream prior to disposal. The water flow from the TEG dewatering system is continuous and recovered. It is the result of the waste water that is in the gas stream that requires removal so that the exported gas meets the export specification for wet gas. This water flow is also free of liquid hydrocarbons.

Filtering system

At the beginning of initial development, there is the potential for waste materials from well completion to reach the production platform. These materials are expected to contain some petroleum-based sludge, while starter effluents are treated, collected, and shipped ashore.

The filtration installations, MAJ68101/2, will be installed on the path of waste water flow from the primary separator. These units will capture the well completion materials and will be kept in operation after the well cleaning operations are deemed to have been completed. These filters are

not intended to capture fine sands without oil. The contaminated fine sands will agglomerate and be trapped by filters with the filtration specification at 99.9% of particles > 50 microns.

These filters are the ones that provide the primary means of treating water sources where oil contamination can be expected, combined with a primary separator (MBD62301), a degasser (MAZ68101) and TEG regeneration recovery.

The effluent from the wells before start-up is also expected to contain brine and fluid volumes associated with the application of gravel bundles that are fed into the production wells. These liquids will be free of oily impurities and will pass through filters.

While well clean-up activities are considered to be carried out, potentially contaminated water sources will be directed to the open collection system for isolation and assessment of the adequacy of discharge through the produced water disposal caisson, ABH68101, or for pumping to support vessels.

Open drainage system

An open drainage system will be provided at the production platform. The purpose of this system is primarily to manage precipitation on exposed upper and lower deck areas. There is a possibility that oily liquids or chemical spills may occur during equipment maintenance, so the system will function as a means of retaining potentially contaminated fluids. No intermediate tank is provided on the upper deck of the production platform, but a final coarse filter is installed before the collected liquids are directed to the open drain tank (ABJ99901). The open drain tank is located in one of the steel legs of the platform and has a working volume of 200 m^3, an associated open drain pump caisson (ABH99901) and a single hydraulically operated drain pump (PBE99901).

Normally, the inflow sources are expected to be uncontaminated, therefore the remote discharge capacity is provided so that the contents of the open drain tank can be removed through the discharge caisson.

This activity will only take place if the oil-in-water content of the removed water meets the limits of 15 ppm. This measurement will be carried out by an analyzer installed on the evacuation route. A pumping route with hose connection to the support vessels is also provided if the water quality does not comply with the disposal standards.

Cooling system

A wet gas cooler (HBG62301) is provided on the top of the platform to aid the TEG dewatering process by reducing the gas temperature in some operating cases, where the temperature prevents the export wet gas dew point from being reached. This system uses seawater using lifting pumps (PBE68501/1).

Each of these pumps has a nominal capacity of 317.3 m3/h and in order to avoid the development of marine vegetation that can weigh down the pumps, the suction of each one during operation will be dosed with sodium hypochlorite (SHC) at a rate of 2 ppm. The dosing rate will be adjusted so that by using a downstream free chlorine analyzer the final discharge concentration is <0.2 ppm. SHC (chlorine) is discharged to the final effluent at 0.2 ppm according to the limits determined in the NTPA001.

Caisson for disposal of wastewater

The residual water remaining from the degassing drum, the water according to specifications from the open drain pump and the water recovered from the dismantling drums will be directed to the vertical disposal box. It has been established that the exit into the sea at the bottom of the caisson is optimal below 90 m water depth.

The discharged effluents will comply with all the standards established in the exploitation permits and defined in the national legislation (NTPA 001), excluding those parameters that are naturally found in the Black Sea water in concentrations higher than the prescribed limits.

For chemicals not listed under NTPA 001, the methodological steps, tools and resources described in the previous paragraphs were used to support the chemical selection decision-making process (deposit inhibitor, corrosion inhibitor and defoamer).

The qualification criteria for the evaluation of each chemical included technical performance tests (e.g. degree of protection against corrosion and limescale inhibition, lowest dose rate required to achieve technical objectives, compatibility of fluids and materials, ease of transport and handling, etc.) and environmental properties.

The following equipment will be provided within the production platform:

- Equipment for measuring the volumes of water produced / discharged
- Chlorine analyser
- Salinity analyser
- Hydrocarbon Analysers
- Water sampling points

Management of chemical substances and preparations

Injection system for chemical substances and preparations

A chemical injection system is required to provide chemical injection capabilities to support production, gas separation, and the protection of the interior of pipelines and equipment at sea. Injection is performed continuously or intermittently during normal operations, operational disturbances, and start/restart operations.

The chemical injection system implemented at the marine production platform is designed to reliably deliver the necessary chemicals and preparations to be injected into predetermined injection points. Methanol (only at initial well start-up), deposit inhibitor and corrosion inhibitor (only at Domino) are the chemicals that must be injected into underwater systems to ensure the flow and integrity of materials. The defoamer is currently expected to be the only chemical potentially used on the platform. Each chemical injection system is equipped with a flow meter for individual injection points to allow dosing requirements to be set.

The chemical substances and preparations used are: methanol, deposit inhibitor, corrosion inhibitor and defoamer, TEG (triethylene glycol), nitrogen for purging, hydraulic fluids, biocide.

Supply with electricity

a) **Onshore supply with electricity**

Power supply in building phase

Power supply is required for onshore site organizations (for SRM and micro tunnelling). The electricity supply for the site organisation at SRM will be provided from the electrical transformer substation (which is not part of the project described in this presentation memorandum and will be subject to a separate authorisation procedure) which will be installed in the eastern part of the future SRM site.

The electrical panels installed within the site organization at SRM will provide the necessary energy for its facilities and equipment (including lighting).

The electricity necessary for the organization of the construction site at the microtunnel will be provided by three diesel generators of 750 kW each, which will be installed within it. Diesel generators will provide power for micro tunnelling facilities and equipment (including lighting).

Power supply during operation

The electricity supply of the onshore components of the project (SRM, CCR, etc.) will be carried out from the local energy supplier's network through a transformer substation that will be installed in the eastern part of the SRM site. The electricity grid connection project will include an access road and a perimeter fence.

The electricity grid connection project is not part of the project described in this technical memorandum and will be subject to a separate permitting procedure.

The electricity supplied from the local power grid will serve as the primary power source for the project's onshore facilities. The power and distribution cables will be buried and designed to minimize obstruction of above-ground activities.

A backup diesel generator, equipped with an automatic power transfer switch, will be installed in the CCR area and will provide the power reserve for both CCR and SRM. The backup generator will be sized to support the essential operational consumption for both SRM and CCR during power outages.

A small diesel fuel tank, sized to provide 3 days of continuous operation at full load, will be installed/incorporated into the backup generator. If necessary, the diesel tank will be refuelled by tankers on the basis of a contract signed with authorised contractors.

An automatic transfer switch will also be installed to ensure automatic switching to and from the generator.

b) **Power supply of offshore components**

Power supply in building phase

The ships used in different periods of the project (construction/installation, commissioning, maintenance and operations and decommissioning) will be provided with specific electricity generation and distribution systems to ensure the power supply on board the ships.

The drilling rig will provide electricity through its own power generation systems and will be equipped with an emergency generator.

Power supply during operation

The electricity needed to operate the offshore infrastructure (production platform, underwater systems, lighting systems, etc.) will be produced on-site using natural gas from the production pipeline as a fuel source.

The main electricity will be generated on the platform by three gas turbine generators operating in an N+1 configuration, thus allowing one main generator to be on standby at all times. The nominal output of two generators is approximately 9.2 megawatts (MW) The generators will be sized to power all electrical loads, including the direct heating system, under all operating conditions including DEH under all operating conditions.

The direct electric heating system is the dominant electrical load.

If all main gas turbine generators are shut down, all underwater wells will be shut down and equipment on the platform will be blocked. No electricity is required to safely isolate underwater or platform equipment. All valves required for the safe insulation of the installation are "safe", which means that when energy is lost, they move to the safe position to be closed or opened by means of a mechanical spring.

The backup for gas turbine generators is represented by a 230 V AC non-redundant uninterruptible power supply system (UPS) which is a battery-powered system whose function is to provide energy to keep control and communication equipment running for several hours.

The Main Power Generation System ensures low safe operation or shutdown of the subsea well protector (SWP) in the event of a loss of primary power supply. This is achieved by means of an essential main generator, which is a 690 V, 3-phase, 50 Hz diesel generator with a nominal power of 1,500 kW. Essential equipment includes uninterruptible power supply (UPS) systems, safety systems, equipment protection, critical heating, critical operating equipment, as well as safety and control systems.

The Power Reserve Generation has the role of allowing the SWP to be restarted in case the primary and essential electricity supply is lost. This is provided by a 690 V, 3-phase, 50 Hz secondary generator with a diesel engine. Typically, the start-up requirements in the event of a power outage will be limited to the equipment required to start a gas turbine (GTG), after which the resumption of plant operation can be carried out in the normal order.

A Local Equipment Room (LER) will be used to ensure an efficient distribution of electricity on the SWP, in order to minimize/optimize the size and length of the cables and to protect the equipment from the external environment. LERi will house all the necessary equipment for electricity, instrumentation, control and fire protection to meet process and infrastructure requirements

Gas supply

a) **Onshore gas supply**

It is not planned to connect to local gas supply networks during the construction and operation periods.

b) **Gas supply of offshore components**

Downstream of the gas dehydration unit and before entering the production pipeline, a stream of dehydrated gas will be taken up to be used as fuel gas for power generation and instrumental gas for process control valves. The gas production pipeline will function as an instrumental gas storage tank, in case of plant shutdown.

During the cold start and the start-up period, this gas flow is properly superheated with an electric heater, in order to meet the requirements of the selected primary power generators and to avoid low temperatures due to the Joule-Thomson effect in the discharge valves, where the pressure is reduced to about 30 bar. The temperature is maintained at least 0 °C before entering the combustible gas scrubber. During the medium and late operating period of the platform, when the pressure in the system decreases, a bypass around the heater will be provided.

Parallel and redundant control valves will be installed to ensure a safe supply of combustible gas and instrumental gas. Parallel control valves provide redundancy to prevent the failure of a single control valve from causing the loss of instrumental gas or fuel supply to the entire installation.

A bypass will be provided with a self-contained pressure regulator to supply fuel gas to the essential generator during cold start. Bypass valves must be operated manually to allow the transfer of combustible gas from the production pipeline to the superheater. Power supply will be provided from UPS during this operation. Once the essential generator is running, the energy supplied to the superheater will be fed from the essential switchboard.

From the pressure drop station, the combustible gas is directed to a 1x100% scrubber and 2x100% fuel gas filters. Most of the flow downstream of the fuel gas scrubber is sent to the main 3x50% power generators, where each package is provided with 2x100% own safety filters at the inlet of each turbine.

The remaining flow rate is sent to the low-pressure combustible gas system for purging/stripping and to the low-pressure instrumental gas system (7 barg). Safety valves adjusted to 10 bar will be installed downstream of the control valves to provide overpressure protection to end users.

Heating, ventilation and air conditioning systems

a) ***Onshore heating, ventilation and air conditioning systems***

Heating, ventilation and air conditioning systems in building phase

The containers related to the site organizations will be provided with electric heating, ventilation and air conditioning systems.

Heating, ventilation and air conditioning systems during operation

HVAC systems will be installed at the LER and CCR buildings located on land. The HVAC system will consist of an air treatment control unit connected to an external evaporation unit, with variable refrigerant volume, with high efficiency and low energy consumption. The air conditioning system will be mounted on the roof of the building.

The distribution of air conditioning in the rooms will be made through rectangular air ducts made of galvanized sheet, thermally insulated with stone wool mattresses.

The selection of the distribution channel routes was made taking into account the location of the air treatment plant and the possibilities of laying and masking the pipes.

For the introduction of air into the rooms, exhaust vents with ceiling mounting were provided. The connection between the discharge outlet and the flexible aluminium connection with which it is connected to the air distribution pipe is made by means of a telescopic plenum.

The air exhaust from the rooms will be done through the recirculation/exhaust air vents with grille, mounted in the false ceiling, these being provided with an exhaust flow control system.

b) **Heating, ventilation and air conditioning systems for offshore components**

The ships will be equipped with specific heating systems on board.
The HVAC system will be installed within the Neptun Alpha Platform to ensure an acceptable environment (temperature, humidity and filtration standards) in all enclosed areas and to maintain the separation of hazardous and non-hazardous areas, through pressure differences and/or dilution through ventilation.

Telecommunications and security systems

a) **Onshore telecommunications and security systems**

Telecommunications and security systems in building phase

Telecommunications within the site organizations will be carried out with mobile phones and high-frequency radios.

Telecommunications and security systems in operation

The communication between the RSI and the CCR, then between the CCR and the Neptun Alpha Platform will be through a direct connection through the fiber optic cable installed parallel to the production pipeline. The fibre optic cable will ensure communication between the Neptun Alpha Platform and the operators working within the CCR located on land. Fibre optics were selected based on bandwidth and availability for the remote process control application.

The CCR will be equipped with facilities for communication with SRM and the marine production platform. The sea section of the fiber optic cable will serve as the primary means for communication with the marine production platform. A backup VSAT satellite antenna will also be installed within the CCR to provide satellite communications with the marine production platform.

Telephone and internet services will be provided by local providers. There will be a dedicated connection, through MPLS fiber optics, with a bandwidth of at least 30 Mbps, to connect the local network to the wide area network (WAN). There will also be a wireless connection (IBPC) with 30 Mbps bandwidth for the Dual Line telephone service, which will provide secondary connection to the WAN. The antennas for the wireless connection will be located on the roof of the CCR.

The CCR will be equipped with specialized security systems, including a monitored CCTV system and access card readers. Access with a security card will be required to enter the restricted area of the CCR building control room. In addition, the SRM site will be equipped with security systems, including CCTV system, intrusion detection and access gates with card readers.

Security systems and cameras will be connected to the CCR for remote alarm and monitoring. Both CCR and SRM sites will be provided with perimeter fences.

b) **Offshore telecommunications and security systems**

The main communications and security systems related to offshore facilities will include:

• Spare fiber optic and VSAT cable;

• Ultra-high frequency (UHF) radio system;

• Maritime radio system;

• CCTV system;

• EVC system with dedicated line and satellite phones;

• Automatic identification system.

• Public announcement and general alarm system

The fibre optic cable will transmit dedicated lines of VOCs between the CCR and the marine production platform, general alarm as part of the instrumented safety system, video camera, marine radio and two-way radio. Possibilities will be provided for remote access of the Beneficiary's private communications network and to allow suppliers to remotely access their respective networks within the production platform.

In the event of an unforeseen loss of fiber optic cable transmission, the Neptun Alpha Platform is equipped with a backup satellite antenna (VSAT) to ensure data transmission between the offshore production platform and the onshore CCR. When communication is made via backup VSAT instead of fiber optic cable, to determine what level of control and supervision will be lost, the philosophy of bandwidth removal/network prioritization will be adopted. The production platform will continue to operate normally on backup communication (VSAT). If both the fiber optic cable and the VSAT cannot transmit data from the production platform to the CCR, the production platform will close securely based on the control and interlocking systems provided on the platform.

Radio system UHF

The system will provide radio communications for platform personnel and land-based control room operators for emergency and maintenance activities. The land and sea portions of the system will be connected via the fibre optic cable to/from shore, so that staff can communicate between all sites. The control room operator interface to the radio system shall be available at the CCR console.

The system must consist of radio repeaters, portable radios and control stations. The crane/operator must be equipped with a UHF radio for loading and unloading activities.

Marine Radio System

For maritime operations, the system will provide communications between supply vessels/crew vessels, the production platform, the drilling platform and the control room operators. The marine radio on the production platform must be located in the LER and include the remote control function for operation in the temporary shelter. The radio on the production platform will be connected to the control room operators via the fibre optic link. The operator interface of the control room to the marine radio of the production platform shall be available to the CCR console. The crane/platform operator shall also be equipped with a marine radio for communications with supply vessels/crew vessels.

CCTV system

This system will provide CCR operators with high-definition video images from most areas of the Neptun Alpha Platform. The CCTV system will be a dual-role system, one for operations and one for security, and will include the latest technology for security monitoring and surveillance on an unmanned platform. The system design must provide a detailed view of most of the areas/equipment on the production platform for CCR operators. Thus, if a major hazard event happens while operators are on board the production platform, CCR operators will be able to monitor the potential major hazard event, including the affected areas, and thus assist operators on board the platform with situational awareness.

eVOC Hot-Line System and satellite phones

A Hot-Line eVOC system will ensure immediate VOC communications between CCR operators and various locations on the production platform. Locations for the dedicated line will include the LER, the temporary shelter and the DEH building. The operator interface for the hot-line system will be available at the CCR console. Satellite phones will be available for critical or emergency telephone service from the production platform. Also, the satellite phones will serve as backup communications to the CCR, in case of failure of the dedicated line system.

Automatic identification system

On the production platform, an automatic identification system will send a safety message to similarly equipped vessels near the production platform. The data received from similarly equipped ships in the area of the production platform will be displayed on a console screen at the CCR. This system uses transponders on ships and will be used to eliminate collisions of ships with the production platform.

Public Announcement and General Alarm System (PAGA)

The Public Announcement and General Alarm System (PAGA) on the platform has the functionality to provide both general alarms and public announcements. PAGA will interact with the SIS (Instrumented Safety System) and F&G (Fire and Gas Control System) systems to initiate the platform's general alarms.

This will be achieved by safe and fault-resistant wired signals. There will be an additional interface with the UHF two-way radio system. It will be possible to make PAGA broadcasts from selected portable devices and interrupt the activity on all radio channels through PAGA announcements.

Description of the activities involved for the commissioning and operation of the project

Preliminary testing of the modules will be carried out to a large extent at their manufacturing site and at the logistics base on shore, before mobilization for installation at sea and on land.

The list of the main activities carried out before the start of the installation of the infrastructure on land and at sea is presented below:

Prior to installation, testing (including hydro-testing and pigging, as appropriate):

- o All pipelines on the platform, including the pre-installed production pipeline, the risers of the supply/adduction pipelines and mechanical, electrical and control systems;
- o All components of underwater equipment and control systems, connection pipes to the eruption head and to the riser supply/adduction pipelines;

- External testing of the tightness of all connections of the supply/supply pipes of the risers;
- Filling, pigging, chemical inhibition and hydrostatic testing of the entire gas production pipeline, as well as testing of supply/supply pipelines prior to installation of connection pipelines and risers;
- The discharge of the hydrotest water from the entire system will be carried out in the anoxic zone at the DODC2 Drilling Centre, at a depth of 950m.
- Drying of the gas production pipeline;
- Hydrotesting of umbilical systems, testing and verification of control functions and communication functions after installation;
- Testing the tightness of umbilical systems after the installation of the connecting hydraulic pipes;
- Testing the tightness of the entire gas production pipeline, the supply/adduction pipelines (after installing the connection pipes and risers) and the pipelines and equipment on the superstructure;
- Verification of electrical continuity and functionality of all underwater controls after installation of electrical and fiber optic link cables;
- Testing and verifying the integrity of the fiber optic communication cable after installation;
- Testing and verification of the facilities and functions on the platform after the completion of the connections;
- Testing and verification of the functions of the onshore section of the gas production pipeline after installation and connection;
- Cleaning of wells at the marine production platform;
- Testing and commissioning activities of components on land.

2.3. Decommissioning activities

Decommissioning works after the completion of construction phase

Upon completion of the construction and commissioning of the offshore facilities, no site restoration works are required for the offshore components of the Neptun Deep project (production platform, drilling centers, supply/adduction pipelines and marine section of the production pipeline).

For the onshore components of the Neptun Deep project, upon completion of the construction works, several site restoration activities will be carried out, such as:

- Removal of equipment and installations within SRM-related site organizations and microtunnel

- All facilities and equipment within the site organisations, such as containers (office containers, facilities containers, etc.), skid equipment (pumps, generators, etc.), will be craned onto trucks and transported off-site.
- The temporary foundations will be demolished by excavation and breaking with demolition hammers. The resulting concrete waste will be disposed of at an authorized landfill.
- The holes resulting from the excavation of the temporary foundations will be filled with soil, and the last 30 cm from the surface will be filled with topsoil.

Removal/demolition of temporary construction infrastructure

- All temporary construction infrastructure (construction roads, temporary railway level crossing, technology platforms, parking areas, storage areas, etc.) will be demolished upon completion of the construction works.
- Graders will be used to dismantle the layers of penetrated macadam, gravel and coarse aggregate and to break up the consistency of the layers.
- The resulting gravel mixture will be loaded onto trucks using wheel loaders or excavators and transported off-site for proper disposal or recycling.
- The areas occupied by the temporary infrastructure will be refilled with soil, and the last 30 cm of the surface will be filled with topsoil.

All areas affected by the construction and installation works will be restored by:
• Scarification, filling and levelling, as required.
• In case of identification of contaminated areas, the site will be rehabilitated, and the contaminated materials will be managed in compliance with the legal provisions in force.
• The restoration of the site vegetation (use of grass seeds, fertilizers, etc., as the case may be).

II. REASONS UNDERLYING THE ISSUE OF THE ENVIRONMENTAL AGREEMENT:

• The Zonal Urban Plan – PUZ, which regulates the location and development of the project on land, was approved by the Tuzla Local Council (Decision No. 100 of November 16, 2020) and the Constanta County Council (Opinion No. 67 of November 27, 2019).
• The reasons/criteria based on which the alternative was chosen, including technological and location criteria:

Analysis of alternatives for the electricity production system on the platform from the point of view of environmental effects

Environmental issue	**Alternative 0**	**Alternative 1** ***Generators of gas turbine Selected variant***	**Alternative 2** ***Generators of internal combustion engines***	**Alternative 3** ***Onshore power supply***	**Comments**
Population	No effects	No effects	No effects	No effects	
Human health	No effects	No effects	No effects	No effects	
Biodiversity	No effects	No effects	No effects	Installing the cable at sea will lead to increased turbidity, there will also be underwater noise from digging the trench. It can lead to the disruption of marine biodiversity.	
Land	No effects	No effects	No effects	No effects	
Soil	No effects	No effects	No effects	No effects	
Water	No effects	No effects	No effects	The installation of the cable at sea will lead to an increase in turbidity, but it will also manifest itself locally during the execution of the work	
Air	No effects	Air emissions from gas flaring	Air emissions from fuel combustion	No effects	Alternatives 1 and 2 will have an effect on the air during operation
Climate	No effects	There are hothouse gas emissions	There are hothouse gas emissions	Indirect GHG emissions	Alternatives 1 and 2 will have an effect on the climate during operation
Material assets	No effects	No effects	No effects	No effects	
Cultural heritage	No effects	No effects	No effects	No effects	
Landscape	No effects	No effects	No effects	No effects (cable underground)	
Transborder	No effects	No effects	No effects	No effects	

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Environmental issue	**Alternative 0**	**Alternative 1** ***Generators of gas turbine Selected variant***	**Alternative 2** ***Generators of internal combustion engines***	**Alternative 3** ***Onshore power supply***	**Comments**
impact					
Infrastructure	No effects	No effects	No effects	No effects	

Analysis of alternatives for the dispersion and flaring system on the platform from environmental effects point of view

Environmental issues	**Alternative 0**	***Alternative 1 LP and HP Flare System Placed on a Single Support Arm Selected variant***	***Alternative 2 LP and HP Flare emission gas dispersion system located on 2 support arms***	***Alternative 3 Single-arm LP/HP emission gas dispersion system***	**Alternative 4 Continuous LP Flare Emission Recovery, Flashing HP Flare Emission**	**Alternative 5 Continuous LP Flare Emission Recovery, Flashing HP Flare Emission**	**Comments**
Population	No effects	No effects	No effects	No effects	No effects	No effects	
Human health	No effects	No effects	No effects	No effects	No effects	No effects	
Biodiversity	No effects	The presence of the flare flue can cause discomfort to waterfowl	The presence of the flare flue can cause discomfort to waterfowl	The presence of the flare flue can cause discomfort to waterfowl	without effect	without effect	
Lands	No effects	No effects	No effects	No effects	No effects	No effects	
Soil	No effects	No effects	No effects	No effects	No effects	No effects	
Water	No effects	Technological water generation from the separator vessel of the flare fluids that are discharged into the sea through the discharge caisson	Technological water generation from the separator vessel of the flare fluids that are discharged into the sea through the discharge caisson	No effects	Technological water generation from the separator vessel of the flare fluids that are discharged into the sea through the discharge caisson	Technological water generation from the separator vessel of the flare fluids that are discharged into the sea through the discharge caisson	
Air	No effects	Emissions of	Emissions of	It evacuates gases			

Environmental issues	**Alternative 0**	***Alternative 1 LP and HP Flare System Placed on a Single Support Arm Selected variant***	***Alternative 2 LP and HP Flare emission gas dispersion system located on 2 support arms***	***Alternative 3 Single-arm LP/HP emission gas dispersion system***	**Alternative 4 Continuous LP Flare Emission Recovery, Flashing HP Flare Emission**	**Alternative 5 Continuous LP Flare Emission Recovery, Flashing HP Flare Emission**	**Comments**
		pollutants generated by gas flaring	pollutants generated by gas flaring	directly into atmosphere	Gas recovery requires additional equipment and implicitly occupies space on the deck of the platform. There are emissions from gas flaring	Gas recovery requires additional equipment and implicitly occupies space on the deck of the platform. There are emissions from gas flaring	
Climate	No effects	There are GHG emissions from gas flaring	GHG emissions from gas flaring. CH4 emissions	Direct release of CH4 which are GHG in the air	There are GHG emissions from gas flaring	There are GHG emissions from gas flaring	
Material assets	No effects	No effects	No effects	No effects	No effects	No effects	
Cultural heritage	No effects	No effects	No effects	No effects	No effects	No effects	
Landscape	No effects	No effects	No effects	No effects	No effects	No effects	
Transborder impact	No effects	No effects	No effects	No effects	No effects	No effects	
Infrastructure	No effects	No effects	No effects	No effects	No effects	No effects	

Analysis of alternatives for storage of chemicals on the platform from environmental effects point of view

Environmental aspect	**Alternative 0**	**Alternative 1** ***Storage in jacket legs*** ***Selected variant***	**Alternative 2** ***Storage on the platform deck***	**Alternative 3** ***Suspended tank***	**Alternative 4 Suspended tank below sea level**	**Alternative 5 Underwater storage**	**Alternative 6 Onshore storage and umbilical system**	**Comments**
Population	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Human health	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Biodiversity	No effects	No effects	No effects	No effects	No effects	Installing tanks at sea will lead to increased underwater noise. It can lead to the disruption of marine biodiversity.	The installation of the umbilical system at sea will lead to increased turbidity, there will also be underwater noise from digging the trench. It can lead to the disruption of marine biodiversity.	
Lands	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Soil	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Water	No effects					Accidental chemical leaks can lead to seawater pollution	Installation of the umbilical system at sea will lead to increased turbidity	
Air	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Climate	No effects	No effects	No effects	No effects	No effects	No effects	No effects	

Environmental aspect	**Alternative 0**	**Alternative 1** ***Storage in jacket legs Selected variant***	**Alternative 2** ***Storage on the platform deck***	**Alternative 3** ***Suspended tank***	**Alternative 4 Suspended tank below sea level**	**Alternative 5 Underwater storage**	**Alternative 6 Onshore storage and umbilical system**	**Comments**
Material assets	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Cultural heritage	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Landscape	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Crossborder impact	No effects	No effects	No effects	No effects	No effects	No effects	No effects	
Infrastructure	No effects	No effects	No effects	No effects	No effects	No effects	No effects	

Analysis of alternatives for management of water from the open drainage system from environmental effects point of view

Environmental aspect	**Alternative 0**	**Alternative 1** ***Storage in tank and transport to the shore***	**Alternative 2** ***Storage in a tank equipped with hydrocarbon separator and discharge into the sea***	**Alternative 3** ***Effluent storage on the platform, analysis and discharge to the sea (<15 ppm) or transport to shore (>15 ppm). Selected variant***	**Comments**
Population	No effects	No effects	No effects	No effects	
Human health	No effects	No effects	No effects	No effects	
Biodiversity	No effects	No effects			
Lands	No effects	No effects	No effects	No effects	
Soil	No effects	No effects	No effects	No effects	
Water	No effects	Accidentally the wastewater from the tank can be discharged into the sea	No effects	No effects	
Air	No effects	Air emissions from the marine shipping	Air emissions from the marine shipping	Air emissions from the marine shipping	
Climate	No effects	There are hothouse gas emissions	There are hothouse gas emissions	There are hothouse gas emissions	

Environmental aspect	**Alternative 0**	**Alternative 1** ***Storage in tank and transport to the shore***	**Alternative 2** ***Storage in a tank equipped with hydrocarbon separator and discharge into the sea***	**Alternative 3** ***Effluent storage on the platform, analysis and discharge to the sea (<15 ppm) or transport to shore (>15 ppm).*** ***Selected variant***	**Comments**
Material assets	No effects	No effects	No effects	No effects	
Cultural heritage	No effects	No effects	No effects	No effects	
Landscape	No effects	No effects	No effects	No effects	
Crossborder impact	No effects	No effects	No effects	No effects	
Infrastructure	No effects	No effects	No effects	No effects	

Analysis of alternatives concerning the discharge of water produced from environmental effects point of view

Environmental aspect	**Alternative 0**	***Alternative 1*** ***Discharge by caisson in the sea depth of 90m*** ***Selected variant***	**Alternative 2** ***Discharge by pipeline into the sea***	**Alternativa 3** ***Injection in new well formation***	**Alternative 4** **Injection in existing well formation**	**Alternative 5** **Transport to the shore**	**Comments**
Population	No effects	No effects	No effects	No effects	No effects	No effects	
Human health	No effects	No effects	No effects	No effects	No effects	No effects	
Biodiversity	No effects	Effects on marine biodiversity	Effects on marine biodiversity	No effects	No effects	No effects	
Land	No effects	No effects	No effects	No effects	No effects	No effects	
Soil	No effects	No effects	No effects	No effects	No effects	No effects	
Water	No effects	It changes the water quality indicators	It changes the water quality indicators	No effects	No effects	No effects	
Air	No effects	No effects	No effects	No effects	No effects	Emissions from	

Environmental aspect	**Alternative 0**	***Alternative 1 Discharge by caisson in the sea depth of 90m Selected variant***	**Alternative 2** ***Discharge by pipeline into the sea***	**Alternativa 3** ***Injection in new well formation***	**Alternative 4 Injection in existing well formation**	**Alternative 5 Transport to the shore**	**Comments**
						marine shipping	
Climate	No effects	No effects	No effects	No effects	No effects	Emissions from marine shipping	
Material assets	No effects	No effects	No effects	No effects	No effects	No effects	
Cultural heritage	No effects	No effects	No effects	No effects	No effects	No effects	
Landscape	No effects	No effects	No effects	No effects	No effects	No effects	
Transborder impact	No effects	No effects	No effects	No effects	No effects	No effects	
Infrastructure	No effects	No effects	No effects	No effects	No effects	No effects	

Analysis of alternatives for location of components onshore from environmental effects point of view

Environmental aspect	**Alternative 0**	**Alternative 1** ***Cape Midia Area***	**Alternative 2** ***23 August Area***	**Alternative 3** ***Tuzla Area Selected variant***	**Alternative 4** ***2 Mai Area***	**Comments**
Population	No effects	During construction there will be discomfort due to the increase in traffic that will hinder access to agricultural land	During construction there will be discomfort due to the increase in traffic that will hinder access to the land and the beach	During the construction there will be discomfort due to the increase in traffic that will hinder access to the land and the beach. During the operating period there will be an access road to the beach. There will be no construction	During construction there will be discomfort due to the increase in traffic that will hinder access to the land and the beach	Minimal discomfort during the realization stage – all variants

Environmental aspect	**Alternative 0**	**Alternative 1** *Cape Midia Area*	**Alternative 2** *23 August Area*	**Alternative 3** *Tuzla Area* ***Selected variant***	**Alternative 4** *2 Mai Area*	**Comments**
				restrictions due to the location of the production pipeline because the safety restriction limit of 20 m, imposed by the regulations in force, this area being entirely on the land owned by the project owner. During the operation there will be a curtain of trees around SRM and CCR, to reduce the visual impact.		
Human health	No effects	During the construction period there will be potential discomfort due to vehicle traffic and noise from the machinery used				Minimal discomfort in the realization stage – all variants
Biodiversity	No effects	The site is located near a protected natural area - Danube Delta Biosphere Reserve (UNESCO protected natural area)	The analysed site is located in the vicinity of the ROSPA 0076 Black Sea Protected Area	The closest protected natural areas are represented by ROSPA0076 Black Sea and ROSCI0273 the marine area of Capul Tuzla, about 60 m east of the easternmost edge of the site. During the construction of the microtunnel, the protected area will be affected due to the anchors for stabilizing the pipeline installation barge	The special conservation area of the 2 Mai - Vama Veche Marine Reserve occupies the entire coastline between 2 Mai and Vama Veche. The works will be carried out within the perimeter of the protected area, with significant negative effects on the biodiversity and habitats present in the area being possible.	Due to the constraints related to the protected area, alternative 4 was rejected.
Lands	No effects	The category of land use is changed, areas are	The site is located in the administrative area of 23	It has mainly agricultural uses and it is located within the	The area of the site is located between the	All variants will change the category

Environmental aspect	**Alternative 0**	**Alternative 1** *Cape Midia Area*	**Alternative 2** *23 August Area*	**Alternative 3** *Tuzla Area* ***Selected variant***	**Alternative 4** *2 Mai Area*	**Comments**
		permanently occupied	August, close to the Black Sea shore (located east of the site). The use of the land is mainly agricultural.	limits of the administrative area of Tuzla Commune. The site is located between the National Road DN39 (located approximately 1.8 km west of the site boundary) and the Black Sea coast (located approximately 60 m east of the site boundary)	localities of 2 Mai and Vama Veche	of land use, areas will be permanently occupied
Soil	No effects	Potential historical pollution of the land given the vicinity of the Rompetrol refinery	The seaside cliff is exposed to natural erosion processes, without consolidation/stabilization works. The geotechnical investigations carried out on the site revealed the presence of a layer of calcareous rock affected by an intense karstification process due to the presence of Black Sea waters The execution of the shore undercrossing works can activate the landslide processes in the sea cliff area (unterraced).	The soil and basement conditions of the selected site are more favorable for the execution of the pipeline corridor and shore crossing	The undercrossing works will be carried out on the coastal area between the two localities, as there is no corridor that would allow the pipeline to cross on the shore due to the marine reserve.	Due to the safety constraints of the construction, alternative site no. 2 was rejected. Because of potential historical pollution of the land, Alternative 1 was rejected.
Water	No effects	There will be no direct effects on the water. In the control and metering station, no gases will be treated so no technological water will be generated.				The project does not influence the quality of surface water and

Environmental aspect	**Alternative 0**	**Alternative 1** *Cape Midia Area*	**Alternative 2** *23 August Area*	**Alternative 3** *Tuzla Area* *Selected variant*	**Alternative 4** *2 Mai Area*	**Comments**
						groundwater
Air	No effects	During construction, traffic, soil excavation, the operation of machinery are the main source of air emissions During the operating period, emissions from traffic and maintenance works The noise generated during the construction period will be temporary, being generated only during the operation of vehicles and equipment. It will be felt locally.				All variants will have an effect on the air during construction
Climate	No effects	The main source of greenhouse gases during the execution period is represented by the traffic of vehicles that ensure the supply of construction materials and equipment/machinery used for construction. Low GHG emissions during operation				All variants will have an effect on climate during construction
Material assets	No effects	During construction, undercrossings of pipelines, railways, local roads are required				In all variants undercrossings will be necessary
Cultural heritage	No effects	No effects	No effects	According to the archaeological investigations carried out on the site, no archaeological remains have been identified within the limits of this site	No effects	The project does not influence the cultural heritage
Landscape	No effects	Visual impact	Visual impact	Visual impact	Visual impact	All variants will cause changes to the landscape
Crossborder impact	No effects	The project cannot have a crossborder impact.				The project does not have crossborder impact.
Infrastructure	No effects	The construction and arrangement of access roads, which implies the occupation of larger	The construction and arrangement of access roads, which implies the	The construction and arrangement of access roads, which implies the occupation of larger areas of land. Local	It is necessary to arrange access roads. There are no access roads	For all variants, access roads must be arranged.

Environmental aspect	**Alternative 0**	**Alternative 1** *Cape Midia Area*	**Alternative 2** *23 August Area*	**Alternative 3** *Tuzla Area* ***Selected variant***	**Alternative 4** *2 Mai Area*	**Comments**
		areas of land. Local suppliers to provide utilities. Difficult access to the National Gas Transmission System	occupation of larger areas of land. Local suppliers to provide utilities. Easy access to the National Gas Transmission System	suppliers to provide utilities. Easy access to the National Gas Transmission System	in the investigated area to ensure the transport of materials and equipment to the proposed site.	
Other activities in the area	No effects	There is a military unit in the area. The site is located in the Midia industrial area (Petromidia oil refinery, terminal)	The CF 800 Constanta - Mangalia railway line is located in the immediate vicinity of the site (250 m away from the seashore).	Agricultural activities	-	Due to the presence of this protected area and other limitations (e.g. potential historical pollution of the land, the presence of a military base in the area), alternative 1 was rejected.

Analysis of alternatives for onshore undercrossing from environmental effects point of view

Environmental aspect	**Alternative 0**	**Alternative 3** ***Microtunnel*** ***Selected variant***	**Alternative4** ***Direct pipe***	**Comments**
Population	No effects	During the construction there will be discomfort due to the increase in traffic that will hinder access to the land and the beach due to the organization of the construction site. During the operating period there will be a way of access to the beach. There will be no construction restrictions due to the location of the production pipeline because the safety	During the construction there will be discomfort due to the increase in traffic that will hinder access to the land and the beach due to the organization of the construction site There will be no construction restrictions due to the location of the production pipeline because the safety restriction limit of 20 m, imposed by the regulations in	Minimal discomfort in the implementation stage – all variants

Environmental aspect	**Alternative 0**	**Alternative 3** ***Microtunnel*** ***Selected variant***	**Alternative4** ***Direct pipe***	**Comments**
		restriction limit of 20 m, imposed by the regulations in force, this area being entirely on the land owned by the project owner.	force, this area being entirely on the land owned by the project owner.	
Human health	No effects	During the construction period there will be potential discomfort due to vehicle traffic and noise from the machinery and ships used		Minimal discomfort in the implementation stage – all variants
Biodiversity	No effects	The reception manhole and the transition ditch are located in the sea in the vicinity of the protected area ROSCI0273 Cape Tuzla Marine Area During the installation of the pipeline from land to sea, 3 of the 8 anchors of the barge used will be fixed on the seabed in the protected area, and will have an effect on the sediments The noise produced by excavation will have effects on the marine fauna.	The reception manhole and the transition ditch are located in the sea in the vicinity of the protected area ROSCI0273 Cape Tuzla Marine Area The noise produced by excavation will have effects on the marine fauna.	All variants will have impact on biodiversity
Land	No effects	It has mainly agricultural uses and is located within the limits of the administrative area of Tuzla Commune. The site is located between the National Road DN39 (located approximately 1.8 km west of the site boundary) and the Black Sea coast (located approximately 60 m east of the site boundary)	It has mainly agricultural uses and is located within the limits of the administrative area of Tuzla Commune. The site is located between the National Road DN39 (located approximately 1.8 km west of the site boundary) and the Black Sea coast (located approximately 60 m east of the site boundary)	All variants will change the category of land use, areas will be permanently occupied
Soil	No effects	The ground and subsoil conditions of the selected site are more favorable for the execution of the shore undercrossing During the installation of the pipeline from land to sea, 3 of the 8 anchors of the barge used will be fixed on the seabed in the protected area, and will have an effect on the sediments	The ground and subsoil conditions of the selected site are more favorable for the execution of the shore undercrossing	Due to the safety constraints of the construction, **alternatives 1 and 2 were rejected.**
Water	No effects	Increasing the local turbidity in the area where the	Increasing the local turbidity in the area where the	All variants will have impact on

Environmental aspect	**Alternative 0**	**Alternative 3** ***Microtunnel*** ***Selected variant***	**Alternative4** ***Direct pipe***	**Comments**
		excavations for the reception manhole and the transition ditch will be carried out. In accidental situations, accidental pollution with hydrocarbons from the machinery or ships involved in the construction process can occur.	excavations for the reception manhole and the transition ditch will be carried out. In accidental situations, accidental pollution with hydrocarbons from the machinery or ships involved in the construction process can occur.	water during the construction period.
Air	No effects	During construction, traffic, soil excavation, the operation of machinery are the main source of air emissions. The noise generated during the construction period will be temporary, being generated only during the operation of the equipment. It will be felt locally.		All variants will have impact on the air during the construction period.
Climate	No effects	The main source of greenhouse gases during the execution period is represented by ships and machinery used in construction.		All variants will have impact on climate during the construction period.
Material assets	No effects	No effects		All variants do not impact material assets
Cultural heritage	No effects	No effects	No effects	All variants do not influence cultural heritage
Landscape	No effects	Visual impact by the presence of equipment used for construction	Visual impact by the presence of equipment used for construction	All variants will bring changes with visual impact only during the construction stage.
Crossborder impact	No effects			The project does not have crossborder impact.
Infrastructure	No effects	No effects	No effects	All variants do not impact infrastructure.

Compliance with BAT/BREF/compliance with BAT conclusions, applicable Bref provisions:
The project does not comply with the provisions of Law no. 278/2013, for industrial emissions, as further amended and supplemented

Compliance with community requirements transposed in the national legislation:
In compliance with Decision No. 10847/13.06.2023, issued by the Dobrogea – Litoral Water Basin Administration, it is not necessary to prepare the impact assessment study on water bodies (SEICA), but it is necessary to continue the study submitted by the beneficiary in which new substances were established, other than those provided for in NTPA 001/2002 and for which acute toxicity tests have been carried out against the concentrations imposed by the technological limits set by the beneficiary, by carrying out chronic toxicity tests so as to demonstrate that the maximum permissible limit values set for discharge into the marine environment at the level of each chemical ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to achieve the environmental objectives set by the Framework Directive Strategy for marine environment (2008/56/EC).

How it complies with the sanitary protection areas, the environmental protection objectives from the area in air, water, soil, etc:

The project respects the sanitary protection zones and is favourably approved by the competent authority in the field of population health.
The environmental protection objectives are respected by applying the measures and conditions imposed in the environmental agreement and in the regulatory acts issued by the interested authorities.

Compatibility with the objectives of protection of Natura 2000 sites

Analysis of conservation measures in ANPIC management plans/regulations that may limit/influence the interventions and activities proposed by the project

Natura 2000 Site ROSAC0273 Cape Tuzla Marine Area
From the analysis of the management actions/measures for the conservation of habitats and species as well as the management measures for ensuring the sustainable development of the local communities listed above, it can be concluded that they have a general character without particularizations focused on certain types of human activities within or in the vicinity of the site.
The only provisions of the Regulation incidental to the analysed project are those that concern navigation. It is specified that: “Anchoring is allowed for boats and ships only in sectors established by the Custodian" (Art. 27). Under these conditions, the anchor points provided for by the project and which have been analysed from the point of view of the effects that may induce a potential impact on the habitats within the ROSAC0273, were approved by ANANP- ST Constanta by Favourable Opinion with Conditions No. 34 of 27.06.2024.

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The other regulations specific to the activities allowed within the Natura 2000 site ROSCI/ROSAC0273 Cape Tuzla Marine Area are not able to limit or influence the interventions and activities envisaged within the analysed project.

Natura 2000 site ROSPA0076 the Black Sea

From the analysis of the measures in the management plan, it emerged that it is not possible to establish relations with the proposed project, which would result in limitations between these measures and the activities and/or interventions proposed by the Neptun Deep project.

With reference to the Regulation of the Natura 2000 site ROSPA0076 the Black Sea, it should be noted that it also concerns ROSAC0197 the Eforie North-Eforie South submerged beach and aims to ensure the conservation and maintenance in a favorable conservation status of the existing bird species and their specific habitats.

The activities envisaged by the project are not directly regulated and as a result, are not influenced by the regulation of the Natura 2000 site ROSPA0076 the Black Sea. The only activity that is subject to the regulations is the one related to maritime transport, but without bringing limitations to the activities within the project, regardless of its implementation stage.

Natura 2000 Site ROSCI0293 Costinești-23 August

For ROSCI0293 Costinești-23 August, no management plan was developed. ANANP Note 1827/BT/375/21.01.2022 on the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in ROSCI0293 Costinești-23 August does not contain measures that influence or limit the activities and interventions proposed by the project analysed within this appropriate assessment study.

Natura 2000 Site ROSCI0311 Viteaz Canyon

For ROSCI0311 Viteaz Canyon no management plan was drawn up. ANANP Note No. 1827/BT/377/20.01.2022 on the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in ROSCI0311 Costinești-23 August does not contain measures that would influence or limit the activities and interventions proposed by the project analysed within this appropriate assessment study.

Impact during the construction period

During the planning stage of the natural gas transportation infrastructure from the wells and the production platform to the Regulation and Measurement Station (SRM), located between Tuzla and Costinesti, it was found that the route of the gas pipeline and the optical fibre cable for communication and control, intersected, on a short stretch of approx. 600 m, with the special conservation area of the Cape Tuzla Marine Area.

Following the analysis, it was concluded that the option of digging a trench for laying the optical fibre pipe and cable inside the protected natural area will lead to the permanent loss of some areas of the habitats of community interest 1110 and 1170, the project being susceptible to a significant impact without the possibility of establishing effective measures to reduce the level of impact.

In order to eliminate the possibility of permanent damage to the protected marine habitats within the NATURA 2000 site ROSAC0273 the Cape Tuzla Marine Area, a technical solution was chosen that would not affect the integrity of the protected natural area despite the additional costs involved. The technical solution for the pipeline and the communication cable involves undercrossing the shore area by building a microtunnel over a length of approx. 890 m, which will allow the total avoidance of direct interventions on habitats of conservation interest in the marine and coastal area (beach).

Part of the activities/interventions provided for by the project in the construction phase, carried out inside or in the vicinity of the protected natural areas (ROSAC0273 the marine area of Capul Tuzla, ROSCI0293 Costinești-23 August, ROSPA0076 the Black Sea and ROSCI0311 the Viteaz Canyon), designated for the protection and conservation of species of fish, cetaceans, birds and marine habitats of Community interest, including microtunnel construction activities, may generate different forms of potential impact on the conservation objectives of these protected natural areas. Among these, the analysis of potential significant effects and impacts highlights the following activities/interventions:

- Anchoring the barge used for the construction of the microtunnel,
- Digging/dredging and subsequent covering of the trench for the gas production pipeline,
- Construction of the microtunnel outlet manhole in the sea,
- Fixing by tapping the pillars to the jacket of the Neptun Alpha platform.

These interventions also involve the use of boats that in turn can generate additional negative effects on ANPIC's conservation objectives.

The main identified effects resulting from the interventions listed above are:
- Crushing and/or denuding of the substrate populated with marine organisms as a result of the placement of the ship's anchors used in the construction of the microtunnel,
- Relocation of the substrate with living organisms,
- Increased turbidity,
- Increased noise levels in the aquatic and airborne environment,
- Temporary and local increase of nutrients and possibly of some pollutants present in sediments due to re-suspension of sediments

<u>Relevant aspects concerning the forms and types of impact:</u>

- No significant impacts of the project have been identified on the conservation objectives within the protected natural areas ROSAC0273 the Marine Area of Capul Tuzla, ROSCI0293 Costinești-23 August, ROSPA0076 the Black Sea and ROSCI0311 the Viteaz Canyon.
- The analysis of the impact of anchor positioning within the ROSAC0723 Cape Tuzla Marine Area was carried out within the EA study by marine biodiversity experts, including marine habitats expert, based on data collected from the proposed areas and potentially affected by anchors, based on the information held concerning the marine habitats in the project's area of influence, and on the basis of expertise on the impact on these types of habitats.

- For species of community interest (fish and cetaceans) within ROSAC0273 Marine Area of Capul Tuzla and ROSCI0293 Costinești - 23 August, direct, indirect and secondary impacts

were identified during the construction period, only in the short term and reversible, without the possibility of affecting the characteristic parameters in the long or permanent term.

- - In the case of bird species of community interest for which the Special Bird Protection Site ROSPA0076 the Black Sea has been designated, the impacts generated by the project activities are temporary and reversible without producing changes in the size of the populations or in the long-term availability of feeding and/or resting habitats.
- With reference to the turbidity-generating activities, the dredging/excavation of the trench will be carried out outside ANPIC. Most of the suspended sediment particles will resettle near the trench (500-700 m). A large part of the surface where the concentration of suspended solid particles in the protected natural area will increase is represented by bare rock (without organisms characteristic of habitat 1170), and low concentrations of particulate matter (1-5 mg/l) will not impact the biofilter organisms because they are within the normal limits of water turbidity in coastal areas. During the period of storms on the Romanian coast, TSS values of 75 mg/l can also be recorded, while the occurrence of negative effects as a result of the high concentration of suspended particles can be anticipated, for example, in the case of the characteristic species Mytilus galloprovincialis, from TSS values higher than 80 mg/l. The concentration of solid particles in the water mass generated by the works within the project will not exceed values of 1-5 mg/l inside the protected natural area ROSAC0273 Cape Tuzla Marine Area, while inside ROSCI0293 Costinești - 23 August, values of 0.1-1 mg/l are anticipated, which does not represent an exceedance of the normal turbidity values in coastal waters.
- From the analysis of the impact on species and habitats of community interest within ROSAC0273 Marine Area of Cape Tuzla, ROSCI0293 Costinești- 23 August, no significant impacts resulted.
- In the case of habitat 8330, which is sensitive due to the fragility of the characteristic cavernous submarine structures, identified outside ROSAC0273 Cape Tuzla Marine Area, not mentioned in the literature in this area, it will not be affected, as a result of the relocation of the T6.3 anchor point.
- - In the case of habitat sub-type 1170-2 Biogenic reefs of Mytilus galloprovincialis, with an important ecological role in the marine ecosystem, it has an insular presence, north and south of the gas pipeline route (points: P7, P9, P10, P23). This habitat sub-type is highly vulnerable to trench digging/dredging activities, due to its short distances (160 m – 550 m) up to the area where the works are carried out, as a result of which in order to avoid the potential significant impact due to the high level of turbidity in the vicinity of the transition trench, specific avoidance measures have been proposed (e.g.: the use of turbidity curtains in the work points). This measure to avoid the impact of high turbidity was also provided for habitat 8330.
- - As a result of the noise modeling scenarios in the aquatic environment, a potential impact that may affect the parameter - population size in the case of the species Tursiops truncatus, namely, the reduction of population numbers (1-5 individuals), resulting from the high level of noise generated by the activity of fixing the jacket of the Neptun Alpha platform, it will not materialize. Before the activities of beating the pillars, other interventions will be carried out, such as manoeuvring the platform transport vessel in the fixing area, manoeuvring the support ship, assembling the jacket and pillars with the use of the crane, all of which will have the effect of removing the phallin within a radius of at least 400 m, beyond the area of significant damage (100 m) of the individuals.
- Other species of cetaceans are also present on the offshore site of the project, one of which is much more sensitive to noise and vibrations, namely Phocoena phocoena (porpoise). In the case

of this species, the activities of hammering the pillars can affect the porpoises in an area with a much greater radius (about 12 km) than in the case of the other two species of dolphins (T. truncatus, D. delphis). In the case of the species of community interest Phocoena phocoena, the impact with the application of prevention/avoidance measures is considered to be insignificant.

- - Following the cumulative impact assessment with other existing, planned and/or anticipated PPs, as well as taking into account the pressures and threats in the approved management plans and standard forms, it resulted that the effects within the analyzed project can only be cumulated with the effects resulting from the implementation of the project COASTAL EROSION REDUCTION - PHASE II (2014-2020), and only in the case of habitats of community interest within the site ROSCI0293 Costinești - 23 August. The effect will be represented by the temporary increase of turbidity and will be cumulative, only if the two projects will be carried out simultaneously and even in this case the contribution of the analyzed project to the increase of turbidity in the site will be negligible.

Impact during the operational period

The main activities/interventions provided for in the project in the operation phase are carried out outside the protected natural areas ROSAC0273 the Marine Area of Cape Tuzla, ROSCI0293 Costinești - 23 August, ROSPA0076 the Black Sea and ROSCI0311 Viteaz Canyon and target the SRM and CCR premises in the land area of the project and the Neptun Alpha platform.

From the analysis of the potential significant effects and impacts, it was found that the only activities that can affect the conservation objectives of the protected natural areas are related to the production activity on the Neptun Alpha Platform, located at a distance of 115 km from the shore.

Among the activities carried out on the Neptun Alfa Platform, the only activity that can be considered in terms of a potential significant impact on protected natural areas is the discharge of technological water. The technological water resulting from the degassing vessel, the water collected at the open drain system and the water recovered from the torch separators, will be directed to the vertical discharge caisson into the sea. The caisson discharge head is located at a depth of 90 m.

The main anticipated impacts on marine biodiversity as a result of effluent discharge are based on the introduction into the aquatic environment of substances that are known for their toxicity to aquatic organisms.

The effluent will be discharged in the offshore area of the Black Sea (approx. 115 km from the shoreline) at long distances from the marine protected natural areas (SCIs, SPAs). The closest (approx. 13.2 km) protected natural area to the technological water discharge area and the production platform is ROSCI0311 Viteaz Canyon.

The composition of the chemicals in the effluent does not contain heavy metals, hydrocarbons or priority substances listed in the Water Law No. 107/1996 and in Directive 2013/39/EU amending Directives 2000/60/EC and 2008/105/EC.

In order to determine the maximum concentration of the chemicals used, so that the effluent discharged into the sea complies with the maximum permissible values, according to NTPA001, analyses on synthetic samples were carried out at a laboratory accredited according to SR EN ISO 17025:2018. Based on the results obtained, the laboratory determined by calculation the maximum permissible concentration recommended to be used for each chemical in such a way as not to exceed the maximum permissible concentrations, provided for in the standard NTPA001 and which the beneficiary is obliged to comply with.

For chemicals for which no limits have been set in NTPA001 ecotoxicity tests have been performed. The laboratory tests were carried out at INCDM "Grigore Antipa". The purpose of the

ecotoxicity tests was to evaluate under laboratory conditions the toxicity of the products and the associated effects on potentially affected marine organisms.

Toxicity tests were carried out on three species native to the Black Sea, namely: *Skeletonema costatum, Acartia tonsa, Chelon auratus*. The species and test conditions were selected to best reflect the trophic levels of the Black Sea communities (primary producer – first-order consumer – second-order consumer) and the probable conditions of the effluent discharge area.

Toxicity tests showed that the products or their mixture "did not have acute toxicity at the concentrations proposed for discharge" for *Acartia tonsa, Chelon auratus*. Toxicity tests for *Skeletonema costatum* showed a reduced effect for AFMR20400A defoamer and SCAL13370A deposit inhibitor (15% growth inhibition, 18%, respectively), and a large effect for CORR12452A corrosion inhibitor and their mixture (79% growth inhibition, 92%, respectively).

The conclusion of the study of the toxicity of the concentrations at discharge of the substances was as follows: "The AFMR20400A antifoamer and the SCAL13370A deposit inhibitor had a negligible effect, while the CORR12452A corrosion inhibitor and the mixture of the three products had a significant effect on the first trophic level (phytoplankton). However, it must be taken into account that the discharge of technological water into the sea is made at a depth of 90 m, and the DREAM simulation shows that the effluent with the highest concentration of toxic substances does not affect the upper layer (euphotic zone) of the water column that constitutes a living environment for phytoplankton. No acute effects on upper trophic levels (zooplankton and fish) were observed, both when the products were tested separately and in mixture. The 5% mortality recorded for the corrosion inhibitor CORR12452A and the mixture of the three products in the test with Acartia tonsa are within the accepted mortality range, the same as in the control group of the test and it is not considered an effect. These results indicate that the production chemicals tested and their mixture did not have significant effects on marine organisms at the three trophic levels assessed.

In addition, for modelling the potential risk to the marine environment of effluent discharge into the Black Sea, a licensed software program – DREAM, provided by SINTEF, was used. The Environmental Impact Factor (EIF) was analysed. From the simulations carried out, it results that the effluent pen with potential to affect (EIF >5%) of macrozoobenthic and zooplankton will extend over a distance of approx. 7 km in the south-west direction and/or approx. 2 km around the platform in the other directions.

Given the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, the risk of affecting habitats 1170 and 1180 is insignificant. At the same time, following the observations made on the route of the pipeline and in the area of the Neptun Alpha platform, the presence of habitats 1170 or 1180 was not reported.

During the decommissioning period of the project

The decommissioning activities will target the Neptun Alpha platform as well as the constructions and equipment in the onshore area of the project. These activities will have as their main effect the temporary increase of the noise level in the aquatic and air environment, without the possibility of significant impacts on the protected natural areas ROSAC0273 the Marine Area of Cape Tuzla, ROSCI0293 Costinești - 23 August, ROSPA0076 the Black Sea and ROSCI0311 Viteaz Canyon.

Identification and quantification of cumulated impact

The maintenance or achievement of a target value associated with the parameters of the conservation objectives may be prevented by the contribution of: the existing pressures (in the Natura 2000 site

and its vicinity), the identified threats (including other plans and projects) and the plan/project analysed.
The impacts generated by other plans and projects were identified and quantified together with the impact of the analysed project in order to obtain a more complete picture of the extent to which the target of the conservation objective parameter can be achieved/maintained. Also included in the cumulative impact analysis were the pressures and threats identified and assessed in the approved management plans and those provided for in the standard forms of Natura 2000 sites.

The impact analysis for each objective/parameter within the protected natural areas ROSAC0273 the Marine Area of Capul Tuzla, ROSCI0293 Costinești - 23 August, ROSPA0076 the Black Sea and ROSCI0311 Viteaz Canyon located in the area of influence of the project is presented in **Annex 2 to the Environmental Agreement.**
The residual impact assessment was carried out taking into account the effectiveness of the proposed prevention and avoidance measures. The assessment of the significance of the residual impact was carried out, based on the conservation objectives, and is subject to **Annex 3 to the Environmental Agreement.**

The impact analysis within the appropriate assessment study was carried out based on the conservation objectives communicated by ANANP and approved by **Decision No. 195/23.03.2023** on the revision of the Methodological Norms for the implementation of the conservation objectives provided in Annex No.1 to OMMAP No. 1197/2016 on the approval of the Management Plan and the Regulation of the Natura 2000 site ROSPA0076 the Black Sea, **Decision No. 490/06.01.2021** on the approval of the Methodological Norms on the implementation of the conservation objectives in the Annex to Order No. 1433/2016 on the approval of the Management Plan and the Regulation of the Natura 2000 site **ROSCI0273 the Cape Tuzla Marine Area** and based on **Note No. 375/20.01.2022** concerning the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in **ROSCI0293 Costinești – 23 August** and **Note No. 377/20.01.2022** concerning the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, of wild flora and fauna, population safety and investment in **ROSCI0311 Viteaz Canyon**.

ALTERNATIVE SOLUTIONS
Considering the fact that after taking into account the prevention and avoidance measures, an insignificant impact of the analysed project resulted and consequently, in the absence of a significant residual impact, it was not necessary to consider alternative solutions.

Cumulated impact
Identification of drilled wells and wells planned to be drilled
The currently active oil companies that have carried out exploration and exploitation activities in the Black Sea are OMV Petrom, Black Sea Oil & Gas, Lukoil Overseas.

Based on the available public information, 21 drilled wells were identified, of which 5 are in operation, 16 wells are abandoned/preserved following exploration, as shown in table 6.173.

List of drilled wells and wells planned to be drilled

Company	Name of block	Name of well	Exploration date	Distance from the drilling centres from ND project (km)		
				PSDC1	DODC1	DODC2
OMV Petrom SA *(ExxonMobil Exploration and Production Romania Limited Nassau (Bahamas), Bucharest Branch and OMV Petrom S.A*)	XIX Neptun	Califar 1	2015	36.1	30	34.62
	XIX Neptun	Delfin 1	2015	32.2	35.38	38.75
	XIX Neptun	Domino 1	2011	24.43	1.76	3.68
	XIX Neptun	Flamingo 1	2015	71.14	46.46	48.85
	XIX Neptun	Pelican South 1	2014	3.05	22.4	20.22
	XIX Neptun	Domino 2	2014	24.05	9.75	4.66
	XIX Neptun	Pelican South1	2015	3.7	21.82	20.82
	XIX Neptun	Domino1	2015	25.31	4.47	2.54
Black Sea OIL & Gas	EX-25 Luceafarul	Ovidiana-1		67.8	88.87	84.74
	EX-25 Luceafarul	Madalina-1	2015	74.6	92.23	87.78
	XV Midia	Iulia	2015	46.84	69.63	66.51
	XV Midia	Paula		34.46	57.98	56.5
	XV Midia	Ana 100	2018	50.51	68.52	63.76
	XV Midia	Ana 101	2018	50.51	68.52	63.76
	XV Midia	Ana 102	2018	50.51	68.52	63.76
	XV Midia	Ana 103	2018	50.51	68.52	63.76
	XV Midia	Doina 100	2018	39.7	61.75	57.56
Lukoil Overseas	EX-29 Rapsodia	Elena	November 2014	44.01	54.67	57.55
	EX -30 Trident	Daria	2015	42.11	48.86	51.9
	EX -30 Trident	Lira	2015	42.96	38.41	43.15
	EX -30 Trident	Trinity	2018	55.98	47.07	52.06

The cumulative impact between the Neptun Deep project and the wells abandoned or preserved from the exploration campaigns of active companies is negligible.

The cumulated impact with the activity carried out by the company Black Sea Oil& Gas is evaluated in the paragraphs from the section below.

The project does not generate a cumulative impact in a crossborder context, resulting from the presence of abandoned/preserved wells and the analyzed project, both during the construction period and during the operation period of Neptun Deep project.

Cumulative impact assessment with existing and planned projects

No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
1	Reducing coastal erosion Phase II (2014-2020) Owner: Romanian Waters National Administration – Dobrogea-Litoral Constanta Water Basin Administration (ABADL)	Construction of breakwaters and expansion of beaches for adaptation to climate change, prevention and risk management through protection against coastal erosion The project is ongoing	The nearest sanding perimeter is the Costinesti Area at approx. 1.2 km from the land area of the project and approx. 1.5 km from the project's marine area The sand perimeter in the Costinesti area intersects ROSPA0076 the Black Sea In the vicinity (5-28 m) of ROSCI0293 Costinești-23 August	Turbidity Noise impact on biodiversity	Temporary indirect disturbance of habitats 1110 and 1170 from the site ROSCI0293 Costinești-23 August. According to the project assessment, the site ROSAC0273 the Marine Area at Capul Tuzla will not be affected/impacted. Temporary disturbance of fish and marine mammal species due to noise generated by excavation work. Temporary damage to some perimeters where fish, marine mammals and waterfowl feed. Thus, the cumulative impact generated by underwater noise is assessed to be negative, direct, local, short-term and of low intensity, resulting in a small magnitude. In the event that the works on the two projects will be carried out simultaneously, a medium sensitivity and a low negative magnitude are estimated, resulting in a minor cumulative impact. In the operation and decommissioning phase of the studied project, the impact is negligible. It is estimated that there will be no impact in a cross-border context as a result of the cumulative potential impact resulting from the construction of breakwaters and the extension of

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No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
					beaches and the project studied both during the construction period and during the operation period
2.	Works to consolidate the seafront in the area of Tuzla, Constanta County. Holder: National Administration of Romanian Waters – Dobrogea-Litoral Constanta Water Basin Administration (ABADL)	Prevention of the extension of landslides and increasing tourist attractiveness in the coastal sector of Tuzla Commune. Currently, the works are suspended due to a dispute between ABADL and Tuzla City Hall.	The cliff consolidation works will be carried out on the cliff located along the eastern part of the project's land site, at a distance of approx. 20 m The microtunnel related to the Neptun Deep project will cross the cliff area, being drilled in the rock layer under the cliff, > 2 m deep, thus not affecting the cliff or its consolidation works. It intersects with ROSAC0273 Cape Tuzla Marine Area, ROSPA0076 the Black Sea in the vicinity of (3,5 km) ROSCI0293 Costinești-23 August	Changes in the sedimentary substrate Noise Turbidity Pollutant emissions in air on Biodiversity	Disturbance of waterfowl in the resting area (Tuzla beach) The simultaneous development of the two projects will lead to an increase in pollutant emissions into the air, an increase in underwater noise and environmental noise and the suspension of sediments in the water column. Thus, the cumulative effect generated by underwater noise, turbidity is assessed to be negative, direct, local, short-term and of low intensity leading to a low magnitude. A medium sensitivity and a low negative magnitude are estimated, resulting in a minor cumulative impact. In the operational and decommissioning phases of the studied project, the impact is negligible. It is estimated that there will be no impact in a transboundary context as a result of the cumulative potential impact resulting from the construction of breakwaters and the extension of beaches and the project studied both during the construction period and during the operation period
3.	Regional project for the development of water and wastewater infrastructure in the	Rehabilitation and extension of distribution and sewerage networks,	The analyzed project intersects with the RAJA site in the railway area. The project also includes	Air emissions of pollutants	The simultaneous development of the two projects will lead to an increase in pollutant emissions into the air. They will not affect protected natural areas: ROSAC0273 Marine area of CapeTuzla, ROSCI0293 Costinești-23 August,

No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
	area of operation of SC RAJA SA Constanta Owner: RAJA SA Constanta	rehabilitation of the wastewater pumping station and wastewater discharge pipelines in Tuzla, Constanta County.	the rehabilitation of a 500 mm discharge pipe that crosses from south to north the S3 area owned by OMV Petrom within the project site, by removing the old water pipe and installing a new pipe along the local road De 277. The onshore section of the production pipeline and fibre optic cable related to the Neptun Deep project will subcross the location area of the new RAJA discharge pipeline in the vicinity of ROSAC0273 the marine area of Cape Tuzla, ROSCI0293 Costinești-23 August, ROSPA0076 the Black Sea		ROSPA0076 the Black Sea Disturbance of waterfowl in the resting area (Tuzla beach) Therefore, the cumulative effect generated by the construction works of the project is assessed to be negative, direct, local, short-term and of low intensity and the magnitude will be small A medium sensitivity and a low negative magnitude are estimated, resulting in a minor cumulative impact. In the operation and decommissioning phase of the studied project, the impact is negligible. It is estimated that there will be no impact in a cross-border context as a result of the cumulative potential impact resulting from the construction of the rehabilitation and expansion of the distribution and sewerage networks and the project studied both during the construction period and the operation period
4.	Midia Natural gas development project Owners: Black Sea Oil & Gas SA in partnership with Petro Ventures	The project carries out activity and consists of the exploitation of natural gas from the	The Ana production platform of the Midia Natural Gas Development project is located at	**Impact on:** Water Biodiversity Natural resources	No impact during the construction period. The depletion of natural resources represents a significant cumulative impact. In the case of unplanned events (e.g. natural disasters-earthquakes, explosions, pipeline damage) that have a very low

No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
	Resources SRL and Gas Plus Dacia SRL	Black Sea and its processing on shore. The existing facilities in the marine area consist of an underwater well at Doina and four production wells at Ana, an underwater production assembly on the Doina reservoir field connected by an 18 km pipeline to the Ana production platform. A 121 km underwater pipeline will ensure the transport of gas from the Ana platform to the shore, where 4.1 km of underground pipeline will follow to the gas treatment plant.	approx. 49.5 km west distance from the production platform of the Neptun Deep project and approx. 3.5 km north of the production pipeline of Neptun Deep. It intersects with ROSPA0076 Black Sea at approx. 12,7 km from ROSCI0311 Viteaz Canyon. At about 46 km from ROSAC0273 Cape Tuzla Marine Area About 53 km up to ROSCI0293 Costinești-23 August.		probability of occurrence given the design conditions of the pipelines and underwater infrastructure and the protective barriers for events, the impact is estimated to be significant on water, marine biodiversity.
5.	Electrification and rehabilitation of the Constanta Mangalia railway line Owner:	Rehabilitation and electrification of the railway infrastructure on the railway section between Constanta	The railway to be rehabilitated intersects with the project area. The Neptun Deep project provides for works to	Air emissions Ambiental noise	The simultaneous development of the two projects will lead to an increase in pollutant emissions into the air and an increase in noise levels. Therefore, the cumulative effect generated by the construction works of the project is assessed to be negative, direct, local,

No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
	National Railway Company CFR SA through SC Baicons Impex SRL	and Mangalia The project has an estimated duration of 24 months, but the start date of the works is not specified The project is in the regulatory procedure	undercross the gas production pipeline, and during the construction period a temporary railway grade crossing will be made.		short-term and of low intensity and the magnitude will be negligible A low sensitivity and negligible magnitude is estimated, resulting in an insignificant impact In the operation and decommissioning phase of the project studied, the impact is negligible.
6.	Sand exploitation projects in the Black Sea: Owners: SC EXTRASAND PCM SRL, SC STRICT AQUASERV SRL, SC COMPREST UTIL SRL, SRL, SC METAL TRADE RNG SRL, SC VAN OORD DREDGING AND MARINE CONTRACTORS, ENVISAN NV BELGIUM - PITEȘTI BRANCH, SAGA LOGISTICS MANAGEMENT SRL, BOSKALIS INTERNAȚIONAL	Black Sea sand exploitation perimeters At different stages of regulation/deployment	They are located on the continental shelf of Romania's exclusive economic zone at distances of more than 10 km from the marine area of the analyzed project. Over 2 km from ROSPA0076 Black Sea Over 7 km from ROSAC0273 Cape Tuzla Marine Area and ROSCI0293 Costinești-23 August	Noise On biodiversity	Temporary disturbance of fish and marine mammal species due to noise generated by dredging works. Temporary damage to some perimeters where fish, marine mammals and waterfowl feed Therefore, the cumulative effect generated by the construction works of the project in the situation where the works are carried out simultaneously, is assessed to be negative, direct, local, short-term and of low intensity and the magnitude will be small A medium sensitivity and a low negative magnitude are estimated, resulting in a minor cumulative impact. In the operational and decommissioning phase of the studied project, the impact is negligible. It is estimated that there will be no impact in a transboundary context as a result of the cumulative potential impact resulting from the exploitation of the Black Sea sand both during the construction period and during the operational period.

No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
	BV				
7.	Neptun Deep - Construction of the access roads, site organization, provision and connection to utilities, access roads to them, related to SRM and CCR.	Construction of way of access	The new permanent access road will support the construction and operation of the Neptun Deep project facilities. It will intersect with the site in the land area of the analysed project on the S1 area	Noise on biodiversity	Temporary disturbance of ROSPA0076 waterfowl resting on arable land. The cumulative effect generated by the construction works of the project is assessed to be negative, direct, local, short-term and of low intensity and the magnitude will be negligible A low sensitivity and negligible magnitude is estimated, resulting in an insignificant impact In the operation and decommissioning phase of the studied project, the impact is negligible. Road traffic will not cause mortalities in the case of conservation objectives of protected natural areas located in the vicinity
8.	Construction of a roundabout intersection in the area of the national road DN39 (E87) - km 23 + 190	Construction of roundabout intersection	The proposed roundabout will connect the new access road proposed for the Neptun Deep project with DN39. It is located approx. 1.6 km from the western limit of the S1area	No effects	No impact
9.	Neptun Deep – Power supply, site organization, natural	Power supply	The proposed transformer substation will provide electricity for the	No effects	No impact

No.	Name of existing/planned project	Activity carried out	Distance from Neptun Deep project	Potential effects generated	Evaluation of potential impact
	gas metering station and control center		construction and operation of the onshore components of the Neptun Deep project (SRM, CCR, etc.).		
10.	Black Sea Coast pipeline - Podișor (RO) for collection of gas from the Black Sea	construction of a pipeline for the transmission of natural gas in the NTS The Black Sea Coast - Podișor (RO) pipeline will transport the gas produced in the operational phase of the Neptun Deep project, in the NTS in Romania.	A Transgaz facility connected to SRM within the Neptun Deep project will be built. The Transgaz connection point (a facility that is not part of the Neptun Deep project, will be subject to a separate authorization procedure) will be installed on the private land owned by OMV Petrom (area S1, cadastral number 109216).	Morphological changes of the land Noise Air emissions of pollutants	The simultaneous development of the two projects will lead to an increase in pollutant emissions into the air and an increase in noise levels. Therefore, the cumulative effect generated by the construction works of the project is assessed to be negative, direct, local, short-term and of low intensity and the magnitude will be negligible Low sensitivity and negligible magnitude are estimated resulting in an insignificant impact. In the operation and decommissioning phase of the studied project, the impact is negligible.

III. The conclusions of the Environmental Impact Report (including the appropriate assessment study, the water impact assessment study and the major accident prevention policy or safety report, as applicable) and measures to prevent, reduce and, where possible, compensate for significant adverse environmental effects:

1. Conclusions of the Environmental Impact Report

The forecast of the residual impact under the implementation of avoidance and reduction measures is shown in the table below:

Synthesis of residual impact

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	Use of land					
Construction	Change of land use	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Occupation of the land and surface of the marine substrate	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Operation	Occupation of the land and surface of the marine substrate	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Decommissioning	Evacuation of the land/marine substrate occupied by the project components	Positive	Low	Positive	-	Positive
	Soil and subsoil					
Construction	Decapping of vegetal soil layer	Medium	Low	Minor	With recommendations to keep the impact at an	Minor

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Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
					insignificant level	
	Physical changes in stratification of the soil and subsoil	Medium	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Compacting of soil and degradation of its structure	Medium	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Introduction of allochthonous plant species with invasive potential, in the stage of restoration works of the surfaces temporarily occupied by the works	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Operation	Occupation of soil and subsoil with constructions and installations	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
Decommissioning	Decapping of vegetal soil layer	Medium	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Physical changes in stratification of the soil and subsoil	Medium	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Compacting of soil and degradation of its structure	Medium	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	Introduction of allochthonous plant species with invasive potential, in the stage of restoration works of the surfaces temporarily occupied by the works	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Sedimentary substrate and marine subsoil					
Construction	Physical disturbance of the sedimentary substrate	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Change in the quality of sediments as a result of suspension and re-sedimentation process	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Sediment quality change as a result of the discharge of water-based drilling fluid at the sedimentary substrate level	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Operation	Physical presence of underwater installations	Negligible	Medium	Insignificant	-	Insignificant
	Local metal ion emissions from sacrificial anodes that provide cathodic protection of the pipeline	Negligible	Medium	Insignificant	-	Insignificant

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	Increasing the concentration of sediment quality parameters by sedimentation of chemical compounds from the planned discharged effluent	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Decommissioning	Physical disturbance at the level of the sedimentary layer	Negligible	Medium	Insignificant	-	Insignificant
	Change in sediment quality as a result of the suspension and resedimentation process	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Body of water and aquatic environment					
Construction	Increase in turbidity in water column	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Temporary increase of nutrients and possibly of some pollutants present in sediments due to sediment suspension	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Affecting water quality through controlled effluent discharge	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Change of hydrographic conditions	Negligible	Medium	No impact	-	No impact
	Change of hydrogeological	Negligible	Medium	No impact	-	No impact

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	conditions					
	Routine discharges from the ships used for Decommissioning	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Operation	Affecting water quality through controlled effluent discharge	Medium	Medium	Moderate	With recommendations to keep the impact at an insignificant level	Minor
	Presence of natural gas transmission pipeline	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Decommissioning	Increase in turbidity in water column	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Routine discharges from the ships used for Decommissioning	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Quality of air and climate					
Construction	Emissions of pollutants in the air in onshore area	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Emissions of pollutants in the air in offshore area	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Hothouse gas emissions	Low	Mare	Moderate	With application of mitigation measures	Moderate
Operation	Emissions of pollutants in the air in onshore area	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Emissions of pollutants in the air in offshore area	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	Hothouse gas emissions	Low	Mare	Moderate	With application of mitigation measures	Moderate
Decommissioning	Emissions of pollutants in the air in onshore area	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Emissions of pollutants in the air in offshore area	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Hothouse gas emissions	Low	Mare	Moderate	With application of mitigation measures	Moderate
	Acoustic environment					
Construction	Increase in ambient noise due to the activity in the onshore area	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Construction	Increase in underwater noise due to works in offshore area	Medium	Medium	Moderate	After the application of mitigation measures	Minor
Operation	Increase in ambiental noise due to activity in onshore area	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Increase in the level of noise in offshore area	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Decommissioning	Increase in the level of noise in onshore area	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Increase in the level of noise in offshore area	Low	Medium	Minor	With measures to keep the impact at an	Minor

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
					insignificant level	
	Radiations					
Construction	Emissions of light radiations	Negligible	Low	Insignificant	-	Insignificant
	Emissions of natural radionuclides	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
Operation	Emissions of thermal radiations	Negligible	Low	Insignificant	-	Insignificant
	Emissions of light radiations	Negligible	Low	Insignificant	-	Insignificant
	Emissions of natural radionuclides	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Material assets and natural resources					
Construction	Affecting material assets	Low	Low	Minor	After the application of mitigation measures	Insignificant
	Use of natural resources	Low	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor
Operation	Use of natural resources	Medium	Mica	Minor	With recommendations to keep the impact at an insignificant level	Minor
	The occurrence of major accidents accompanied by explosions and/or fires that would expand and affect the material assets of the local	Medium	Low	Minor	With recommendations to keep the impact at an insignificant level	Minor

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	community					
Decommissioning	Affecting material assets	Low	Low	Minor	After the application of mitigation measures	Insignificant
	Cultural heritage					
Construction	Affecting the cultural heritage due to the works carried out in the onshore and offshore areas	Negligible	Medium	Insignificant	With conditions for keeping the impact at an insignificant level according to the approval of DJC Constanta	Insignificant
Decommissioning	Affecting the cultural heritage due to the works carried out in the onshore and offshore areas	Negligible	Medium	Insignificant	With conditions for keeping the impact at an insignificant level according to the approval of DJC Constanta	Insignificant
	Landscape					
Construction	Change of land use	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Presence of the drilling platform	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Operation	Presence of SRM and CCR	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Presence of production platform	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Decommissioning	Change of land use	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
	Human settlements					

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
Construction	Change of land use	Negligible	Medium	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Operation	Presence of SRM and CCR	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Decommissioning	Change of land use	positive	Medium	positive	-	positive
	Demography and economic conditions					
Construction	Demographic changes due to project works	Positive	Low	Positive	-	Positive
	Changes at economy level	Positive	Medium	Positive	-	Positive
	Presence of drilling platform and ships used in construction	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Operation	Changes at economy level	Positive	Mare	Positive	-	Positive
	Presence of production platform	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
Decommissioning	Demographic changes due to project works	positive	Low	positive	-	positive
	Presence of ships used in Decommissioning	Low	Medium	Minor	With recommendations to keep the impact at an insignificant level	Minor
	Health of population					
Construction	Increase in emissions of pollutants in the air	Low	Medium	Minor	With measures for keeping the impact at an insignificant level	Minor
	Increase in the level of	Low	Medium	Minor	With measures for	Minor

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	noise				keeping the impact at an insignificant level	
Operation	Increase in noise levels, temporarily during maintenance work and in emergency situations	Negligible	Medium	Insignificant	With measures for keeping the impact at an insignificant level	Insignificant
Decommissioning	Increase in emissions of pollutants in the air	Low	Medium	Minor	With measures for keeping the impact at an insignificant level	Minor
	Increase in the level of noise	Low	Medium	Minor	With measures for keeping the impact at an insignificant level	Minor
	Biodiversity					
Construction	Noise emissions in onshore area	Low	Low	Minor		Minor
	Decapping of vegetal soil layer	Negligible	Low	Insignificant	With measures for keeping the impact at an insignificant level	Insignificant
	Accidental mortality as a result of road traffic and machinery operation	Negligible	Low	Insignificant	With measures for keeping the impact at an insignificant level	Insignificant
	Increase in turbidity	Medium	Medium	Moderate	With measures for mitigation of impact	Moderate
	Relocation of substrate with living organisms	Low	Medium	Minor	With measures for keeping the impact at an insignificant level	Minor
	Temporary and local increase of nutrients and possibly of some pollutants present in sediments due to sediment resuspension	Low	Medium	Minor	With measures for keeping the impact at an insignificant level	Minor
	Crushing and/or	Low	Mare	Moderate	With measures for	Moderate

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	denuding of the hard substrate populated with marine organisms as a result of the placement of the ship's anchors used for installation				keeping the impact at an insignificant level	
	Emissions of underwater noise	Mare	Mare	Major	After the application of mitigation measures	Moderate
	Artificial lighting	Negligible	Low	Insignificant	With recommendations to keep the impact at an insignificant level	Insignificant
Operation	Emissions into offshore marine waters of chemical compounds that have the potential to affect the aquatic environment	Low	Mare	Moderate	With measures for keeping the impact at an insignificant level	Moderate
	Increase in noise levels during depressurization	Low	Low	Minor	With measures to keep the impact at a negligible level	Minor
	Artificial lighting	Low	Low	Minor	With measures to keep the impact at a negligible level	Minor
Decommissioning	Noise emissions in onshore area	Low	Low	Minor	With measures to keep the impact at a negligible level	Minor
	Temporary and local	Low	Medium	Minor	With measures to keep	Minor

Stage	Effect	Magnitude	Sensitivity	Significance of impact	Impact mitigation measures	Significance of residual impact
	increase of nutrients and possibly of some pollutants present in sediments due to sediment resuspension				the impact at a negligible level	
	Underwater noise emissions	Medium	Medium	Moderate	With measures to keep the impact at a negligible level	Moderate
	Artificial lighting	Low	Low	Minor	With measures to keep the impact at a negligible level	Minor

2. Conclusions of the Adequate Assessment Study

Description of PP components	Affected ANPIC	Affected species/habitats	Conservation objectives/affected parameters	Types of impact, including cumulative	Avoidance/prevention measures	Residual impact	Alternative solution	Imperative reasons of major public interest	Compensatory measures	Other issues
Anchoring the barge Digging a trench for the gas pipeline	ROSAC0273 Cape Tuzla Marine Area	1110 Submerged sand banks of low depth	Habitat area	Direct and indirect short-term insignificant impact Insignificant	MS 4	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging of trench for the gas pipeline			Characteristic invertebrate species	indirect short-term insignificant impact	MS 4	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging of trench for the gas pipeline			Ecological status of water based on physio-chemical indicators	indirect short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Anchoring the barge	ROSAC0273 Cape Tuzla	1170 Reefs	Habitat area	Direct and indirect short-term	MS 1, MS 4	Insignificant	Not applicable	Not applicable	Not applicable	Habitat is

Description of PP components	**Affected ANPIC**	**Affected species/habitats**	**Conservation objectives/affected parameters**	**Types of impact, including cumulative**	**Avoidance/prevention measures**	**Residual impact**	**Alternative solution**	**Imperative reasons of major public interest**	**Compensatory measures**	**Other issues**
Digging a trench for the gas pipeline	Marine Area			insignificant impact						present outside of ANPIC
Anchoring the barge Digging a trench for the gas pipeline			Surface of subtypes of habitat	Direct and indirect short-term insignificant impact	MS 1, MS 4	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging a trench for the gas pipeline			Ecological status of water based on physio-chemical indicators	indirect short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging a trench for the gas pipeline	ROSAC0273 Cape Tuzla Marine Area	8330 Caves fully or partially submerged	Ecological status of water based on physio-chemical indicators	indirect short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Habitat is present outside of ANPIC
Digging a trench for the gas pipeline	ROSAC0273 Cape Tuzla Marine Area	*Alosa tanaica*	Ecological status of water based on physio-chemical indicators	Indirect and secondary short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dred-ging a trench for the gas pipeline	ROSAC0273 Cape Tuzla Marine Area	*Alosa immaculata*	Ecological status of water based on physio-chemical indicators	Indirect and secondary short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Operation of ships	ROSAC0273 Cape Tuzla Marine Area	*Tursiops truncatus*	Spatial and temporal pattern, intensity of habitat use	Direct short-term insignificant impact	Not applicable	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dred-			Size and diversity	Secondary short-	Not	Insignificant	Not	Not	Not	Not

Description of PP components	Affected ANPIC	Affected species/habitats	Conservation objectives/affected parameters	Types of impact, including cumulative	Avoidance/prevention measures	Residual impact	Alternative solution	Imperative reasons of major public interest	Compensatory measures	Other issues
ging a trench for the gas pipeline			of predator species	term insignificant impact	applicable		applicable	applicable	applicable	applicable
Digging/dredging a trench for the gas pipeline			Ecological status of water based on physio-chemical indicators	Indirect and secondary short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Operation of ships	ROSAC0273 Cape Tuzla Marine Area	*Phocoena phocoena*	Spatial and temporal pattern, intensity of habitat use	Direct short-term insignificant impact	Not applicable	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline			Size and diversity of predator species	Secondary short-term insignificant impact	Not applicable	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline			Ecological status of water based on physio-chemical indicators	Indirect and secondary short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	1110 Shallow underwater sandbars	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	1170 Reefs	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	1140 Sand and mudflats exposed at low tide	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable

Description of PP components	**Affected ANPIC**	**Affected species/habitats**	**Conservation objectives/affected parameters**	**Types of impact, including cumulative**	**Avoidance/prevention measures**	**Residual impact**	**Alternative solution**	**Imperative reasons of major public interest**	**Compensatory measures**	**Other issues**
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	8330 Completely or partially submerged caves	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	*Alosa tanaica*	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	*Alosa immaculata*	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	*Tursiops truncatus*	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging a trench for the gas pipeline	ROSCI0293 Costinești - 23 August	*Phocoena phocoena*	Ecological status of water based on physio-chemical indicators	Indirect and cumulated short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Installation of Neptun Alpha platform	ROSCI0311 Viteaz Canyon	*Tursiops truncatus*	Size of population	Direct short-term insignificant impact	MS 7, MS 8	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Installation of Neptun Alpha platform Operation of ships			Distribution pattern	Direct short-term insignificant impact	Not applicable	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Technological water from Neptun Alpha platform			Ecological status of water based on ecological indicators	Indirect and secondary long-term insignificant impact	MS 6, MS 9	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable

Description of PP components	**Affected ANPIC**	**Affected species/habitats**	**Conservation objectives/affected parameters**	**Types of impact, including cumulative**	**Avoidance/prevention measures**	**Residual impact**	**Alternative solution**	**Imperative reasons of major public interest**	**Compensatory measures**	**Other issues**
Technological water from Neptun Alpha platform	ROSCI0311 Viteaz Canyon	1170	Ecological status of water based on ecological indicators	Indirect long-term insignificant impact	MS 6, MS 9	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Technological water from Neptun Alpha platform		1180	Ecological status of water based on ecological indicators	Indirect long-term insignificant impact	MS 6, MS 9	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable
Digging/dredging of trench for gas pipeline	ROSPA0076 Black Sea	*Chlidonias hybridus, , Chlidonias niger, Gavia arctica, Gavia stellata, , Gelochelidon nilotica, Larus genei, Larus melanocephalus, , Larus minutus, , Mergus albellus,, Pelecanus crispus, Phalaropus Iobatus, Puffinus yelkouan, Sterna albifrons, Stema caspia, Sterna hirundo, Sterna sandvicensis, Anas penelope,, Anas platyrhynchos,, Anas strepera,, Aythya ferina,, Aythya fuligula,, Bucephala clangula,, Fulica atra, , Larus cachinnans,, Larus precanus,, Larus fuscus,, Larus ridibundus,, Limosa*	Ecological status based on physico-chemical quality elements	Indirect and secondary short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable

Description of PP components	**Affected ANPIC**	**Affected species/habitats**	**Conservation objectives/affected parameters**	**Types of impact, including cumulative**	**Avoidance/prevention measures**	**Residual impact**	**Alternative solution**	**Imperative reasons of major public interest**	**Compensatory measures**	**Other issues**
		limosa, , Mergus merganser, , Mergus serrator,, Phalacrocorax carbo, , Podiceps cristatus,, Podiceps grisegena,, Podiceps nigricollis, , Tachybaptus ruficollis.								
Operation of ships	ROSPA0076 Black Sea	*Gavia arctica, , Gavia stellata, , Pelecanus crispus*	Distribution pattern	Direct short-term insignificant impact	MS 5, MS 6	Insignificant	Not applicable	Not applicable	Not applicable	Not applicable

LOCAL ENVIRONMENTAL PROTECTION AGENCY CONSTANȚA

Based on the data, information, data collected during the field investigations and documents made available to the environmental authority by the project owners and environmental experts, cumulated with the information on the current state of the environment, as well as the impact of the project activities and their effects on environmental and economic-social factors, under the conditions of compliance with the project and the technical execution norms, along with measures to reduce pollution of the environmental factors, the impact is appreciated as within acceptable limits.

Measures during the implementation of the project/ exploitation/closure/demolition/ decommissioning and rehabilitation of the land for further use (to be specified for: water, air, soil, subsoil, biodiversity/natural areas, noise, vibrations, waste, risk to health, landscape, cultural and historical heritage, etc.) and the effect of their implementation:

Measures for environmental protection proposed for physical and social environmental factors

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
Land use	Temporary land occupation/temporary disturbance of fauna species of community interest	The occupation of additional land areas compared to those provided for by the technical design will be avoided;	√		Onshore	√		
		Construction/Decommissioning works will be carried out only in the areas delimited for works	√		Onshore	√		√
		The materials will be transported only in the arranged/existing access roads	√		Onshore	√		√
Soil and subsoil	Degradation of soil in diggings area and changes in the stratigraphy of soil and subsoil	The soil excavation works will be carried out only in the areas delimited for works	√		Onshore	√		
		Vegetal soil will be separately stored to be used in arrangement, after the completion of construction works	√		Onshore	√		
		The surplus excavated soil will be transported to the authorized economic agents or to landfills to be used as coverage material	√		Onshore	√		
		Avoidance of direct placement on soil of mounting/construction materials and wastes resulted from works	√		Onshore	√		
	Waste management	Waste management according to the category and types of wastes	√		Onshore	√	√	√
	Accidental pollution with hydrocarbons	Respecting the plan of prevention and control of accidental pollution	√		Onshore	√	√	√
		Equipping with absorbent materials for intervention in case of accidental pollution with hydrocarbons	√		Onshore	√	√	√
		Staff training concerning the method of action and response in the event of accidental pollution	√		Onshore	√	√	√
Sedimentary substrate	Structural change of the sedimentary substrate	Installation of a curtain for retaining suspended solids for works in the shallow water area where such curtains can have an efficiency in mitigating the dispersion of suspended sediments (measure in compliance with the protection of marine habitats of conservation interest within ROSAC Cape Tuzla Marine Area)	√		Offshore	√		
	Sedimentation	Compliance with the dose of chemicals in the test water,	√		Offshore	√	√	

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
	of chemical residues contained in the discharged effluent	the water produced to avoid changing the chemical parameters of the sediments						
Water bodies and marine environment	Change in the quality indicators of sea water	Audit of ships involved in the project to ensure compliance with MARPOL 73/78 requirements for the planned discharge from ships of treated wastewater, food waste, uncontaminated water at sea in compliance	√		Offshore	√	√	√
		Wastewater exceeding the limit imposed by the international MARPOL convention of 15ppm hydrocarbons will be collected and transported to shore for treatment	√		Offshore	√	√	√
		Installation of wastewater monitoring and sampling points on the drilling platform to ensure that planned wastewater discharges meet compliance requirements according to MARPOL 73/78	√		Offshore	√		
		Equipping the Neptun Alpha platform with adequate insulation, treatment and monitoring systems as part of design.	√		Offshore		√	
		Compliance with the chemical dose in the pipeline test water and in the planned discharged produced water	√		Offshore	√		√
		Maintaining the requirements of standards and good practices concerning the preventive maintenance of Neptun Alpha equipment and installations, to avoid leaks of hydrocarbons and other contaminants that could enter the drainage system	√		Offshore		√	
		Internal audit of compliance with the requirements imposed in regulatory permits and authorizations on the impact of the activity on the quality of marine water.	√		Offshore		√	
	Accidental pollution with marine fuel	Development and implementation of safe procedures for fuel transfer	√		Offshore	√		√
		Securing chemical and hydrocarbon storage areas with	√		Offshore	√	√	√

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
		leak retention systems, in order to avoid any accidental leaks and/or leaks during handling, which can be carried by washing water from the deck and discharged uncontrollably into the sea						
		Establishment of operational procedures for the vessels/ships affected by the Project in the work area, avoiding vessel collision	√		Offshore	√	√	√
		Application of safety areas around the facilities and activities of the project	√		Offshore	√	√	√
		Propose a schedule and an adequate number of vessels for the transport of construction materials and equipment to avoid congestion in the area, if possible	√		Offshore	√	√	√
		Implement appropriate staff training and field exercises to prevent, isolate and respond to marine fuel spills	√		Offshore	√	√	√
		Ensuring that response and containment equipment used in the event of a leak is regularly inspected and maintained, operationally checked and tested, and used during activities or available as required for the response	√		Offshore	√	√	√
	Change in ecological status of marine water body	Drawing up the eco-toxicity study by carrying out chronic toxicity tests for chemicals for which there are no discharge limits set by national legislation, in order to validate/demonstrate that the maximum permissible limit values set for discharge into the marine environment, at the level of each chemical ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to achieve the environmental objectives set by the Framework Directive Strategy for marine environment (2008/56/EC), correlated with the requirements of the Water Management Permit.		√	Offshore		√	
	Local changing of air quality	During periods without rainfall, the access roads and areas with active works will be moistened in order to reduce particulate emissions and to fit the concentrations (PM10/ PM2.5) within the limit values provided by the	√		Onshore	√		

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
Air quality		legislation in force						
		Avoiding the execution of works that involve handling the quantities of soil (decapping/filling) during periods with strong winds	√		Onshore	√		
		When placing topsoil and excavated soil deposits, the prevailing wind direction will be taken into account in order to reduce the likelihood of affecting sensitive receptors	√		Onshore	√		
		In strong wind conditions, powder-generating activities will be reduced or surfaces will be sprayed with water to reduce powder dispersion	√		Onshore	√		
		Setting a maximum speed limit on temporary access roads	√		Onshore	√		
		The vehicles transporting pulverulent materials will be covered	√		Onshore	√		
		Machinery and vehicles involved in construction activities should be state-of-the-art for low fuel consumption and low emissions.	√		Onshore			
	Reduction of air emissions	Use of ships and drilling rigs certified in compliance with MARPOL 73/78 Annex VI — Prevention of air pollution from ships		√	Offshore	√	√	√
		Use of ships and drilling platform which hold „*Ship Energy Efficiency Management*" certification		√	Offshore	√	√	√
		Use of low-sulphur fuel in compliance with IMO requirements		√	Offshore	√	√	√
		Maintaining good operation, inspection and maintenance schedules for all equipment, facilities and vehicles involved in the project		√	Onshore/ Offshore	√	√	√
Climate	Reduction of GHG emissions; Contribution to climate change	Compliance with relevant design guidelines and inclusion of mitigation measures to reduce accidental gas leaks	√		Onshore/ Offshore	√		
		Incorporating BAT studies into the design and operation process, which include reviewing the project, equipment efficiency and properly sizing equipment as required, in	√		Onshore/ Offshore	√		

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
		the later stages of the project						
		Compliance with any relevant legal requirements concerning emission limits	√		Onshore/ Offshore	√	√	√
		Communication and enforcement of the emission reduction policy to the Neptun Deep project contractors	√		Onshore/ Offshore	√	√	√
		Use of fuel-efficient equipment and machinery to limit GHG emissions	√		Onshore		√	
		Maintaining routine maintenance procedures to ensure that the engines of machinery, equipment, ships are operational at the defined operational performance and the specified emission level	√		Onshore/ Offshore	√	√	√
		Implementation of environmental management, emergency preparedness and response and intervention plans in case of accidents generating GHG emissions	√		Offshore	√	√	
Acoustic environment (onshore)	Attenuation of the noise level produced by machinery, motor vehicle equipment during construction and/or operation	Carrying out the works in stages in time and space, according to the work schedule as much as possible	√		Onshore	√		√
		Installation of mobile panels to attenuate the noise level for activities that exceed the permissible noise level, at the execution of the microtunnel entrance manhole in order to protect the inhabited areas		√	Onshore	√		
		Carrying out the activities of execution of the works during the day, according to the declared work schedule	√		Onshore	√		
		Carrying out equipment maintenance works according to the maintenance program, so that the noise level produced is below the maximum permissible limits.	√		Onshore		√	
		Planting trees perimeter to attenuate sound when propagating through vegetation	√		Onshore		√	
Acoustic underwater environment	Attenuation of noise level produced in underwater environment	Application of standard management and mitigation procedures such as MMO observations before the start of work, and application of soft-start techniques. These procedures will be repeated each time the activities are interrupted for a period of time longer than 60 minutes.	√		Offshore	√		
		The construction works will be carried out in stages, and during the installation works of the jacket pillars, no other		√	Offshore	√		

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
		activities will be carried out that may lead to an increase in the cumulative impact of noise;						
		All vessels used in the project must comply with MARPOL 73/78		√	Offshore	√	√	√
Cultural heritage	Protection of the objectives of interest for the national cultural heritage identified in the marine area in the vicinity of the project site	Maintaining the safety zone of the cultural heritage objectives identified in the offshore area of the project	√		Offshore	√		
		If the existence of artifacts is discovered by chance, the legal provisions in force specific to the onshore or offshore works shall apply.	√		Onshore/ offshore	√		
		In the event of the discovery of archaeological complexes that require "in situ" conservation, the project will adapt to the realities revealed by archaeological research according to the legal provisions	√		Onshore/ offshore	√		
Landscape	Mitigation of visual impact as a result of the presence of onshore machinery, equipment and installations (SRM).	The occupation of additional land areas to those provided for in the design will be avoided	√		Onshore	√		
		The construction works will be carried out only in the areas delimited for works	√		Onshore	√		
		For the transport of materials, only the indicated access roads must be used	√		Onshore	√		
		A vegetation curtain will be installed and maintained to reduce the visual impact on SRM		√	Onshore	√	√	
Health of population	Attenuation of noise level	Installation of mobile panels to attenuate the noise level for activities that exceed the permissible noise level, at the execution of the microtunnel entrance manhole in order to protect the inhabited areas	√		Onshore	√		
		All mechanical equipment must comply with the standards concerning environmental noise emissions according to GD 1756/2006 on limiting the level of environmental noise emissions produced by equipment intended for use outside buildings.	√		Onshore	√		√
		Complete avoidance or reduction of oversized transport during the night.	√		Onshore	√		√

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
		All vehicles will turn off the engines - no vehicle will have the engine running when stationary.	√		Onshore	√		√
		Adopting a flexible work schedule, so as to ensure the comfort of the inhabitants during the quiet period during the day and at night;			Onshore	√		√
		Perimeter tree planting to attenuate sound when propagating through vegetation	√		Onshore		√	
	Mitigating the increase in the concentration of dust and pollutants in the air	During periods without rainfall, the access roads and areas with active works will be moistened in order to reduce particulate emissions and to fit the concentrations (PM10/ PM2.5) within the limit values provided by the legislation in force	√		Onshore	√		√
		Avoiding the execution of works that involve handling the quantities of soil (decapping/filling) during periods with strong winds	√		Onshore	√		√
		Setting a maximum speed limit on temporary access roads	√		Onshore	√		√
Material assets and natural resources	Prevention of any impact on material assets	Marking the areas where the planned works overlap with pipelines	√		Onshore	√		√
		The works in the overlapping areas with public utility pipes will be done manually	√		Onshore	√		√
	Preventing the inefficient use of resources for sustainable exploitation	Use of natural resources in the quantities allocated by technical design	√		Onshore	√		
		Compliance with the natural gas exploitation programme agreed with the regulatory authorities	√		Offshore		√	
		Implementation of preparedness and response plans for emergencies, in order to avoid the occurrence of major accidents	√		Onshore/ offshore	√	√	√
Economic and social environment	The actual development of the Neptun Deep project (modification of the use of the	Implementing a communication plan with the local community to provide information on the evolution of the project, and achieving the environmental performance established by the regulatory acts, while providing the opportunity to respond to the community's concerns about the project	√		Onshore	√	√	√

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/ prevention	Mitigation		Construction	Operation	Decommissioning
Economic and social environment	land owned by OMVP, the presence of SRM and CCR, Neptun Alpha)							
	Prevention of the risk of major accidents as a result of collision with ships within or outside the project	Ensuring 500m safety zones around the drilling platform/production platform, to avoid collision with vessels inside and outside the project; as well as around the submarine pipeline to prevent accidental hooking of anchors or fishing or trawling equipment.	√		Offshore	√	√	
	Prevention of ship traffic congestion and port operation activities	Coordination of the schedules concerning the loading/unloading and movements of the ships in the project with the economic activities in the harbour area	√		Offshore	√	√	√
	Prevention of affecting the harbour traffic of other vessels (commercial, fishing)	Informing the harbour authorities about the traffic schedule of the ships from the project	√		Offshore	√	√	√
	Prevention of affecting recreational and/or tourist activities in the coastal area of Tuzla Commune and Costinești	To avoid increasing turbidity in coastal water during the summer season, the execution of the microtunnel exit into the sea will be planned during the off-season	√		Offshore	√		

Measures to reduce the impact of the project on the climate and/or, where appropriate, adapted measures concerning the project's vulnerability to climate change:

Measures to reduce the project's impact on the climate:

- Compliance with relevant design guidelines and inclusion of mitigation measures to reduce accidental gas leaks;
- Incorporating BAT studies into the design and operation process, which include reviewing the design, equipment efficiency and appropriate equipment sizing as required, in the subsequent stages of the project;
- Compliance with any relevant legal requirements concerning emission limits;
- Communication and enforcement of the emission reduction policy to the Neptun Deep project contractors;
- Use of low-fuel equipment and machinery to limit GHG emissions;
- Maintaining routine maintenance procedures to ensure that the engines of machinery, equipment, ships are operational at the defined operational performance and at the specified emission level;
- Elaboration of the plan for verifying the integrity of the pipelines, in order to avoid uncontrolled discharges of gases into the atmosphere;
- Implementation of a system for detecting potential uncontrolled releases of gases into the atmosphere, which would allow the identification of faults and their remediation;
- Implementation of environmental management, emergency preparedness and response and intervention plans in case of accidents that generate GHG emissions;

Adapted measures concerning the vulnerability of the project to the climate change:

For the analysed area, from the perspective of climate change, the Neptun Deep project presents a low vulnerability in terms of bottom currents, but presents a medium vulnerability to wind intensifications, wave height, increase in the speed of surface currents and as a medium period of use of drilling rigs per year.

The risk assessment indicates a low risk of climate change on the project both in the construction phase and in the operation phase due to the consideration in the design phase of meteorological data associated with extreme phenomena that may occur in a period of 100 years.

Plan of action with measures of adaptation and reduction of project vulnerability to the critical hypotheses of climate change

No.	Field of action	Description	Deadline	Responsible person
1	**Drilling/production platform**	The selected drilling platform and the design of the production platform will comply with the optimal parameters necessary for the safe conduct of activities even in the event of extreme weather events.	In the selection and/or design process	Project owner
2.	**Production pipeline**	Regular monitoring of integrity of the production pipeline	It will be included in the project monitoring programme	Project owner
3.	**Onshore installations (microtunnel area)**	Visual observations concerning the integrity of the cliff in the microtunnel area	It will be included in the project monitoring programme	Project owner
4.	**Re-evaluation of project risk to climate change**	Appointment of a Climate Change Immunization Officer to ensure the monitoring of the project throughout the life cycle of the project. During the life cycle of the Neptun Deep project, currently assessed for no more than 20 years, of the operation and maintenance of the infrastructure, it will be necessary to monitor the GHG emissions and the vulnerability of the project, so that every 5-10 years a re-assessment of the project's risk to climate change will be carried out, depending on their evolution.	It will be included in the project monitoring programme	Project owner
5.	**Evaluation of carbon dioxide emissions**	The monitoring of carbon dioxide emissions (calculated on the basis of fuel consumption, gas volume) must be included throughout the project development cycle to ensure the compatibility of the project with the GHG emission reduction trajectory.	It will be included in the project monitoring programme	Project owner
6.	**Monitoring of climate risk factors and monitoring of vulnerable components of the project**	The monitoring of climate risk factors and the monitoring of the project's vulnerable components to climate change, must be included throughout the project development cycle in order to ensure the resilience of the project (in the operational phase) to adverse climate effects in the project area.	It will be included in the project monitoring programme	Project owner

Measures to reduce or eliminate the impact on protected natural areas of community interest, the conditions and the mode/calendar of their implementation.
For the identified impacts, likely to affect ANPIC, the prevention/avoidance measures have been established which are included in the table below:
Proposed Environmental Protection Measures for Biological Environmental Factors According to the Appropriate Assessment Study

Legend:
P – impact prevention
E – avoidance of impact

Description of measure	Type of measure (P/E/R)	Species and habitat affected	Parameter to which the measure is addressed	Impact to which the measure is addressed	Measure implementation period	Measure implementation location
ROSAC0273 Cape Tuzla Marine Area						
MS 1. The anchoring plan will be respected, which reduces to a minimum (7 positions) the use of anchors in the ROSAC0273. Any change in the planning of anchorages in ROSAC0273 will be made only after the information and with the agreement of the environmental protection authorities (APM and ANANP).	E/P	1170 (E) and 8330 (P)	Habitat area	Alteration of habitat	Construction stage	Barge anchoring points in ROSAC0273: T1.1, T1.5, T2.1, T2.5, T3.1, T3.5, T8.4
MS 2. For the anchor that overlaps with the mapped area of habitat 8330 (outside ANPIC), a new position will be identified in the vicinity that will not intersect habitats on hard substrate.	P	8330	Habitat area	Losses of the non-ANPIC habitat area	Construction stage	Barge anchoring points outside of ROSAC0273: T6.3
MS 3. The anchor launching works will be assisted by biodiversity conservation specialists, and the anchor placement areas will be inspected before the start of the works with the help of ROV equipment.	P	8330	Habitat area	Losses of the non-ANPIC habitat area	Construction stage	Barge anchoring points
MS 4. In order to limit the expansion of the sediment feather inside and outside ANPIC, turbidity curtains will be installed around the working areas in the transition trench area, which will retain most of the suspended sediments.	E	1110, 1170, 8330	Habitat area Characteristic invertebrate species	Habitat alteration Losses of the non-ANPIC habitat area	Construction stage	Trench of gas pipeline
MS 5. Carrying out excavation works in the shore area only in periods of calm sea of maximum level 3 Beaufort.	E	*Alosa tanaica, Alosa immaculata, Tursiops truncatus, Phocoena phocoena*, 1110, 1170, 8330	Ecological status of water based on physicochemical indicators	Disruption of species activity Habitat alteration	Construction stage	Gas Pipeline Trench MC/PM1 microtunnel entrance point from the marine part of the project

Description of measure	Type of measure (P/E/R)	Species and habitat affected	Parameter to which the measure is addressed	Impact to which the measure is addressed	Measure implementation period	Measure implementation location
MS 6. Carrying out intervention plans in case of accidental pollution. The presence of accidental pollution response equipment on board barges and ships.	P/E	*Alosa tanaica, Alosa immaculata, Tursiops truncatus, Phocoena phocoena*, 1110, 1170, 8330	Ecological status of water based on physicochemical indicators	Disruption of species activity Habitat alteration	Construction stage	Gas Pipeline Trench MC/PM1 microtunnel entrance point from the offshore part of the project
ROSCI0311 Viteaz Canyon						
MS 6. Carrying out intervention plans in case of accidental pollution. The presence of accidental pollution response equipment on board barges and ships.	P/E	*Tursiops truncatus*, 1180, 1170	Ecological status of water based on physicochemical indicators	Disruption of species activity Habitat alteration	Construction and operation stages	Neptun Alpha Platform (offshore)
MS 7. Imposing a marine mammal exclusion zone. Work to fix the platform will only begin if no dolphins are present in the exclusion zone, 500 m around the works, after a 30-minute observation period.	P	*Tursiops truncatus, Phocoena phocoena* (does not constitute a conservation objective of ROSCI0311)	Size of population	Reduction of population numbers through accidental injuries or killings	Construction stage	Neptun Alpha Platform (offshore)
MS 8. In order to avoid the occurrence of potential injuries or accidental killings in the case of cetaceans, as a result of noise and vibration emissions, at the beginning of the works of fixing the pillars to the platform jacket, only 20% of the power of the beating of these pillars will be used for 120 minutes (soft start procedure), so that the individuals in the affected area (3.5 km in the case of T. truncatus and D. delphis; 19-20 km in the case of the P. phocoena species) can safely leave the area affected by the project. The soft start procedure shall apply whenever the works for fixation by beating the pillars are interrupted for more than 60 minutes.	P	*Tursiops truncatus, Phocoena phocoena* (does not constitute a conservation objective of ROSCI0311)	Size of population	Reduction of population numbers through accidental injuries or killings	Construction stage	Neptun Alpha Platform (offshore)
MS 9. Carrying out the eco-toxicity study by carrying out chronic toxicity tests, for all chemicals that will be discharged into the sea, including biocide and methanol, by means of which to validate/demonstrate that the	E	1170, 1180, *Tursiops truncatus*	Ecological status of water based on ecological indicators	Disruption of species activity. Habitat alteration	Before the start of works and in construction stage	Neptun Alpha Platform (offshore)

Description of measure	Type of measure (P/E/R)	Species and habitat affected	Parameter to which the measure is addressed	Impact to which the measure is addressed	Measure implementation period	Measure implementation location
maximum permissible limit values established at the discharge into the marine environment, at the level of each chemical substance, ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to achieve the environmental objectives established by the Framework Directive Strategy for marine environment (2008/56/EC). If the chronic toxicity study highlights negative effects on the biological components of the marine environment, the beneficiary will have the obligation to adapt/reconsider the substances used (Measure correlated to the requirements of the Water Management Permit).						
ROSCI0293 Costinești- 23 August						
MS 5. Excavation works in the onshore area only in periods of calm sea of maximum level 3 Beaufort	E	*Alosa tanaica, Alosa immaculata, Tursiops truncatus, Phocoena phocoena,* 1110, 1170, 1140, 8330	Ecological status of water based on physicochemical indicators	Disruption of species activity. Habitat alteration	Construction stage	Gas Pipeline Trench MC/PM1 microtunnel entrance point from the offshore part of the project
MS 6. Carrying out intervention plans in case of accidental pollution. Presence on board barges and ships of intervention equipment in case of accidental pollution	P/E	*Alosa tanaica, Alosa immaculata, Tursiops truncatus, Phocoena phocoena,* 1110, 1170, 1140, 8330	Ecological status of water based on physicochemical indicators	Disruption of species activity. Habitat alteration	Construction stage	Gas Pipeline Trench MC/PM1 microtunnel entrance point from the offshore part of the project
ROSPA0076 Black Sea						
MS 5. Realization of excavation works in the onshore area only in periods of calm sea of maximum level 3 Beaufort	E	All species of waterfowl	Ecological status of water based on physicochemical indicators	Disruption of species activity. Habitat alteration	Construction stage	Gas Pipeline Trench MC/PM1 microtunnel entrance point from the offshore part of the project
MS 6. Carrying out intervention plans in case of accidental pollution. Presence on board barges and ships of intervention equipment in case of accidental pollution	P/E	All species of waterfowl	Ecological status of water based on physicochemical	Disruption of species activity. Habitat	Construction stage	Gas Pipeline Trench MC/PM1 microtunnel entrance point from the

Description of measure	**Type of measure (P/E/R)**	**Species and habitat affected**	**Parameter to which the measure is addressed**	**Impact to which the measure is addressed**	**Measure implementation period**	**Measure implementation location**
			indicators	alteration		offshore part of the project

Calendar for implementation and monitoring of impact prevention/avoidance measures

Measure	Species/ habitat affected	Parameter to which the measure is addressed	Impact to which the measure is addressed	Calendar for implementation of measures																													Responsible person	Estimated budget in EUR
				2024							2025												2026										2027-2047		
				1-6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10			
MS 1	1170, 8330	Habitat area	Habitat alteration																														Project Owner	-
MS 2, MS 3	8330	Habitat area	Losses of the non-ANPIC habitat area																														Project Owner	660,000
MS 4	1110, 1170, 8330	Habitat area Characteristic invertebrate species	Habitat alteration																														Project Owner	350,000
MS 5	*A. tanaica, A. immaculata, T. truncatus, P. phocoena, 1110, 1140, 1170, 8330, marine birds from ROSPA0076*	Ecological status of water based on physicochemical indicators	Disruption of species activity. Habitat alteration																														Project Owner	-
MS 6	*A. tanaica,*		Disruption																														Project	-

	A. immaculata, T. truncatus, P. phocoena, 1110, 1140, 1170, 1180, 8330, marine birds from ROSPA0076	Ecological status of water based on physicochemical indicators	of species activity. Habitat alteration	Owner	
MS 7	*T. truncatus, P. phocoena*	Population size	Reduction of population numbers through accidental injuries or killings	Project Owner	-
MS 8	*T. truncatus, P. phocoena*	Population size	Reduction of population numbers through accidental injuries or killings	Project Owner	-
MS 9	1170, 1180, *T. truncatus*	Ecological status of water based on physicochemical indicators	Disruption of species activity. Habitat alteration	Project Owner	1,500,000

Measures for prevention/mitigation of impact in crossborder context (for Bulgaria)

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/prevention	Mitigation		Construction	Operation	Decommissioning
Land use	No impact in crossborder context	No measures are required						
Soil and subsoil	No impact in crossborder context	No measures are required						
Sedimentary substrate	No impact in crossborder context	No measures are required						
Water bodies and marine environment	Accidental pollution with marine fuel	Implement appropriate staff training and field exercises to prevent, isolate and respond to fuel spills	√		Offshore	√	√	√
		Ensuring that response and containment equipment used in the event of a leak is regularly inspected and maintained, operationally checked and tested, and used during or available activities as required for the response	√		Offshore	√	√	√
Quality of air and climate changes	No direct impact on air quality in crossborder context	No additional measures are required, except the measures presented in table 8.1						
Acoustic environment (onshore)	No impact in crossborder context	No measures are required						
Acoustic underwater environment	Attenuation of noise levels produced in the underwater environment for the protection of marine mammals	Application of standard management and mitigation procedures such as MMO observations before the start of work, and application of soft-start techniques. These procedures will be repeated each time the activities are interrupted for a period of time longer than 60 minutes.		√	Offshore	√		
Cultural heritage	No impact in crossborder context	No measures are required						
Landscape	No impact in crossborder context	No measures are required						

Environmental factor	Aspect of impact	Measure	Type of measure		Location	Project stage		
			Avoidance/prevention	Mitigation		Construction	Operation	Decommissioning
Health of population	No impact in crossborder context	No measures are required						
Material assets and natural resources	No impact in crossborder context	No measures are required						
Economic and social environment	No impact in crossborder context	No measures are required						

• measures to reduce or eliminate the impact on the protected natural area of community interest, the conditions and the mode/calendar of their implementation – Not applicable

• the alternative solution resulting from the appropriate assessment for which the environmental agreement is issued and the measures to reduce or eliminate the impact, related to it – Not applicable

• compensatory measures approved/accepted by the competent authority for environmental protection, the conditions and the mode/calendar of their implementation – Not applicable

• the considerations concerning public health or safety or the beneficial consequences of major importance for the environment, which justify the need to carry out the proposed project, for the protected natural areas of community interest that shelter a priority natural habitat type and/or a priority wildlife species of community interest– Not applicable

• other overriding reasons of overriding public interest on which the European Commission's point of view has been obtained, which justifies the need to carry out the project – Not applicable

Wastes estimated to be generated by the project during construction and installation of components

List and estimated quantities of wastes generated during the construction period

Waste name	Waste type	Waste code	M.U.	Estimated quantity/year	Physical status	Storage method	Recovery disposal operation according to GEO 92/2021
A. Wastes generated in the offshore construction activity							
Paint and varnish waste containing organic solvents or other hazardous substances	Paint residues	08 01 11*	Tonnes	0.5	solid	Metal container	D10 disposal by authorized economic operators
Non-chlorinated engine, transmission and lubricating mineral oils	Worn oil	13 02 05*	Tonnes	0.45	Liquid	Tightly closed metal container	R12 recovery by authorized economic operators
Aqueous liquid waste containing hazardous substances	Water with content of oil	16 10 01*	Tonnes	0.9	liquid	Metal container	D9 disposal by authorized economic operators
Mixed municipal waste	Household waste	20 03 01	Tonnes	54.0	solid	Collected in big bags and metal containers	D5 disposal by sanitation operators
Wood packaging	Wood packaging	15 01 03	Tonnes	10.0	solid	Metal container	R12 recovery by authorized economic operators
Other waste with content of hazardous substances (cement)	Cement in bulk	11 01 98*	Tonnes	15.0	solid	Collected in big bags and metal containers	D5 disposal by authorized economic operators
Ferrous metals	Ferrous	16 01	Tonnes	5.0	solid	Metal	R12 recovery by

Waste name	Waste type	Waste code	M.U.	Estimated quantity/year	Physical status	Storage method	Recovery disposal operation according to GEO 92/2021
	materials	17				container	authorized economic operators
Non-ferrous metals	Non-ferrous materials	16 01 18	Tonnes	3.0	solid	Metal container	R12 recovery by authorized economic operators
Plastics	Plastics	17 02 03	Tonnes	3.0	solid	Metal container	R12 recovery by authorized economic operators
Ferrous metals	Frame for support of superstructure	16 01 17	Tonnes	600.0	solid	Metal container	R12 recovery by authorized economic operators
Ferrous metals	Jacket frame	16 01 17	Tonnes	600.0	solid	Metal container	R12 recovery by authorized economic operators
Ferrous metals	Auxiliary installation of jacket and superstructure, grilles, slings, bumpers	16 01 17	Tonnes	200.0	solid	Metal container	R12 recovery by authorized economic operators
Ferrous metals	Piles, caissons	16 01 17	Tonnes	20.0	solid	Metal container	R12 recovery by authorized economic operators
Ferrous metals	Auxiliary installation of underwater equipment grids, slings, guides, bumpers	16 01 17	Tonnes	500.0	solid	Metal container	R12 recovery by authorized economic operators
Other batteries and accumulators	Batteries	16 06 05	Tonnes	0.1	solid	Metal container	R12 recovery by authorized economic operators
Earth and stones, other than those specified in 17 05 03	Sea sediments excavated at the construction of the exit manhole and transition ditch	17 05 04	Tonnes	40,950.0	solid	Stored on the seabed and fully reused to fill the manhole and trench after pipeline installation	Used for filling the manhole and the ditch after the installation of pipeline
Paper and cardboard packaging	Paper and cardboard	15 01 01	Tonnes	10.0	solid	Metal container	R12 recovery by authorized economic operators
Aqueous liquid waste with content of hazardous substances	Fluid from the start of the wells consisting of a mixture of water with methanol, corrosion	16 10 01*	Tonnes	3,150	Liquid	Metal basins	D9 disposal by authorized economic operators

Waste name	Waste type	Waste code	M.U.	Estimated quantity/year	Physical status	Storage method	Recovery disposal operation according to GEO 92/2021
	inhibitor, deposition inhibitor, TEG						

B. Wastes generated in the onshore construction activity

Waste code	Waste name	M. U.	Estimated quantity	Physical status	Storage method	Recovery/disposal operation according to GEO 92/2021
20 03 06	Waste from cleaning the sewerage system	m3	1400	Liquid	Tank	Transported to a treatment plant
20 03 06	Waste from cleaning the sewerage system	m3	192	liquid	Tank	Transported to a treatment plant
01 05 04	Freshwater drilling sludge and waste	m3	200,0	liquid	Metal tank	Transported to a treatment plant
01 05 04	Freshwater drilling sludge and waste	m3	3140,0	liquid	Metal tank	Transported to a treatment plant
16 10 01*	Aqueous liquid waste with content of hazardous substances	m3	1070,0	liquid	Metal tank	Transported to a treatment plant
20 03 01	Mixed municipal waste	tonnes	17.5	solid	Collected in big bags and in metal container	D9 disposal by sanitation operators
17 05 04	Earth and stones other than those specified in 17 05 03 (excavated soil)	m3	7770.0	solid	Storage in bulk in arranged area	R10 filling the launch manhole and pipeline ditches D5 disposal by authorized economic operators
15 01 03	Wood packaging	Tonnes	10.0	solid	Metal container	R12 recovery by authorized economic operators
15 01 01	Paper and cardboard packaging	Tonnes	10.0	solid	Metal container	R12 recovery by authorized economic operators
16 01 17	Ferrous metals	Tonnes	5.0	solid	Metal container	R12 recovery by authorized economic operators
16 01 19	Plastic materials	Tonnes	3.0	solid	Metal container	D9 disposal by authorized economic operators
16 06 05	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted	Tonnes	0.1	solid	Metal container	R12 recovery by authorized economic operators

Waste name	Waste type	Waste code	M.U.	Estimated quantity/year	Physical status	Storage method	Recovery disposal operation according to GEO 92/2021
	batteries and accumulators which contain these batteries						
08 01 11*	Paint and varnish waste containing organic solvents or other hazardous substances	Tonnes	0.1	solid	Metal container		D9 disposal by authorized economic operators

List of wastes generated during the execution of drilling

Waste code	Waste name	M. U.	Estimated quantity	Physical status	Storage method	Recovery/disposal operation according to GEO 92/2021
20 03 06	Waste from cleaning the sewerage system	m3	31,040	liquid	Tank	Transported to the shore to a treatment plant
01 05 04	Freshwater drilling sludge and waste	m3	72,678	liquid	Not stored	It is discharged on seabed
20 03 01	Mixed municipal waste	Tonnes	78.0	solid	Collected in big bags and in metal container	D9 disposal by sanitation operators
01 05 05*	Oil-containing drilling sludge and waste	m3	3,989	solid	Metal skips	D9 disposal by authorized economic operators
16 01 15	Antifreeze liquids, other than those specified in 16 01 14	m3	350	liquid	Metal container	D9 disposal by authorized economic operators
01 05 04	Freshwater drilling sludge and waste	m3	8.784	solid	Not stored	It is discharged on seabed
16 10 02	Aqueous liquid waste other than those specified in 16 10 01	m3	31.300,0	liquid	Open drainage system tank	It is discharged into the sea after the concentration of hydrocarbons < 15 ppm is checked
16 10 01*	Aqueous liquid waste with content of hazardous substances	m3	61.480,0	liquid	Pool of contaminated water	D9 disposal by authorized economic operators
11 01 98*	Other waste with content of hazardous substances (cement)	Tonnes	15,0	solid	Collected in big bags and in metal container	D5 disposal by authorized economic operators
15 01 03	Wood packaging	Tonnes	10,0	solid	Metal container	R12 recovery by authorized economic operators
15 01 01	Paper and cardboard packaging	Tonnes	10.0	solid	Metal container	R12 recovery by authorized economic operators
16 06 05	Batteries and	Tonnes	0.1	Solid	Metal container	R12 recovery by

Waste code	Waste name	M. U.	Estimated quantity	Physical status	Storage method	Recovery/disposal operation according to GEO 92/2021
	accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators which contain these batteries					authorized economic operators
08 01 11*	Paint and varnish waste containing organic solvents or other hazardous substances	Tonnes	0.5	solid	Metal container	D9 disposal by authorized economic operators
18 01 03*	waste whose collection and disposal are subject to special infection prevention measures	Tonnes	0.02	Solid	Special containers for collection of medical waste	D10 disposal by authorized economic operators

List of wastes generated in operational stage

Waste code	Waste name	M. U.	Estimated quantity	Physical status	Storage method	Recovery/disposal operation according to GEO 92/2021
A. Wastes generated in the offshore operational activity						
20 03 06	Waste from cleaning the sewerage system	m3	480	liquid	Basin	Transported to the shore, to a treatment plant
16 10 01*	Aqueous liquid waste containing hazardous substances	m3/year	50.0	liquid	Metal container	Transported to the shore, to a treatment plant
20 03 01	Mixed municipal waste	tonnes/day	0.005	solid	Collected in big bags and in metal container	D9 disposal by sanitation operators
16 06 05	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators which contain these batteries	tonnes/year	0.1	solid	Metal container	R12 recovery by authorized economic operators
08 01 11*	Paint and varnish waste containing organic solvents or other hazardous substances	Tonnes	0.5	solid	Metal container	D9 disposal by authorized economic operators
15 01 03	Wood packaging	Tonnes	2.0	solid	Metal container	R12 recovery by authorized economic operators
15 01 01	Paper and	Tonnes	3.0	solid	Metal container	R12 recovery by

Waste code	Waste name	M. U.	Estimated quantity	Physical status	Storage method	Recovery/disposal operation according to GEO 92/2021
	cardboard packaging					authorized economic operators
16 01 19	Plastics	Tonnes	2.0	solid	Metal container	R12 recovery by authorized economic operators
16 01 17	Metals	Tonnes	10.0	solid	Metal container	R12 recovery by authorized economic operators
18 01 03*	Waste whose collection and disposal are subject to special infection prevention measures	Tonnes	0.005	Solid	Special containers for collection of medical waste	D10 disposal by authorized economic operators
B. Wastes generated by the adjustment-measuring station activity						
16 10 01*	Aqueous liquid waste containing hazardous substances	m3/year	20.0	liquid	Metal container	Transported to the shore, to a treatment plant
18 01 03*	Waste whose collection and disposal are subject to special infection prevention measures	Tonnes	0.01	Solid	Special containers for collection of medical waste	D10 disposal by authorized economic operators
15 01 03	Wood packaging	Tonnes	1.0	solid	Metal container	R12 recovery by authorized economic operators
15 01 01	Paper and cardboard packaging	Tonnes	1.0	solid	Metal container	R12 recovery by authorized economic operators
16 06 05	Batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators which contain these batteries	Tonnes/year	0.05	solid	Metal container	R12 recovery by authorized economic operators
08 01 11*	Paint and varnish waste containing organic solvents or other hazardous substances	Tonnes/year	2.0	solid	Metal container	D9 disposal by authorized economic operators
20 03 01	Mixed municipal waste	Tonnes/day	0.005	solid	Collected in big bags and in metal container	D9 disposal by sanitation operators
16 01 19	Plastics	Tonnes	2.0	solid	Metal container	R12 recovery by authorized economic operators
16 01 17	Metals	Tonnes	15.0	solid	Metal container	R12 recovery by authorized economic operators

Wastes estimated to be generated by the project during decommissioning stage

At the end of the project service life (up to 20 years), the project infrastructure will require decommissioning/abandonment in compliance with a dedicated demolition/decommissioning/abandonment plan.
The full list and estimated quantities of hazardous and non-hazardous waste generated in the Decommissioning phase will be available upon completion of the Decommissioning/Abandonment Plan.
All waste resulting from the decommissioning phase will be managed in compliance with the legal provisions in force at the time of the decommissioning/abandonment works.
The management of the waste generated as a result of the execution of the works provided for in the project will be carried out in compliance with the specific environmental legislation and will be the responsibility of the project owner, as follows:

- the mixed municipal waste generated during the construction works will be collected, temporarily stored in bins and disposed of at an authorized landfill with the consent of the landfill operator;
- recyclable industrial waste resulting during construction works (metal, paper and cardboard, plastic, etc.) will be collected, temporarily stored by type, in special containers, in order to be recovered by specialized authorized companies;
- concerning the management of construction and demolition waste, in compliance with GEO No. 92/2021, on the waste regime, with amendments and completions, the holders in whose name building and/or demolition permits have been issued according to the provisions of Law no.50/1991 *for authorization of construction works execution, republished,* as further amended and supplemented, have the obligation to manage the construction and demolition waste, so that they reach a level of training for reuse, recycling and other material recovery operations, including backfilling operations using waste to replace other materials, of at least 70% of the mass of non-hazardous waste from construction and demolition activities, with the exception of natural geological materials defined in category 17 05 04 of the Annex to the Commission Decision of 18 December 2014 amending Decision 2000/532/EC establishing a list of wastes pursuant to Directive 2008/98/EC of the European Parliament and of the Council;
- in compliance with GEO No. 92/2021, *for waste regime,* as further amended and supplemented, the holder of the building/demolition permit issued by the lcoal and central public administration authority or by the competent institutions to authorize the construction works with special regime has the obligation to have a waste management plan for waste from construction and/or demolition activities, as applicable, by which they instate sorting systems for the waste from construction and demolition activities, at least for wood, mineral materials – concrete, brick, sandstone and ceramic, stone, metal, glass, plastic and plaster for their recycling/re-use on site, to the extent that it is economically feasible, it does not affect the environment and safety in constructions, and to take measures for promotion of selective demolitions to allow the disposal and handling in safe condition of hazardous substances to facilitate the re-use and high quality recycling by disposal of non-valorized materials;
- in compliance with GEO No. 92/2021, *for waste regime,* as further amended and supplemented, the holders in the name of which building permits and/or demolition permits have been issued must report every year to the Agency for Environmental Protection until April 30th, of the year that follows the reporting year, the compliance with Article 17 paragraph (7) and the measures adopted according to Article 31 paragraph (1);

- in compliance with GEO No. 92/2021, *for waste regime*, as further amended and supplemented, waste management must be carried out without endangering the health of the population and without harming the environment, in particular:

- without generating risks of contamination for air, water, soil, fauna or flora;
- without creating discomfort due to noise or odors; and
- without negatively affecting the landscape or areas of special interest.

IV. Conditions that must be observed:

1.During the implementation of the project:

1.1. Technical conditions required by the provisions of specific normative acts

- The provisions of GEO No.92/2021 for waste regime, *approved as amended by Law No. 17/2023 shall be observed*, among which:
  - art.29, para. (1): Waste generators have the obligation to ensure that during the collection, transport and storage operations of hazardous waste, they are packaged and labelled in compliance with the provisions of Regulation (EC) No. 1.272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, as well as amending the Regulation (EC) No. 1.907/2006, of the Government Decision No. 1.408/2008 for classification, packing and labelling of hazardous substances;
  - Waste generators have the obligation to draw up and maintain a characterization of hazardous waste generated by their activities and the waste that can be considered as hazardous because of origin or composition, for the purpose of determining the possibilities of their mixing, treatment and disposal methods;
  - The classification and coding of waste, including hazardous waste shall be carried out according to:
    - a) Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as further amended;
    - b) Annex No. 4.
  - Waste generators and holders, legal entities, are cumulatively required to classify and code the waste generated from the activity in the list of waste provided for in art. 7 para. (1), according to which they draw up a list of waste;
  - in the case of a type of waste that falls according to the list of wastes provided for in art. 7 para. (1) under two different codes depending on the possible presence of hazardous characteristics - codes marked with an asterisk, the classification as non-hazardous waste is made by the producers and holders of such waste only on the basis of an analysis of the origin, tests, analysis bulletins and other relevant documents requested by the environmental protection authority;
  - the reference laboratory within the ANPM analyses the cases of uncertainty concerning the characterization and classification of waste and makes the appropriate classification proposal;
  - In order to determine the possibilities of mixing, the methods of prior preparation, recycling, recovery and disposal of waste, the producers and holders of waste legal

persons are obliged to carry out and maintain a characterization of the hazardous waste generated by their own activity and of the waste that can be considered hazardous due to its origin or composition and if it has one or more of the properties provided in Annex No. 4;
- it is forbidden to reclassify hazardous waste as non-hazardous waste by the producer or holder of waste by diluting or mixing it in order to reduce the initial concentrations of hazardous substances to a level lower than the level required for a waste to be defined as hazardous;

- Hygiene norms and recommendations concerning the life environment of population, approved by the Order of Minister of Health No. 119/2014, as further amended and supplemented must be observed;
- It is forbidden to affect in any way the vicinity of the studied site.
- The handling/storage of chemical substances will be done in compliance with the provisions of their Safety Data Sheets, *drawn up in compliance with the provisions of Regulation (EU) 878/2020 amending Annex II to Regulation (EC) No.1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) by the supplier/producer of substances or mixtures.* Safety Data Sheets are communicated in the official language of the state where the substance or mixture is marketed;
- Chemical preparations stored/used must be packaged and labelled in compliance with the provisions of *EC Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, as well as amending Regulation No. 1907/2006;*
  - The observance of the provisions of Law no. 360/2003, as further amended and supplemented, concerning the regime of toxic and hazardous substances and subsequent legislation;
  - the works will be carried out in compliance with the provisions of G.E.O. No. 202/2002 on the integrated management of the coastal zone, approved by Law 280/2003, as further amended and supplemented, in compliance with the norms concerning discharges at sea from ships and marine platforms, correlated with the substances and materials provided in Annex 2 to the respective normative act;
  - ensuring the functionality of the equipment for retaining and/or dispersing pollutants in the environment; any malfunction that results in a decrease in the efficiency of this equipment will be immediately reported to the environmental authority, at the same time as adopting the optimal measures in order to eliminate or, if it is not possible, to reduce the negative effect on the quality of environmental factors;

  - the personnel responsible for handling chemical products will be trained for intervention (individualized on the product) in case of accidents that lead to spills, on platforms or in water, of these substances;
  - compliance with the provisions of Law No. 105/2006 approving GEO 196/2005 as further amended and supplemented – concerning the Environmental Fund;
  - compliance with the provisions of Law No. 104/2011 on ambient air quality, as further amended and supplemented;
  - compliance with the provisions of GEO No. 68/2007, as further amended and supplemented, concerning environmental liability with reference to the prevention and repair of environmental damage;
  - in compliance with the provisions of Law No. 17/1990 republished, as subsequently amended and supplemented, it is forbidden to pollute the inland maritime waters and the territorial sea,

as well as the atmosphere above it, by discharging, throwing, sinking or releasing from ships or other floating or fixed installations, as well as by sources located on shore, substances or residues of noxious substances, radioactive substances, hydrocarbons, and other harmful or dangerous substances for the health of people, or for the sea flora and fauna, or other residues or materials that can cause damage to the Romanian coast or create obstacles to the legitimate use of the sea;

- compliance with the provisions of GEO 57/2007 for the regime of natural protected areas, preservation of natural habitats, wild flora and fauna, as further amended and supplemented;
- compliance with the provisions of GD No. 323 of March 31st, 2010 for establishing the monitoring system of captures and accidental killings of all species of birds, and of strictly protected species set out in annexes No. 4A and 4B to Government Emergency Ordinance No. 57/2007 for the regime of natural protected areas, preservation of natural habitats, wild flora and fauna;
- compliance with the provisions of Order No.1197/2016 for approval of Management Plan and Regulation of Natura 2000 site ROSPA0076 Black Sea.
- We will comply with the provisions of **Decision No.195/23.03.2023** for revision of Methodological Norms for implementation of conservation objectives set out by Annex no.1 to OMMAP No.1197/2016 for approval of the Management Plan and the Regulation of Natura 2000 site **ROSPA0076 Black Sea**
- We will observe the provisions of Order No.1433/2016 for the approval of the Management Plan and Regulation of Natura 2000 site ROSCI0273 Cape Tuzla Marine Area.
- We will observe the provisions of **Decision No. 490/06.01.2021** concerning the approval of the Methodological Norms concerning the implementation of the conservation objectives in the Annex to Order No. 1433/2016 concerning the approval of the Management Plan and the Regulation of the Natura 2000 site ROSCI0273 the Cape Tuzla Marine Area.
- We will comply with **Note No. 1827/BT/377/21.01.2022** on the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in ROSCI**0311 Viteaz Canyon**.
- We will comply with **Note No. 1827/BT/375/21.01.2022** on the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in ROSCI**0293 Costinești – 23 August**.

    - the provisions of G.D. No. 685/2022 on the establishment of the protected natural area regime and the declaration of special conservation areas as an integral part of the European ecological network Natura 2000 in Romania Art.2, letter (2) will be complied with.
- We will comply with the provisions of the Conditional Favourable Permit issued by ANANP/ST Constanta No. 288/ST CT/27.06.2024. Among the conditions imposed by ANANP we mention:

    - ”*Any change in the positioning of the anchors in ROSAC0273 will be made only after informing and with the agreement of ANANP".*
    - *"For the anchor that overlaps with the mapped area of habitat 8330, a new position will be identified that will not intersect habitats of community interest. In order to establish by mutual agreement, the new proposed position will be communicated to ANANP ST Constanta, as soon as possible".*

- *"It is necessary to delimit an exclusion zone for marine mammals, so that the impact on them remains insignificant, in all stages of implementation of the project";*

- compliance with all legislative norms in force concerning the protection of environmental factors;
- **the environmental authority will be immediately notified of any pollution with an effect on the quality of environmental factors and will intervene in order to remove the cause and minimize the negative effects, in compliance with the Intervention Plan in case of accidental pollution.**

In compliance with the Law 165/2016 concerning the safety of offshore oil operations, as amended and supplemented, you have the following obligations in terms of environmental protection:

- all appropriate measures will be adopted to prevent major accidents within oil operations in the areas of the Black Sea under the jurisdiction of Romania, the requirements provided in the relevant legislation in force will be complied with, as well as the regulations issued and the measures imposed by the competent authority in compliance with the applicable legal provisions and the relevant internal procedures of the operator. Operators are not relieved of the obligations regulated above if the acts or omissions that led to or contributed to major accidents belong to their contractors.
- In the event of a major accident, operators have the obligation to take all necessary measures to limit its effects on human health and the environment.
- the operator is obliged to ensure that offshore oil operations are carried out on the basis of systematic risk management, so that the residual risks of major accidents in the case of people, the environment and offshore installations are acceptable.
- the holder of the oil agreement is financially responsible for the prevention and repair of environmental damages, as defined in art. 2 of Government Emergency Ordinance No. 68/2007, approved by Law No. 19/2008, as subsequently amended and supplemented, caused by offshore oil operations carried out by the holder of the oil agreement or by the operator or on their behalf;
- The operator shall provide a safety zone around a facility, where ships are prohibited from entering or remaining. The prohibition does not apply to a ship entering or remaining in the safe zone if it is in any of the following situations:

  a) in connection with the laying, inspection, testing or repair, maintenance, alteration, renewal or removal of any submarine cable or pipeline from the safety zone or its proximity;
  b) under the conditions in which they provide services for any installations in the safety zone or transport persons or goods from/to them;
  c) to inspect any connected facility or infrastructure in that safe zone that is under Romania's jurisdiction in the Black Sea;
  d) in the case of life or property rescue operations;
  e) due to bad weather;
  f) when they are in danger;
  g) If the operator, owner or competent state authorities have expressed their consent.

- Elaboration and implementation of Internal Emergency Intervention Plan.

1.2. Necessary conditions to be fulfilled during site organization

- the management of the waste generated on the site will be carried out in compliance with the environmental legislation in force;
- the uncontrolled storage of waste generated from the project activities is prohibited;
- the necessary utilities will be provided to carry out the works in good conditions (source of drinking water, hygienic-sanitary facilities, including ecological toilets for the staff);
- the equipment and machinery to be used will be in an appropriate technical condition, confirmed by the competent bodies, according to the relevant legislation, so as to avoid water/soil/petroleum product pollution;
- Safe techniques and technologies will be used for the quality of environmental factors;
- anti-noise protection measures will be taken in the work area of the construction site, in order to comply with SR 10009/2017 – Acoustics – Permissible limits of the noise level in the environment, in conjunction with art.16 (1) of the annex to Order No.119/2014 for the approval of the Hygiene and Public Health Norms concerning the living environment of the population;

1.3. Conditions provided in Water Management Notice No. 48 of 17.06.2024, issued by the Dobrogea Litoral Water Basin Administration.

Quality of effluent discharged into the Black Sea during production operations

The values of the quality indicators of the effluents discharged into the Black Sea during the execution of the works will comply with the maximum permissible values according to the *provisions of GD No. 188/2002 for the approval of certain norms concerning the conditions of discharge of wastewater into the aquatic environment*, as further amended and supplemented, NTPA 001, MARPOL Convention.

The following three tables set out the quality indicators and maximum permissible values (maximum permissible concentrations) to be complied with when discharging effluent into the Black Sea during production operations (subject to the condition referred to in footnote 3 to the footnote to the table); the analytical methods and/or analytical technique used, the frequency of annual monitoring and the place of sampling (point of collection of the samples).

It is worth mentioning that the analytical methods and/or analytical techniques (analysis equipment) mentioned in the tables will be updated according to new developments in the field.

Table 1

Parameter monitored Quality Indicator	Units	Maximal permissible value	Analytical method (standard, if available)	Frequency	Sampling
Temperature	°C	35	Calibrated equipment	Quarterly	From effluent, before discharge (NTPA Art. 12.1)
pH	pH units	6.5 - 9	Potentiometric method (SR ISO 10523:2012)		
Suspended solids (MS)	mg/dm³	35.00	Gravimetric method (SR EN 872:2009) According to NTPA STAS 6953-81		
Biochemical consumption of oxygen every 5 days (CBO5)	mgO_2/ dm³	25,0	SR EN 1899-2		
Chemical consumption of	mgO_2/ dm³	125,0	SR ISO 6060-96		

Parameter monitored Quality Indicator	Units	Maximal permissible value	Analytical method (standard, if available)	Frequency	Sampling
oxygen 0 potassium dichromate method (CCO-Cr)					
Sulphides and hydrogen sulphide, S^{2-}	mg/ dm³	0,5	SR ISO 10530-97 SR 7510-97		
SO_4^{2-}	mg/ dm³	1400-1700 (1)	STAS 8601-70 or calculated from salinity data *		
Mg^{2+}	mg/ dm³	700-800 (1)	STAS 6674-77 SR ISO 7980-97 SR ISO 6059:2008 or calculated from salinity data*		
HPT (Oil products)	mg/L	15 (2)	GC-FID (Determination of hydrocarbon index - SR EN ISO 9377-2) or according to NTPA SR 7877/1-95 - gravimetric, SR 7877/2-95 - spectrophotometric		
Free residual chlorine, Cl_2	mg/ dm³	0,2	SR EN ISO 7393-1:2002; SR EN ISO 7393-2:2002; SR EN ISO 7393-3:2002		
Cl^-	mg/ dm³	9700-12000 (1)	SR ISO 9297:2001 (Mohr method)		
Salinity	‰	17 -23 (1)	Calibrated equipment / SR ISO 9297:2001 (Mohr method)		
Total ionic Fe (Fe^{2+}, Fe^{3+})	mg/ dm³	5,0	SR ISO 6332:1996/C91:2006 Spectrophotometric method with 1,10 – Fenantroline SR 13315:1996/ C91:2008 Atomic absorption spectrometric method*		
Hg (Hg^{2+})	mg/ dm³	0,05	SR EN ISO 12846:2012 Atomic absorption spectrometric method (AAS) SR EN ISO 17852:2008 Atomic Fluorescence Spectrometric Method		
Cu^{2+}	mg/ dm³	0,1	Graphite Furnace		
Cd^{2+}		0,2			

Parameter monitored Quality Indicator	Units	Maximal permissible value	Analytical method (standard, if available)	Frequency	Sampling
Pb^{2+}		0,2	Atomic Absorption Spectrometric Method - (GF – AAS)		
Ni^{2+}		0,5			
Cr total		0,1			
Zn^{2+}		0,5			

(1) Maximum permissible values proposed by INCDM based on natural background values
(2) Maximum permissible value under the MARPOL Convention

According to the *Eco-toxicity Study for the environmental documentation of the Neptun Deep project carried out by INCDM Grigore Antipa*:

For substances for which there are no maximum permissible limits in the regulations in force, they will be established on the basis of studies carried out by specialized institutes.

In the case of this project, in order to establish the maximum permissible limits for the substances that enter the composition of the products used during production operations, toxicity tests of these products were carried out at the concentrations imposed by the technological limit.

Taking into account the results obtained from the testing of the acute toxicity of these products (significant negative effect observed on the first trophic level – phytoplankton, in the case of the corrosion inhibitor and implicitly of the mixture of products, but without acute effects on the upper trophic levels – zooplankton and fish) and their composition, provided by the producer through the beneficiary, the following maximum discharge limits have been proposed for the substances that will be discharged into the marine environment through the water produced within the project:

Table 2

Parameter monitored Quality Indicator	Units	Maximal permissible value	Analytical method (standard, if available)	Frequency	Sampling
2-Butoxyethanol*	mg/L	4,27 (3)	Gas chromatographic method with flame ionization detector (GC_FID)	Quarterly	From effluent, before discharge (NTPA Art. 12.1)
Ethoxylated fatty acid (3EO)	mg/L	0,80 (3)	Gas chromatographic method with mass spectrometer detector (GC_MS)		

Parameter monitored Quality Indicator	Units	Maximal permissible value	Analytical method (standard, if available)	Frequency	Sampling
2-Mercaptoethanol*	mg/L	0,14 (3)	Liquid-chromatographic method with mass spectrometer detector (LC-MS/MS)		
Fatty acids, C18-unsaturated, reaction products with acrylic acid and polyethylene polyamines	mg/L	1,35 (3)	Gas chromatographic method with mass spectrometer detector (GC_MS)		
Fatty acids, products of reaction with triethanolamine	mg/L	0,26 (3)	Gas chromatographic method with mass spectrometer detector (GC_MS)		
Monoethylene glycol*	mg/L	1,62 (3)	Gas chromatographic method with flame ionization detector (GC_FID)		
L-aspartic acid, sodium salt of homopolymer in water	mg/L	0,60 (3)	Liquid-chromatographic method with mass spectrometer detector (HPLC or LC/MS)		
Glycerine*	mg/L	0,90 (3)	Gas chromatographic method with flame ionization detector (GC_FID)		

(3) Maximal permissible values proposed by INCDM

*Substances with a majority weight or which may produce chronic effects at the discharge concentration

The toxicity assessment was done by testing each product and their mixture, the entire effluent (WET) using three marine species *(Acartia tonsa, Skeletonema costatum and Chelon auratus)*, located at three trophic levels (phytoplankton, zooplankton and fish), which represent organisms from the receiving marine area.

Toxicity tests for Acartia tonsa and Chelon auratus did not reveal the existence of acute toxicity of the products or their mixture at the proposed discharge concentrations.

Toxicity testing for Skeletonema costatum showed a low effect for AFMR20400A defoamer and SCAL13370A limestone inhibitor (growth inhibition by 15% and 18%, respectively) and a high effect for corrosion inhibitor CORR12452A and their mixture (growth inhibition by 79% and 92%, respectively).

Table 3

Parameter monitored	Units	Maximal permissible	Analytical method (standard, if	Frequency	Sampling

Quality Indicator		value	available)		
Effluent (water produced) resulted from operation and maintenance	% growth inhibition of *Skeletonema costatum*	92 (4)	Testing on *Skeletonema costatum* (ISO 10253:2016, Marine algal growth inhibition test with *Skeletonema sp.* and *Phaeodactylum tricornutum*) adapted to the Black Sea conditions	Quarterly	From effluent, before mixing with cooling water
Effluent (water produced) resulted from operation and maintenance	% mortality of *Acartia tonsa*	0 (4)	Testing on *Acartia tonsa* (*ISO 14669:1999, Determination of acute lethal toxicity to marine copepods (Copepoda, Crustaceans) adapted to Black Sea conditions*		
Effluent (water produced) resulted from operation and maintenance	% mortality of *Chelon auratus*	0 (4)	Testing on Chelon auratus (OCSPP 850.1075, Acute Toxicity Test of Freshwater and Saltwater Fish) Adapted to Black Sea Conditions		

(4) **Preliminary** maximum permissible values proposed on the basis of acute toxicity tests (INCDMs) to be validated by chronic toxicity tests and for which it must be demonstrated that they ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to achieve the environmental objectives set by the Marine Strategy Framework Directive (2008/56/EC).

Proposed monitoring programme for monitoring the quality of the Black Sea water before, during and after the execution of the works provided for by the project

Table 4

Monitoring proposed	Parameters proposed to be monitored	Receiver monitoring location	Sampling frequency
Quality of sea water	**Physicochemical parameters:** Temperature (T), salinity (S), pH, Dissolved Oxygen, Oxidability, Conductivity, Total Suspended Solids (TSS), Heavy Metals (Cu, Cd, Cr, Ni, Pb, Ba), Total Petroleum Hydrocarbons (TPH) and Polycyclic Aromatic Hydrocarbons (PAH) **Biological parameters:** Chlorophyll a, Phytoplankton, Zooplankton	The exit point of the microtunnel located in the coastal waters of the Black Sea	**Before the construction period**: baseline – a sampling campaign **During the construction period**: monthly **After the completion of the construction period**: a sampling campaign
		Sampling points from the Black Sea located along the route of the gas production pipeline	**Before the construction period**: baseline – a sampling campaign **During the construction period**: quarterly **After the completion of the**

Monitoring proposed	Parameters proposed to be monitored	Receiver monitoring location	Sampling frequency
			construction period: a sampling campaign
		Sampling points in the Black Sea located along the routes of supply/adduction pipelines and umbilical systems	**Before the construction period**: baseline – a sampling campaign **During the construction period**: quarterly **After the completion of the construction period**: a sampling campaign
		4 sampling points from the Black Sea located to the North, East, South and West of the Marine Production Platform	**Before the construction period**: baseline – a sampling campaign **During the construction period**: quarterly **After the completion of the construction period**: a sampling campaign
		4 sampling points from the Black Sea located to the North, East, South and West of the Drilling Centre DODC1	**Before the drilling and installation periods:** baseline – a sampling campaign **During drilling and installation periods:** quarterly **After the completion of the drilling and installation periods:** a sampling campaign
		4 sampling points from the Black Sea located to the North, East, South and West of the Drilling Centre DODC2	**Before the drilling and installation periods:** baseline – a sampling campaign **During drilling and installation periods:** quarterly **After the completion of the drilling and installation periods:** a sampling campaign
		4 sampling points from the Black Sea located to the North, East, South and West of the Drilling Centre PSDC1	**Before the drilling and installation periods:** baseline – a sampling campaign **During drilling and installation periods:** quarterly **After the completion of the drilling and installation periods:** a sampling campaign

-all the necessary permits and authorizations according to the law will be requested and obtained before the start of works
- The values of the quality indicators of the effluents discharged into the Black Sea during the execution of the works will comply with the maximum permissible values according to the provisions of GD No. 188/2002 for the approval of some norms concerning the conditions of discharge into the aquatic environment of wastewater, with subsequent amendments and completions, NTPA 001, those of the MARPOL Convention.
- The monitoring data on the quality of the effluent discharged into the Black Sea (according to Tables 1, 2 and 3) and those on the quality of the Black Sea water before, during and after the execution of the works provided by the project (according to Table 4) will be sent every six months to the Dobrogea – Litoral Water Basin Administration.
- The beneficiary will provide proof of the collection, transport to shore and treatment of the effluent resulting from the starting/restarting of the wells, at the commissioning phase of the investment.
- The beneficiary and the designer will closely follow the execution of the works provided in the

technical documentation of substantiation, the beneficiary having the obligation to announce any change compared to the provisions of this permit, one week before its production.
- The contractor will establish safety measures against all risk factors. It will act to prevent all accidents, complying with the provisions of the emergency plan in case of oil pollution, according to the provisions of MARPOL 73/78.
- During the execution of the works, it should not affect the quality of groundwater and water of the Black Sea. Any discharge of untreated wastewater into surface and groundwater, as well as on the beach, is prohibited. The solution of underground discharge of treated wastewater is not allowed.
- The drainable wastewater collection tanks will be made in such a way that they are waterproof to prevent any form of groundwater pollution.
- In case of accidental pollution, the entire responsibility in terms of depollution of the area and bearing any costs lies with the beneficiary and the contractor.
- During the execution of the works, it should not affect the stability of the cliff and the quality of the sand of the Black Sea beach.
-The works of undercrossing the Black Sea beach and the bathing area will not be carried out during the summer season so as not to affect their tourist and leisure potential.
- The land will be brought back to its original state after the installation of the pipe and the communication cable.
-At the end of the works, the areas adjacent to the microtunnel affected by the works will be returned to their initial state. An initial topographic survey will be made that will be compared with the final topographic survey.
- The restoration works of the coastal facilities are the responsibility of the beneficiary and the executor.
-The beneficiary will submit, 10 days before the start of the activity, to the National Administration of Romanian Waters – Dobrogea - Litoral Water Basin Administration, the schedule for carrying out the works.
- To install devices for measuring the flows and volumes of water captured and discharged from/into the Black Sea, according to art. 59 of the Water Law No. 107/1996 as further amended and supplemented;
-It is forbidden to destroy or damage the units and installations of the national network of observations, landmarks, hydrometric markers or other technical or topographical signs, hydrogeological drilling, automatic water quality determination stations and the like.
- To allow the access of the water management personnel to the premises of the objective, in order to fulfill the control attributions, according to the provisions of the Water Law No. 107/1996, as further amended and supplemented.
-For crossing the beach and the territorial sea with pipes, tariffs are charged for the use of the public domain under the administration of the National Administration "Apele Romane", according to GEO No. 52/2023.
The water management permit maintains its validity throughout the duration of the works, if their execution has started within 24 months from the date of its issuance and if the provisions included in the notice have been complied with, otherwise the permit loses its validity, unless the project holds a valid building permit.

If, during the course of the investment, there are changes in the data that were the basis for the issuance of this permit, an amending water management permit will be requested, according to the provisions of Order of the Ministry of Water and Forests No. 828/04.07.2019 concerning the approval of the Procedure and competences for issuing, modifying, withdrawing the water

management permit, including the procedure for assessing the impact on water bodies, the approval of the Normative for the content of the technical documentation subject to approval, as well as the Framework Content of the Impact Assessment Study on water bodies.

After the completion of the investment, the beneficiary has the obligation to apply for and obtain a water management authorization, based on a substantiating technical documentation prepared in compliance with the provisions of the Order of the Ministry of Water and Forests No. 891/23.07.2019 on the approval of the Procedure and competences for issuing, modifying, withdrawing the water management authorization, as well as the Normative for the content of the technical documentation subject to authorization.

Failure to comply with the provisions of this permit entails administrative liability, as the case may be, as well as civil or criminal liability, according to the provisions of Water Law No. 107/1996, as further amended and supplemented.

The technical substantiation documentation, checked for non-changing by the authority for water management, is part of this water management permit.

Throughout the validity of the water management permit, the beneficiary will develop and submit to ABADL the eco-toxicity study by performing chronic toxicity tests, for all chemical substances that will be discharged into the sea, including biocide and methanol, through which they validate / demonstrate that the maximum permissible limit values established at discharge in the marine environment at the level of each chemical substance ensure the protection of the marine environment, has a low impact on the marine aquatic ecosystem and does not lead to the failure to achieve the environmental objectives set by the Marine Strategy Framework Directive (2008/56/EC).
In the event that the chronic toxicity study will highlight negative effects on the biological components of the marine environment, the beneficiary will have the obligation to adapt/ reconsider the substances used.

<u>Conditions imposed by the Bulgarian Party</u>

In order to limit the environmental impact and minimise the likelihood of a transboundary health risk, in particular related to chemical contamination and deterioration of bathing water quality on the Bulgarian coast, in particular in case of emergency and possible exposure to harmful chemicals, the following mandatory conditions will be observed:

a)

If an imminent threat to the environment is identified or if the environmental damage is caused on the territory of the Republic of Bulgaria by activities carried out within the Neptun Deep project for the extraction of natural gas from the Black Sea, carried out in the exclusive economic zone of Romania, the competent authority of Romania designated in compliance with Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage

shall provide the Ministry of Environment and Water of the Republic of Bulgaria with information on the imminent threat to the environment or damage to the environment (location; the area and type of environmental damage or imminent threat; the causes of the imminent threat or damage to the environment; the expected consequences of the environmental damage; recommendations on preventive or remedial measures; preventive or remedial measures taken; Other circumstances and information related to the damage caused or actions taken to prevent environmental damage), as well as information on Romania's relevant national procedures.

b) In order to comply with the provisions of Chapter VIII Transboundary Impact of Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on the safety of offshore oil and gas operations and amending Directive 2004/35/EC, transposed into national legislation by Law No. 165/2016 *on safety of offshore oil operations,* as further amended and supplemented, when the circumstances described in the provisions of the Directive are present, the holder shall make available to the Competent Authority for the Regulation of Offshore Operations in the Black Sea complete relevant information in order to inform the Republic of Bulgaria in an appropriate time to facilitate the identification of the necessary measures to be addressed by the Bulgarian authorities.

c) Prior to the implementation of the project, the Republic of Bulgaria will be provided with the disaster and emergency plans of all contractors involved in the off-shore part of the project that will transport or work with reagents, drilling solutions and marine fuel included in the technology. The plans will include a detailed description of the specific measures and preventive actions in emergencies and disasters, as well as the division of tasks, the structures responsible and the legal entities responsible for implementing the safety measures provided.

d) In order to monitor the potential impact of the project implementation on the marine waters of the Republic of Bulgaria through relevant monitoring, it is necessary to notify the Ministry of Environment and Water of the Republic of Bulgaria/Basin Directorate for Water Management "Black Sea Region" – Varna about the start and duration of drilling activities and construction of the associated infrastructure.

e) To monitor the potential impact of the project on the state of the marine waters and bathing areas of the Republic of Bulgaria:

- it is necessary to provide a procedure whereby the Republic of Bulgaria will regularly receive from the Romanian authorities the results of the planned periodic monitoring of seawater quality in the area of drilling platforms during the drilling, construction and operation of the project;
- The Republic of Bulgaria will be informed in a timely manner of any accident or incident/contamination during the drilling, construction and operation of the technical installation that has the potential to contaminate marine waters.

2. During exploitation:

The following normative acts must be observed:

- G.E.O. No. 195/2005 on environmental protection approved by Law No. 265/2006, as further amended and supplemented;
- STAS 12574/1987 on air quality conditions in protected areas;

- Law No.104/2011 on ambient air quality, with subsequent amendments and completions and Ordinance No.462/1993 for the approval of the Technical Conditions for the protection of the atmosphere and the Methodological Norms for determining the emissions of atmospheric pollutants produced by stationary sources;
- MAPPM Order No.756/1997 for the approval of the Regulation on the assessment of environmental pollution, as further amended and supplemented;
- Water Law No. 107/1996, as further amended and supplemented;
- G.D. No. 352/2005 concerning the amendment and supplementation of G.D. No. 188/2002 for the approval of the norms concerning the conditions of discharge of wastewater into the aquatic environment;
- GEO No. 92/2021 on the waste regime, approved with amendments by Law No. 17/2023;
- Law No. 249/2015 on the management of packaging and packaging waste and Ordinance No. 794/2012 on the reporting procedure;
- G.E.O. No. 196/2005 – on the Environmental Fund approved by Law No. 105/2006;
- G.D. No.878/2005 – on public access to environmental information, as further amended and supplemented;
- Government Emergency Ordinance No. 68/2007 on environmental liability with reference to the prevention and repair of environmental damage, approved by Law No. 19/2008, as further amended and supplemented;
- SR 10009/2017 – Acoustics. Permissible limits of noise level in ambiental environment;
- Order of the Minister of Health No. 119/2014 – hygiene norms and recommendations concerning the living environment of the population;
- GEO 57/2007 concerning the regime of protected natural areas, conservation of natural habitats, wild flora and fauna, as further amended and supplemented;
- G.D. No. 323 of March 31, 2010 on the establishment of the monitoring system for accidental captures and killings of all bird species, as well as of the strictly protected species provided in annexes No. 4A and 4B to Government Emergency Ordinance No. 57/2007 on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna.
- Management Plan of the protected natural area ROSAC0273 the Marine Area of Cape Tuzla, approved by MMAP Order No. 1433/2016.
- Management Plan of the Black Sea ROSPA0076 Protected Natural Area, approved by MMAP Order No. 1197/2016.
- Decision No.195/23.03.2023 on the revision of the Methodological Norms for the implementation of the conservation objectives provided in Annex No.1 to OMMAP No.1197/2016 on the approval of the Management Plan and Regulation of the Natura 2000 site ROSPA0076 the Black Sea
- Decision No. 490/06.01.2021 on the approval of the Methodological Norms on the implementation of the conservation objectives in the Annex to Order No. 1433/2016 on the approval of the Management Plan and the Regulation of the Natura 2000 site ROSCI0273 the Cape Tuzla Marine Area.
-
- Note No. 1827/BT/377/21.01.2022 on the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in ROSCI0311 Viteaz Canyon.
- Note No. 1827/BT/375/21.01.2022 on the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, wild flora and fauna, population safety and investments in ROSCI0293 Costinești – 23 August.

- G.D. No. 685/2022 on the establishment of the protected natural area regime and the declaration of special conservation areas as an integral part of the European ecological network Natura 2000 in Romania Art.2, letter (2).
- Favorable Permit with conditions issued by ANANP/ST Constanta No. 288/ST CT/27.06.2024.

3. During shutdown, demolition, decommissioning, restoration of environment and post-shutdown

3.1 Necessary conditions to be fulfilled at shutdown/demolition/ Decommissioning;

Decommissioning works at the end of operation period of the project

After the cessation of production, the Neptun Alpha offshore installations will be decommissioned, cleaned and secured to allow safe removal. This will include the securing of all systems, as well as the necessary preparations to facilitate the removal of installations in compliance with the legislation applicable from that date.

a) Safe removal of facilities and offshore pipelines

The activities related to this phase consist of:

- Emptying, washing, purging and aeration operations of all platform installations.
- Technical deactivation, including: physical isolation, energization, ventilation and emptying of all platform installations.
- Cleaning all production systems.
- Cleaning of Domino and Pelican mixed pipelines as well as GPP using a combination of platform-mounted equipment and subsea equipment.
- Waste collection

b) Abandonment of production wells

At the end of production, the 10 wells will be made safe and permanently abandoned based on documentation prepared and approved by NAMR experts and in compliance with all legal norms for this type of activity. The equipment at the bottom of the well hole is not recoverable, it is cemented into the well as part of the abandonment procedure. The deposit was isolated by a series of mechanical barriers and cement plugs in the borehole. Abandonment operations are estimated to last 30 days for each well.

The abandonment work schedule for out-of-production wells generally consists of the following works:

-
- Well decommissioning and installation of two independent mechanical barriers in the lower and upper equipment area
- Well head recovery
- Installation of underwater riser and BOP (eruption preventer)
- Recovery of equipment from the upper area of the well hole and filling the well with brine;

- Cutting and recovery of the tubing in the upper sections.
- A 50-metre cement plug is made above the lower fitting barrier inside the 9 5/8" column (or 10 3/4" in the case of the IWC shaft) and the integrity of the leak will be confirmed
- Cutting and recovery of 9 5/8" (or 10 3/4" in the case of IWC well) and 13 3/8" columns
- Making an additional 100-foot cement plug inside the 20-inch column at the cutting point and confirming the integrity
- Making an additional 50-meter cement plug inside the 20-inch column, 50 meters below sea level and confirming the integrity
- Recovery of the BOP underwater assembly
- Cutting the 22" x 20" surface column below the 36" conductor level
- Conductor and well head recovery
- Evaluation of the seabed in the area of the abandoned well with the help of an ROV

c) Preparation of the upper structure of the platform for demounting

Preparation of areas includes the following activities:

- Preparing the upper superstructure for its separation from the jacket, by lifting it with the help of a very heavy crane;
- Temporary establishment of utilities, such as electricity and water supply, after the end of production;
- Separating the caisson from the superstructure and fixing it in order to remove the jacket;
- Separating the J-tube and the riser pipe from the superstructure and fixing them in order to remove the jacket;
- Separating or cutting flexible mixing pipes, umbilical pipes and fiber optic cables on the superstructure, using temporary towing cables;
- Preparation for the separation of the support arm of the Flare systems

d) Dismantling the superstructure

The dismantling of superstructures includes final preparation for removal, ship operations and shore transport, support structures, fixing for sea transport, loading and actual transport. Dismantling activities include:

- Decommissioning of the flare system using the HLV crane vessel and placing it on the HLV;
- The superstructure is removed by means of a single lifting operation with a heavy crane.
- The superstructure will be placed on a heavy transport barge for transport to the dismantling site;

- The location of the site will be determined according to the capacity available at the time of dismantling.

e) Dismantling the sub-structure (jacket)

The dismantling of the substructure includes final preparation for removal, ship operations and shore transport, securing for sea transport, loading and actual transport. Dismantling activities include:

- Cutting the jacket into 5 sections. The platform leg fixing piles will be cut through the inside about 5m below sea level;
- Loading the cut sections onto barges and securing the loaded items for safe transport to shore and actual transport.

f) Onshore recycling of superstructure and substructure of the platform

The dismantling and recycling activities include:

- Unloading from barges of elements transported to shore;
- Dismantling the superstructure and substructure into smaller components;
- Cleaning and managing any resulting waste;
- Reuse/recycling of all recovered materials.

g) Underwater infrastructure

It involves the preparation and removal, or partial removal of subsea infrastructure includes collectors, SSIV skids, support structures, spools, pipelines, fibre optic cables, umbilicals, subsea protection structures, etc., including transportation and disposal to shore. The main activities are as follows:

- All pipes are cleaned using a combination of platform-mounted and underwater equipment; Pumping from the platform is carried out with temporary pumping equipment installed as part of the securing activities.
- Submarine pipelines, umbilical systems and fiber optic cables that are buried will be left in-situ, cut at both ends and covered with stones, and the recovered sections will be transported to shore. Flexible pipes, umbilical systems, pipelines and sections of fibre optic cable that are not buried will be recovered.
- Submarine pipeline spools and jumpers are cut and raised, their recycling being done on shore.
- All submarine structures, including manifolds, SSIV skids, go-devil launchers/receivers, SDU units, protective covers, support structures, etc. are lifted from the seabed and transported to shore for proper recycling or disposal.
- Support structures and protective frames are also recovered from the seabed and transported to shore for proper recycling or disposal.

h) Onshore facilities

After production ceases, shoreline facilities will also be decommissioned, including:

- Natural gas regulation - metering station (SRM).
- The pigging system.
- Central Control Room (CCR).
- 30" gas import pipe (shore section).
- Fibre optic cable (shore section).

i) Securing onshore facilities and pipelines

After production ceases, land-based facilities will be cleaned and secured to allow for demolition. This will include de-pressurization, de-energization/isolation, and system cleaning. We mention that the equipment associated with Transgaz systems is not part of the scope of the OMVP works, as they are decommissioned separately by Transgaz. The key activities are:

- Emptying, cleaning, purging operations of all systems
- Physical isolation, de-energization, ventilation, and emptying of all systems
- Pipe cleaning of the entire system and nitrogen inerting
- Isolation and de-energization of all utilities (including valve stations), electrical equipment and sub-stations.

j) Demolition of equipment and process pipelines above the soil

It includes the activities necessary to demolish all pipes, process plants, equipment and vessels at ground level in preparation for removal from the site and covers:

- Demolition of pipes, support structures, vessels and equipment using crawler excavators equipped with mechanical shears.
- Demolition of all pipes at valve stations using crawler excavators equipped with mechanical shears.
- Insulation and removal of electrical and instrumentation elements.
- Processing of all pipes and support structures for scrap metal recycling.
- Disconnecting and removing valves and loading them into trucks for transport to recycling centers.
- Separation, loading and removal of debris in trucks for transport to recycling centers.

k) Demolition of underground equipment and pipelines

This includes the activities necessary for the decommissioning of the onshore pipeline section, pipeline crossings and micro-tunnels installed below ground level:

- Buried pipe sections will be left in the ground, after being cleaned and purged with nitrogen

• Pipeline crossings will be exposed on each side of the crossing, cut and filled with mortar to avoid collapse and subsidence in the future

• The micro-tunnel inlet shaft will be exposed, the pipe section and fiber optic cable will be filled with mortar from the micro-tunnel outlet location to the entry point

• Excavations will be filled with filler material

l) Buildings (including light dismantling)

The activities for the easy dismantling and demolition of buildings down to ground level in preparation for removal from the Location are:

- Easy dismantling of office buildings to remove valuable items, including furniture, equipment, fixtures, electrical and electronic equipment, cables, suspended ceilings, fluorescent tubes, etc.
- Demolition of office buildings using crawler excavators equipped with mechanical scissors.
- Demolition of warehouse buildings
- Demolition of simple buildings (storage rooms, sub-stations, etc.).
- All bricks, masonry, concrete blocks, concrete floors are loaded and sent to the crushers on the Location.
- Separation and loading of debris in the trucks.

m) Disposal of equipment

This includes activities involved in the reduction, recycling and final disposal of large processing equipment:

• Dismantling of installations, equipment, cutting into pieces of manoeuvrable dimensions, lifting with the help of cranes and loading them into trucks for their transport to recycling centers or final disposal.

• Demolition of the ventilation chimney, cutting, preparation for loading into trucks.

n) Land works

This includes the activities involved in the excavation of the site areas (concrete, asphalt, paved areas, etc.), the loading of all materials from the site to the truck transport until the final restoration and disposal.

- Excavation, cutting, injection, sealing and filling of pipe ends at valve stations, purge stations and collection vessels, including the removal of cathodic protection probes.
- Excavation of reinforced concrete slabs and underground utilities under process equipment, including crushing and separation of rebar, preparation for removal from the construction site
- Excavation of asphalt and paved areas, preparation for removal from the construction site.
- Loading all scrap (steel, metals, rebar, concrete, asphalt, etc.) for truck transport.
- Removal of fences.

3.2. Conditions for the restoration of the initial state/rehabilitation for the subsequent use of Land;

All work associated with soil remediation including soil removal and/or treatment, clean filling, leveling and restoring soil to its original state.

The conditions and measures during the Decommissioning period are presented in chapter III

3.3. Conditions set out in the Water Management Permit: not provided.

V. INFORMATION ON THE CONSULTATION PROCESS OF THE AUTHORITIES WITH RESPONSIBILITIES IN THE FIELD OF ENVIRONMENTAL PROTECTION (PARTICIPANTS IN THE TECHNICAL ANALYSIS COMMISSIONS)

The authorities with responsibilities in the field of environmental protection were consulted and expressed their point of view during the meetings of the Technical Analysis Commission (CAT) on: 16.02.2022 – screening stage, 14.06.2023 – screening stage, transmission of guidance proposals to CAT members, 12.06.2024 – quality analysis stage of the environmental impact report and the appropriate assessment study, 14.06.2024 - stage of analysis of the quality of the environmental impact report, of the appropriate assessment study and the final decision to issue the environmental agreement, 27.06.2024 – stage of analysis of the comments made by the interested public.

VI. INFORMATION ON THE PROCESS OF PUBLIC PARTICIPATION IN THE DEPLOYED PROCEDURE:

The public was informed at all stages of the procedure carried out through announcements on the APM website and in local newspapers:

- submission of the application for the environmental agreement – in the newspaper Cuget Liber – 13.12.2021, posting on the website of Local Environmental Protection Agency Constanța – 25.05.2021 – the announcement concerning the submission of the application for the environmental agreement;
- posting on the website of Local Environmental Protection Agency Constanța of the presentation memorandum – 26.05.2023;
- announcement concerning the decision of the screening stage - Cuget Liber newspaper – 21.06.2023; display on the Local Environmental Protection Agency Constanța website – 23.06.2023 – announcement concerning the decision of the screening stage and the screening stage decision project;
  - posting on the Local Environmental Protection Agency Constanța website the guide with the specific problems that will be analyzed in the environmental impact report and in the appropriate assessment study, on 11.08.2023;
  - announcement concerning the submission of the environmental impact report and the appropriate assessment study and the organization of the public debate on 09.01.2024 – Cuget Liber newspaper – 24.11.2024; posting on the Local Environmental Protection Agency Constanța website – 27.11.2024 – the announcement concerning the submission of the environmental impact report and the appropriate assessment study and the organization of the public debate;

- - posting on the website of Local Environmental Protection Agency Constanța - 08.02.2024 - the Form for the presentation of solutions to solve the problems reported by the interested public during the public debate on 09.01.2024;
- posting on the Local Environmental Protection Agency Constanța – 13.06.2024 – the clarifications to the Environmental Impact Report and the additions and clarifications to the Adequate Assessment Study requested in the CAT meeting on 12.06.2024;
- posting on the Local Environmental Protection Agency Constanța website the final decision on the issuance of the environmental agreement – 14.06.2024;
- public announcement concerning the issuance of the environmental agreement in the newspaper Libertatea – 15.06.2024;
- posting on the Local Environmental Protection Agency Constanța website the public announcement for the issuance of the environmental agreement and the draft environmental agreement, on 17.06.2024;
- The environmental impact report and the appropriate assessment study were prepared by: BLUMENFIELD S.R.L., a developer registered in the Register of certified experts for the elaboration of environmental studies, as a MAIN EXPERT, according to the certificate series RGX No. 2182/18.05.2022) and posted on the Local Environmental Protection Agency Constanța website for consultation;
- The interested public in Romania was able to express their opinions during the public debate meeting on 09.01.2024;

The documentation that was the basis for the issuance of the environmental agreement contains:
- request No. 8923/11.05.2021;
-Notification;
- Presentation memorandum;
- Public announcements;
- The Environmental Impact Report and the Appropriate Assessment Study and the clarifications/additions, submitted subsequently.
- Study on the impact on the health of the population;
- Proof of payment of tariffs;

Permits, documents issued by other authorities:
- Urban Planning Certificate No. 85/29.04.2021, issued by the Constanta County Council;
- ANANP Permit No. 288/ST CT of 27.06.2024;
- Water management permit issued by ABADL No. 48/17.06.2024;
- Order of the Ministry of Culture No. 3089 of 09.06.2023, concerning the partial declassification from the List of Historical Monuments of the Historical Monument-Underwater Archaeological Site code LMI CT – l-s-A-02561;
- Notification-Specialized Assistance in Public Health, No. IMA 17958 R/07.11.2023, issued by DSP Constanta.;
- Situation plan;
- Zoning plan;

VII. CONCLUSIONS OF CROSSBORDER CONSULTATIONS

1. On the basis of Article 3 of the Espoo Convention on Environmental Impact Assessment in a Transboundary Context, Romania notified Bulgaria of this project by Notice No. DGEICPSC/107903/27.06.2023.

2. The Bulgarian Ministry of Environment and Water has responded to the notification received from Romania through letter No. 99-00-200/07.08.2023, stating that Bulgaria will participate in the environmental impact assessment procedure in a transboundary context for this project.
3.The decision was taken following the analysis of the notification form and the presentation memorandum by both the competent authorities of Bulgaria and the public.
4. By letter No. DGEICPSC/108472/24.11.2023, Romania submitted to the Bulgarian side the environmental impact report and the appropriate assessment study prepared for the project, followed by an exchange of information between the central public authorities for environmental protection of the two states.

5. The public consultation was ensured by the publication of the above-mentioned letters and documents (notification, presentation memorandum, environmental impact report and appropriate assessment study) on the official website of the Bulgarian Ministry of Environment and Water at the following links:

- The English version of the official website, Preventive actions/EIA/Cross-border EIA procedures/Cross-border EIA procedures in which Bulgaria is an affected party/Neptun Deep project for the extraction of natural gas on the territory of Romania https://www.moew.government.bg/en/prevention/eia/transboundary-eia-procedures /transboundary-eia-procedures-in-which-bulgaria-is-affected-country/
- the Bulgarian language version of the official website,
  - Preventive actions/EIA/Cross-border EIA procedures/Cross-border EIA procedures in which Bulgaria is an affected party/Neptun Deep project for natural gas extraction on the territory of Romania https://www.moew.government.bg/bg/proekt-neptun-dijp-za-dobiv-na-priroden-gaz-na-teritoriyata-na-rumuniya/
  - Preventive Actions/EIA/Public Access to EIA Reports section https://www.moew.government.bg/bg/obstestveno-obsujdane-na-doklad-za-ovos-za-proekt-neptun-dijp-za-dobiv-na-priroden-gaz-v-cherno-more-na-teritoriyata-na-rumuniya/

6. At the request of the Bulgarian side, on 15.05.2024, in Kavarna, the public debate on the environmental impact report on Bulgarian territory took place.
The announcement on the organization of the debate, as well as the environmental impact report and its annexes were published on the website of the Kavarna City Hall https://www.kavarna.bg, in News & Announcements section. Also, the environmental impact report and its annexes were made available to the public at the office of the Kavarna City Hall.
The announcement was also published on the website of the Bulgarian Ministry of Environment and Water in the section Preventive actions/EIA/Cross-border EIA procedures/Cross-border EIA procedures in which Bulgaria is an affected party/Neptun Deep project for the extraction of natural gas on the territory of Romania and in the section Future public debates.
Last but not least, the announcement was published in the newspaper "24 Chasa".
The public debate was attended by both citizens residing in the potentially affected localities and representatives of environmental non-governmental organizations from the Romanian and Bulgarian territory.

In compliance with the provisions of the Bulgarian legislation, the form for the presentation of solutions to the problems reported by the interested public was published on the website of the Kavarna City Hall, at the link https://www.kavarna.bg/novini-aktualno-sybitiya/novini/3879-2024-05-28-06-41-52, to be consulted by the public for a period of 7 days.

7. By letter No. 99-00-200/10.06.2024, the Bulgarian side considers that Romania has fulfilled its obligations concerning the environmental impact assessment procedure in a transboundary context, carried out in compliance with the provisions of the Espoo Convention and consequently, Romania can continue the regulatory procedure at national level.

In the same letter, the Bulgarian side informed about the procedure of public consultation of the form for the presentation of solutions to the problems reported by the interested public. It was published on the website of the Kavarna City Hall, with the public having 7 days to comment (between 28.05.2024 and 04.06.2024).

During the above-mentioned period, no comments were recorded at the Kavarna City Hall. Also, during this period, no written comments were received at the headquarters of the Ministry of Environment and Water within the public consultation procedure of the form, nor any other proposals/recommendations/opinions or objections to the environmental impact report from the interested public and/or the competent authorities/institutions, other than those presented during the public consultation (the 30 days of consultation of the environmental impact report and the public debate meeting).

In view of these aspects and taking into account the fact that the public consultation did not highlight an alternative method of implementing the project, as well as the lack of new information based on expert opinions that differed from the information presented in the environmental impact report, the Bulgarian side agreed with the holder's conclusion concerning the quality of the environmental impact report, it is not necessary to organize a new debate.

VIII. THE ENVIRONMENTAL MONITORING PLAN, INDICATING THE ENVIRONMENTAL COMPONENTS TO BE MONITORED, THE PERIODICITY, THE PARAMETERS AND THE LOCATION CHOSEN FOR THE MONITORING OF EACH FACTOR:

Before the start of construction works both onshore and offshore, measurements, sampling and analysis of indicators will be carried out, in order to establish the reference status of the environment. At the same time, in the anchoring areas inside and outside the protected natural area ROSAC 0273, additional investigations will be carried out compared to those carried out before the elaboration of the appropriate assessment study, in order to identify all habitats, as well as the collection of data necessary for the optimization of the processes of execution of the works (anchor points, safety checks of operations).

The results of the analyses for those indicators that are not found in the reference norms with maximum permissible values, or whose values are usually found in the natural status, higher than the reference value established by normative acts, will be related to the value resulting from the determination of the reference status (e.g. Hg, or Pb in seawater).

The report on the baseline of environmental factors will be submitted to the competent authority for environmental protection.

1.During the execution:

Monitoring of environmental factors

To ensure that prevention/mitigation/reduction measures are implemented, a series of plans will be developed and implemented to include specific monitoring activities and benchmarks for compliance verification.
These plans will set out the modalities for the implementation of corrective actions to be applied as soon as possible when necessary.

Plans drawn up for all phase of the Neptun Deep project:

Name of plan	**Project stag**			
	Construction/ installation	**Drilling**	**Operation**	**Decommissioning**
Environmental Management and Monitoring Plan	√	√	√	√
Waste Management Plan	√	√	√	√
Wastewater Management Plan	√	√	√	√
Hydrotesting Water Management Plan	√			
Analysis of anchoring system (disruption of sedimentary substrate)	√			
Plan of underwater inspection (of sedimentary substrate)	√			
Accidental Pollution Preparedness and Response Plan	√	√	√	√
Emergencies Preparedness and Response Plan	√	√	√	√
Crisis Management Plan	√	√	√	√
Decommissioning and Abandonment Plan				√

The plans mentioned in the table above will include details of monitoring activities, such as frequency, monitoring and data recording modalities, and their implementation will be regularly audited to verify compliance.

Monitoring and audit requirements for all development stages of the project:

Monitoring/audit	**Project stages**			
	Construction/ installation	**Drilling**	**Operation**	**Decommissioning**
MODU Audit before mobilization		√		
Audit of support ships before mobilization	√	√	√	√
Monitoring the consumption of fuel	√	√	√	√
Soft-start protocol at beating of pillars	√			
Audit of sampling points for wastewater discharges from ships, water produced at sea.	√		√	
Monitoring the water quality parameters	√	√	√	√
Monitoring the soil quality parameters	√			√
Monitoring the sediment quality parameters	√	√	√	√
Monitoring the quality of air onshore	√		√	
Monitoring the level of acoustic pressure in onshore area	√			
Monitoring the biodiversity	√	√	√	√

Monitoring Programme for construction stage

Environmental factor	**Parameters proposed for monitoring**	**Measurement/ sampling (Number of stations)**	**Sampling/measurement Location**	**Frequency**
Air	PM10, PM2,5, PTS	Minimum 4 hourly measurements/ 1 campaign	Within the boundaries of the location of onshore work areas, in the direction of sensitive areas (housing)	Quarterly (for the whole work execution period)
	Sedimentable powders	Minimum 4 (sampling for 30 days)	Within the boundaries of the location of onshore work areas, in the direction of sensitive areas (housing)	Quarterly (for the whole work execution period)
Noise and vibrations	Ambient sound pressure level dB(A) and vibration	Minimum 4	Within the boundaries of the location of onshore work areas, in the direction of sensitive areas (housing)	Quarterly (for the whole work execution period)
Soil	HAP, THP, heavy metals	As applicable	Within the limits of the location of the onshore work areas, following the observations/reporting of accidental pollution incidents	In situations of accidental pollution with hydrocarbons, or dangerous chemicals
Household wastewater	pH, CCO-Cr; CBO5, MTS, extractables in Petroleum ether, Anionic surfactants	Minimum 1	Onshore site organization	At emptying
Sea water	pH, salinity, dissolved oxygen, oxidability, conductivity, total suspended solids, temperature, heavy metals (Barium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Zinc), PAH, TPH	Minimum 4/ work area; On the horizon of depth in the water column	The exit point of the microtunnel located in the coastal waters of the Black Sea	*Before the construction period:* **a sampling campaign**
				During the construction period: **monthly**
				*After the end of construction period***:** **One sampling campaign**
Sea water	Temperature (T), Salinity (S), pH, Dissolved Oxygen, Oxidability, Conductivity, Total	Minimum 4 samples	Black Sea sampling points located along the route of the gas production pipeline	*Before the construction period:* **One sampling campaign**
				During the construction period: **quarterly**

Environmental factor	**Parameters proposed for monitoring**	**Measurement/ sampling (Number of stations)**	**Sampling/measurement Location**	**Frequency**
	Suspended Solids (MTS), Heavy Metals (Cu, Cd, Cr, Ni, Pb, Ba, Zn, Hg), Total Petroleum Hydrocarbons (THP) and Polycyclic Aromatic Hydrocarbons (PAHs)			*After the completion of construction period:* **One sampling campaign**
Sea water	Temperature (T), Salinity (S), pH, Dissolved Oxygen, Oxidability, Conductivity, Total Suspended Solids (MTS), Heavy Metals (Cu, Cd, Cr, Ni, Pb, Ba, Zn, Hg), Total Petroleum Hydrocarbons (THP) and Polycyclic Aromatic Hydrocarbons (PAHs)	Minimum 4 samples	Sampling points in the Black Sea located along the routes of the supply/adduction pipes and umbilicals	*Before the construction period:* **One sampling campaign**
				During the construction period: **quarterly**
				After the completion of construction period: **One sampling campaign**
Sea water	Temperature (T), Salinity (S), pH, Dissolved Oxygen, Oxidability, Conductivity, Total Suspended Solids (MTS), Heavy Metals (Cu, Cd, Cr, Ni, Pb, Ba, Zn, Hg), Total Petroleum Hydrocarbons (THP) and Polycyclic Aromatic Hydrocarbons (PAHs)	4 samples	4 sampling points in the Black Sea located to the North, East, South and West of the Marine Production Platform	*Before the construction period:* **One sampling campaign**
				During the construction period: **quarterly**
				After the completion of construction period: **One sampling campaign**
Sea water	Temperature (T), Salinity (S), pH, Dissolved Oxygen, Oxidability, Conductivity, Total Suspended Solids (MTS), Heavy Metals (Cu, Cd, Cr, Ni, Pb, Ba, Zn, Hg), Total Petroleum Hydrocarbons (THP)	4 samples/ drilling centre	4 sampling points in the Black Sea located to the North, East, South and West from the drilling centres DODC1, DODC2, PSDC1	*Before the drilling and installation periods:* **one sampling campaign**
				During the drilling and installation periods: **quarterly**
				After the completion of drilling and installation periods: **one sampling campaign**

Environmental factor	**Parameters proposed for monitoring**	**Measurement/ sampling (Number of stations)**	**Sampling/measurement Location**	**Frequency**
	and Polycyclic Aromatic Hydrocarbons (PAHs)			*After the completion of drilling and installation periods:* **one sampling campaign**
Sediments	HAP, TPH, Heavy metals: Barium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Zinc	Minimum 4 samples/work area	Exit point of microtunnel located in the coastal waters of the Black Sea	*Before the construction period:* **a sampling campaign**
				During the construction period: **monthly**
				*After the end of construction period***:** **One sampling campaign**
Sediments	HAP, TPH Heavy metals: Barium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Zinc	Minimum 4 samples	Black Sea sampling points located along the route of the gas production pipeline	*Before the construction period:* **One sampling campaign**
				During the construction period: **quarterly**
				After the completion of construction period: **One sampling campaign**
Sediments	HAP, TPH Heavy metals: Barium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Zinc	Minimum 4 samples	Sampling points in the Black Sea located along the routes of the supply/adduction pipelines and umbilicals	*Before the construction period:* **One sampling campaign**
				During the construction period: **quarterly**
				After the completion of construction period: **One sampling campaign**
Sediments	HAP, TPH Heavy metals: Barium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Zinc	4 samples	4 sampling points from the Black Sea located to the North, East, South and West of the Marine Production Platform	*Before the construction period:* **One sampling campaign**
				During the construction period: **quarterly**
				After the completion of construction period: **One sampling campaign**
Sediments	HAP, TPH Heavy metals: Barium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Zinc	4 samples/drilling centre	4 sampling points in the Black Sea located to the North, East, South and West from the drilling centres DODC1,	*Before the drilling and installation periods:* **one sampling campaign**
				During the drilling and installation periods: **quarterly**

Environmental factor	**Parameters proposed for monitoring**	**Measurement/ sampling (Number of stations)**	**Sampling/measurement Location**	**Frequency**
			DODC2, PSDC1	*After the completion of drilling and installation periods:* **one sampling campaign**
Climate	NMCOV, NO_2, CO, NOx, SO_2 emissions	Calculation of emission factors	Monitoring of fuel consumption onshore/ offshore	Every year
Waste	Chronological records of amounts of waste generated;	-	Onshore/ Offshore	Every month

Biodiversity monitoring in the construction phase of the project is essential in terms of receptors sensitive to the effects of the activities carried out in this phase.

Monitoring of biodiversity in construction stage

Parameters proposed for monitoring	**Measurement/ Sampling (Number of stations)**	**Sampling/Measurement Location**	**Frequency**
Chlorophyll a Phytoplankton Zooplankton	Minimum 4/ work area; On the horizon of depth in the water column	Exit point of microtunnel located in the coastal waters of the Black Sea	*Before the construction period:* **One sampling campaign**
			During the construction period: **monthly**
			After the completion of construction period: **One sampling campaign**
	Minimum 4 samples	Black Sea sampling points located along the route of the gas production pipeline	*Before the construction period:* **One sampling campaign**
			During the construction period: **quarterly**
			After the completion of construction period: **One sampling campaign**
	Minimum 4 samples	Sampling points in the Black Sea located along the routes of the supply/adduction pipelines and umbilicals	*Before the construction period:* **One sampling campaign**
			During the construction period: **quarterly**
			After the completion of construction period: **One sampling campaign**
	4 samples	4 sampling points from the Black Sea located to the North, East, South and West of the Marine Production Platform	*Before the construction period:* **One sampling campaign**
			During the construction period: **quarterly**
			After the completion of construction period: **One sampling campaign**
	4 samples/ drilling center	4 sampling points in the Black Sea located to the North, East, South	*Before the drilling and installation periods:* **one sampling campaign**

Parameters proposed for monitoring	Measurement/ Sampling (Number of stations)	Sampling/Measurement Location	Frequency
		and West from the drilling centres DODC1, DODC2, PSDC1	*During the drilling and installation periods:* **quarterly**
			After the completion of drilling and installation periods: **one sampling campaign**
			After the completion of drilling and installation periods: **one sampling campaign**
Zoobentos	Minimum 4 samples	Exit point of microtunnel located in the coastal waters of the Black Sea	*Before the construction period:* **One sampling campaign**
			During the construction period: **monthly**
			After the completion of construction period: **One sampling campaign**

2. During operation:

2.1 Monitoring of technological processes during the operational period

In the operational phase of the project, a series of monitoring activities concern technological processes, both on the Neptun Alpha platform and at SRM, in order to achieve the environmental performance objectives.

Monitoring of technological parameters in the operational phase

Technological monitoring for maintenance of air quality indicators	
Neptun Alpha Platform	**SRM**
Gas pressure	Volumes of gas discharged through the dispersion chimney
Gas temperature	Gas pressure and temperature
Volumes of gas burned by open flame LP, HP	Diesel consumption - Working hours and monthly driving distances (for fuel consumption calculation)
Technological monitoring for maintaining marine water quality indicators on the Neptun Alpha Platform	
Volume of water produced	
Salinity of water produced	
Temperature of water produced	
Content of hydrocarbons in the discharged effluent	
Content of hydrocarbons from the effluent of the open water drainage system	
Volume of effluents discharged	
Free Chlorine Analyser for Monitoring and Compliance with NTPA-001 Limits	
Fluid level and consumption of production chemicals	
Injection rates for production chemicals	

2.2 Monitoring the effluent resulted from the production operations in the Neptun Deep project

Programme to monitor the impact of effluent on the marine environment during production operations within the Neptun Deep project[1]

Parameter monitored Quality Indicator	Units	Maximum permissible value (NTPA001 or maximum permissible limit set by regulatory acts	Analytical method (standard, if available)	Frequency	Sampling point in Neptun Alpha
Temperature	°C	35 (1)	Calibrated equipment	Quarterly	From effluent, from the point before discharge (NTPA Art.12.1)
pH	pH units	6.5 - 9 (1)	Potentiometric method (SR		
Suspended solids (MTS)	mg/ dm³	35.00	Gravimetric method (SR EN 872:2009) according to NTPA STAS 6953-81		
Biochemical oxygen consumption at 5 days (BOD5) (CBO5)	mgO_2/ dm³	25,0 (1)	SR EN 1899-2		
Chemical oxygen consumption - potassium dichromate method (CCO-Cr)	mgO_2/ dm³	125,0 (1)	SR ISO 6060-96		
Sulphides and hydrogen sulphide, S^{2-}	mg/dm³	0,5 (1)	SR ISO 10530-97, SR 7510-97		
$SO4^{2-}$	mg/dm³	1400-1700 (2)	STAS 8601-70 or calculated from salinity data*		
Mg^{2+}	mg/dm³	700-800 (2)	STAS 6674-77, SR ISO 7980-97, SR ISO 6059:2008 or calculated from salinity data*		
HPT (petroleum products)	mg/L	15 (3)	GC-FID (Determination of hydrocarbon index - SR EN ISO 9377-2) or According to NTPA SR 7877/1-95 - gravimetric, SR 7877/2-95 - spectrophotometric		
Free residual chlorine, Cl2	mg/ dm³	0,2 (1)	SR EN ISO 7393- 1:2002; SR EN ISO 7393-2:2002; SR EN ISO 7393-3:2002		
Cl-	mg/ dm³	9700-12000 (2)	SR ISO 9297:2001	Quarterly	From

[1] După INCDM -Studiu de Eco-toxicitate pentru documentația de mediu a proiectului Neptun Deep, 2023. Studiu care sta la baza emiterii Avizului de Gospodărire a Apelor.

Parameter monitored Quality Indicator	Units	Maximum permissible value (NTPA001 or maximum permissible limit set by regulatory acts	Analytical method (standard, if available)	Frequency	Sampling point in Neptun Alpha
Salinity	‰	17 -23 (2)	SR ISO 9297:2001 (Mohr Method) SR EN ISO 6332:1996/ C91:2006		effluent, from the point before discharge (NTPA Art.12.1)
Total ionic iron (Fe2+, Fe3+)	mg/ dm³	5.0 (1)	SR EN ISO 17294-2:2017 Inductive Coupled Plasma Mass Spectrometry (ICP-MS)		
Hg (Hg2+)	mg/ dm³	0.05 (1)			
Cu2+	mg/ dm³	0.1 (1)			
Cd2+	mg/ dm³	0.2 (1)			
Pb2+	mg/ dm³	0.2 (1)			
Ni2+	mg/ dm³	0.5 (1)			
Cr total	mg/ dm³	0.1 (1)			
Zn2+	mg/ dm³	0.5 (1)			
2-Butoxyethanol*	mg/L	4.27 (4)	Gas chromatographic method with flame ionization detector (GC_FID)		
Ethoxylated fatty acid (3EO)	mg/L	0.80 (4)	Gas chromatographic method with mass spectrometer detector (GC_MS)		
2-Mercaptoethanol*	mg/L	0.14 (4)	Liquid chromatographic method with mass spectrometer detector (LC-MS/MS)		
Fatty acids, C18-unsaturated, reaction products with acrylic acid and polyethylene polyamines	mg/L	1.35 (4)	Gas chromatographic method with mass spectrometer detector (GC_MS)		
Fatty acids, products of reaction with triethanolamine	mg/L	0.26 (4)			
Monoethylene glycol*	mg/L	1.62 (4)	Gas chromatographic method with flame ionization detector (GC_FID)		
L-aspartic acid, sodium salt of homopolymer in water	mg/L	0.60 (4)	Liquid chromatographic method with mass spectrometer detector (HPLC or LC/MS)		
Glycerine*	mg/L	0.90 (4)	Gas chromatographic method with flame ionization detector (GC_FID)		

(1) Maximal permissible values according to NTPA001
(2) Maximum permissible values proposed by INCDM Grigore Antipa based on natural background values
(3) Maximum permissible value according to the MARPOL International Convention
(4) Maximum permissible values proposed by INCDM Grigore Antipa for substances not found in NTPA001

Eco-toxicological monitoring of effluent effects – laboratory tests

Monitored parameter Quality Indicator	**Units**	**Maximal permissible value**	**Analytical method (standard, if available)**	**Frequency**	**Sampling**
Effluent (produced water) resulting from operation and maintenance	% growth inhibition of *Skeletonema costatum*	92 (5)	Test on *Skeletonema costatum* (ISO 10253:2016, Marine algal growth inhibition test with *Skeletonema sp.* and *Phaeodactylum tricornutum*) adapted to the conditions of the Black Sea	Quarterly	From effluent, before the mixing with cooling water
Effluent (produced water) resulting from operation and maintenance	% mortality of *Acartia tonsa*	0 (5)	Test on Acartia tonsa (ISO 14669:1999, Determination of acute lethal toxicity to marine copepods (Copepoda, Crustaceans) adapted to Black Sea conditions		
Effluent (produced water) resulting from operation and maintenance	% mortality of *Chelon auratus*	0 (5)	Test on Chelon auratus (OCSPP 850.1075, Acute toxicity test of freshwater and saltwater fish) adapted to Black Sea conditions		

(5) Preliminary maximal permissible values proposed based on acute toxicity tests (INCDM Grigore Antipa)

2.3 Monitoring the marine environment for evaluation of the impact on receptor areas during the operational period

Monitoring the quality of sea water during operational period

In order to assess the impact on seawater quality, in the operation phase we proposed to establish a network of 8 monitoring stations outside the safety zone of the Neptun Alpha Platform of 500m. Thus, 4 monitoring stations at a maximum distance of 600m from the platform in the area of each side, 4 monitoring stations at a maximum distance of 1300m from the platform.

The sampling of seawater will be done in the water column, at horizons between 0-10m, 10-30m, 30-50m, 50-80m, 80-100m, 100-120m.

A "box corer rosette niskin bottles" type of equipment with CTD (temperature, dissolved oxygen, salinity, conductivity sensor) will be used.

Programme for monitoring the seawater quality indicators

Monitored Parameter Quality Indicator	**Units**	**Analytical method (standard, if available)**	**Frequency**
Temperature	°C	Calibrated equipment (in situ)	Quarterly
Dissolved oxygen	mg O_2/dm³	Calibrated equipment (in situ)	
Salinity	PSU	Calibrated equipment (in situ)	

Monitored Parameter Quality Indicator	**Units**	**Analytical method (standard, if available)**	**Frequency**
Conductivity	µS/cm	Calibrated equipment (in situ)	
Turbidity	NTU	Calibrated equipment (in situ)	
pH	pH units	Calibrated equipment (in situ)	
Suspended solids (MTS)	mg/dm³	Gravimetric method (SR EN 872:2009) according to NTPA STAS 6953-81	
Free residual chlorine, Cl_2	mg/dm³	SR EN ISO 7393- 1:2002; SR EN ISO 7393-2:2002; SR EN ISO 7393-3:2002	
Cl-	mg/dm³	SR ISO 9297:2001	
HPT (petroleum products)	mg/dm³	GC-FID (Determination of hydrocarbon index– SR EN ISO 9377-2) or according to NTPA SR 7877/1-95 - gravimetric, SR 7877/2-95 - spectrophotometric	
Polycyclic Aromatic Hydrocarbons	mg/dm³		
Total ionic iron (Fe_2+, Fe_3+)	mg/dm³	SR EN ISO 17294-2:2017 Inductive Coupled Plasma Mass Spectrometry (ICP-MS)	
Hg (Hg2+)	mg/dm³		
Cu2+	mg/dm³		
Cd2+	mg/dm³		
Pb2+	mg/dm³		
Ni2+	mg/dm³		
Total Chromium	mg/dm³		
Zn_2+	mg/dm³		
As	mg/dm³		
Ba	mg/dm³		

Monitoring of sediment quality during operational period

The objective of monitoring the chemical parameters in the sediments is to record the potential changes in the quality of the sediments as a result of the sedimentation process of the substances contained in the effluent (produced water).
The network of stations for monitoring the quality of sediments will be similar to that for seawater.
The sampling will be done with a "corer" type equipment for taking samples undisturbed in the structure, on a depth of the sedimentary substrate 0-30cm.
Samples will be collected in sufficient quantity to ensure that all monitoring activities can be carried out and repeated if necessary. The method of collection, storage and handling must be recorded for all samples.

Sediment Monitoring Programme

Parameter	Standard analysis method	Frequency
Heavy metals: Al, As, Ba, Ca, Cu, Cr, Hg, Ni, Pb, Zn	SR EN ISO 17294-2:2017 Inductive Coupled Plasma Mass Spectrometry (ICP-MS)	Every year
Total PAHs TPH	SR EN 17503:2022 SR 13511:2007 Extraction method followed by gas chromatography	Every year
COT	SR EN ISO 15936:2002 Infrared spectrometry method	Every year

Monitoring habitats and biodiversity during the operational period

The major types of habitats in the water column and on the seabed will be monitored: phytoplankton, zooplankton, benthic communities – zoobenthos.
Biology samples will be taken from water and sediment quality monitoring stations, using net-type equipment for water column samples, and bodengrifer (Van Veen Grab) for zoobenthos.
Samples will be collected in sufficient quantity to ensure that all monitoring activities can be carried out and repeated if necessary. The method of collection, storage and handling must be recorded for all samples.

Programme for monitoring the impact of effluent on the marine environment during production operations within the Neptun Deep project

Theme	Elements of ecosystem	Parameters and possible characteristics	Frequency	Number of stations	Comments
Habitats and biodiversity	Major types of habitats in the water column (pelagic – phytoplankton and zooplankton) and on the seabed (benthic – zoobenthic)	For each habitat type:- composition, abundance and/or biomass of the species (spatial and temporal variation)- structure of the species according to size and age (if applicable)- for pelagic habitats: chlorophyll "a" concentration planktonic flowering frequency and spatial extent	Seasonal	Minimum 5 (of which 1 reference)	Samples from the water column from representative horizons (minimum 5) and sediment.

2.4 Monitoring air quality during operational period

During the operational period, for normal operating conditions, it is not considered necessary to monitor the air quality. The reporting of emissions will be determined by calculation based on the monitoring reports of the technological processes **(item 2.1**).

3. During shutdown, decommissioning, restoration of environment and post-shutdown:

Monitoring the environmental factors during Decommissioning period

The Decommissioning of the installations and facilities of the Neptun Deep project will be subject to a Decommissioning project, which will require the issuance of the environmental agreement, in compliance with the environmental legislation in force on that date.

The programme for monitoring environmental factors during the Decommissioning and post-Decommissioning period will be subject to documentation and studies for the issuance of the Environmental Agreement for demolition.

MONITORING THE MEASURES OF PREVENTION, AVOIDANCE AND MITIGATION OF IMPACT

The monitoring programme aims at highlighting the effectiveness of measures proposed for prevention and avoidance of impacts

Measure Monitoring Programme

ANPIC affected	Species/ habitat affected	Form of impact	Prevention/avoidance measure	Measure implementation period	Location of measure	Monitoring indicators	Measuring units	Monitoring frequency	Monitoring locations	Monitoring period	Effectiveness degree of measure	Estimated budget EUR	Monitoring Officer
ROSAC 0273 Cape Tuzla Marine Area	1170, 8330	Habitat alteration	MS 1	Construction stage	Barge anchoring points in ROSAC0273: T1.1, T1.5, T2.1, T2.5, T3.1, T3.5, T8.4	Real-time location of barge anchorage areas with GPS receivers.	m^2 (areas affected) Stereo 70 coordinates	For the whole barge anchoring period	Barge anchoring points in ROSAC0273: T1.1, T1.5, T2.1, T2.5, T3.1, T3.5, T8.4	For the whole barge anchoring period	High	-	Project Owner
Out of ANPIC	8330	Losses of habitation area out of ANPIC	MS 2, MS 3	Construction stage	Barge anchoring point out of ROSAC0273: T6.3	Presence/absence of types and subtypes of habitats of Community interest with high sensitivity (1170-2, 8330)	m^2	For the whole barge anchoring period	Barge anchoring points out of ROSAC0273	For the whole barge anchoring period	High	660.000	Project Owner
ROSAC 0273 Cape Tuzla Marine Area	1110, 1170, 8330	Habitat alteration	MS 4	Construction stage	Gas pipeline ditch	Confirmation of use around the working areas of turbidity curtains. Turbidity measurement	TSS/MTS (mg/dm^3)	Every week	8 locations on the probable direction of the sediment feather The points will be established, for each	5 months (which includes the entire period of digging and covering	High	350,000	Project Owner

ANPIC affected	Species/ habitat affected	Form of impact	Prevention/avoidance measure	Measure implementation period	Location of measure	Monitoring indicators	Measuring units	Monitoring frequency	Monitoring locations	Monitoring period	Effectiveness degree of measure	Estimated budget EUR	Monitoring Officer
						with a multiparameter probe.			displacement, depending on the probable direction of the sediment wedge and the area where the works are carried out, at the following distances from the excavation/dredging/covering activities of the transition trench and construction of the microtunnel: 50 m, 500 m, 1000 m, 2000 m.	the transition trench as well as one month before the start of the works and one month after the completion of the works in the pipeline area)			
ROSCI 0311 Viteaz Canyon	*Tursiops truncatus* and other species of Cetaceans	Accidental injuries or killings	MS 7	Construction stage	Neptun Alpha Platform (offshore)	Number of individuals affected (all species of Cetaceans)	Individuals belonging to the 3 species of sea mammals	Monitoring during jacket installation and fixation period	500 m around the location	During the period of installation of the pillars and at least 2 days in the post-execution period.	High	50,000	Project Owner
ROSCI 0311 Viteaz	*Tursiops truncatu*	Accidental injuries	MS 8	Construction stage	Neptun Alpha Platform	Number of individuals affected (all	Individuals belonging	Permanent monitoring during jacket	3 km around Neptun Alpha platform		High		Project Owner

ANPIC affected	Species/ habitat affected	Form of impact	Prevention/avoidance measure	Measure implementation period	Location of measure	Monitoring indicators	Measuring units	Monitoring frequency	Monitoring locations	Monitoring period	Effectiveness degree of measure	Estimated budget EUR	Monitoring Officer
Canyon	s and other species of cetaceans	or killings			(offshore)	species of cetaceans)	to the 3 species of sea mammals	installation and fixation period					
ROSCI 0311 Viteaz Canyon	*1170, 1180, Tursiops truncatus*	Disruption of species activity Habitat alteration	MS 9	Before the start of works in construction stage	Neptun Alpha Platform (offshore)	-	-	-	Tests in laboratory	About 2 years and 2 months	High	-	Project Owner

The project owner will submit a monitoring report on the implementation of the measures to prevent/avoid the impact on biodiversity, annually, until the end of January for the previous reporting year. The monitoring report will be accompanied by dated photos. The information will be presented both in the form of raw data (tabular) and in graphic form (representation on maps of all the collected data). Each set of data must be accompanied by the interpretation of the results, as well as qualitative and quantitative assessments of the trends recorded and the prospects for a change in the value of the indicators followed. Also, the monitoring reports will include quantitative and qualitative assessments on the effectiveness of the implemented measures.
The monitoring reports for all environmental factors, except biodiversity, specified above, will be made quarterly in the following stages: preliminary construction, construction, operation. The monitoring reports will be submitted to the Local Environmental Protection Agency Constanța in the month following the monitoring quarter.
The monitoring will be carried out for habitats, marine mammals, fish and birds for which the Natura 2000 sites have been declared: ROSAC 0273, ROSCI 0311, ROSPA 0076 and ROSCI 0293, according to the official monitoring guidelines at national level.
The biodiversity monitoring reports will be carried out annually in the following stages: pre-construction, construction, operation and will be submitted annually to the Local Environmental Protection Agency Constanța, until the end of January for the previous reporting year.

This document contains the following annexes:

Annex 1 – Lists of chemicals used in construction/operation
Annex 2 - Annex No.3C IMPACT ASSESSMENT TABLE according to Order No. 1682/2023, with subsequent amendments and completions - Impact analysis for each objective/parameter within the protected natural areas ROSAC0273 Cape Tuzla Marine Area, ROSCI0293 Costinești - 23 August, ROSPA0076 Black Sea and ROSCI0311 Viteaz Canyon located in the area of influence of the project - Format document.xls.
Annex 3 – Table Evaluation of residual impact

According to the provisions of art.12, para. (8) of Law No.292/2018 on the assessment of the impact of certain public and private projects on the environment, "The responsibility for the correctness of the information provided within the environmental impact assessment procedure belongs to the project owner, and the responsibility for the quality of the information/studies/reports provided for in para. (1) and (7) belongs to the certified experts".

Upon completion of the execution works, the project owner is required to notify the Local Environmental Protection Agency Constanța in order to verify compliance with all the conditions imposed by the environmental agreement, according to the provisions of Annex V - Environmental impact assessment procedure for certain public and private projects, art. 43, para. (3) and (4) of Law No. 292/2018 on the assessment of the impact of certain public and private projects on the environment.

This environmental agreement is valid for the entire period of implementation of the project, and in the event that new elements occur, unknown at the date of issuance of the agreement, or the conditions that were the basis for its issuance happen to change, the Project Owner has the obligation to notify the issuing competent authority.

Failure to comply with the provisions of this Agreement shall result in its suspension or cancellation, as the case may be.

This Agreement may be challenged in compliance with the provisions of Law No. 292/2018 on the assessment of the impact of certain public and private projects on the environment and Law on Administrative Contentious Matters No. 554/2004, as further amended and supplemented.

CHIEF EXECUTIVE OFFICER,
Celzin LATIF

HEAD OF A.A.A. DEPARTMENT,
Lavinia Monica ZECA

HEAD OF CFM DEPARTMENT
Simona CONSTANTIN

Drawn up by
Counsellor SAAA **Virginia MARIN**

Counsellor SCFM **Oana STANCOVICI-BIANU**

This agreement contains 196 pages and was drawn up in 3 (three) original copies.

Annex 1 to Environmental Agreement no.14/28.06.2024

1. List of chemical substances and preparations assessed to be used during the well drilling period

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
1	AVAGEL	Viscosifier - Bentonite	Used to increase the viscosity of the water-based drilling fluid	tons	2222	H350 - May cause cancer	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - If exposed: Call a POISON CENTER or doctor/physician P405 - Store locked up P501 - Dispose of contents/container to a licensed waste disposal collection site
2	Caustic soda	Alkalinity control agent for water-based drilling fluid	Used to increase the pH of the water-based drilling fluid in order to prevent bentonite flocculation	tons	**55**	H314 - Causes severe skin burns and eye damage	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower] P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
3	Soda Ash	Alkalinity control agent	Drilling fluid	tons	41.25	H319 - Causes serious eye irritation	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear eye protection/face protection equipment P337 + P313 - If eye irritation persists: Get medical advice/ attention P501-Dispose of contents/container to a licensed waste disposal collection site
4	STEARALL LQD	Antifoam agent	Used to prevent the formation of foam during the stirring of the water-based drilling fluid	tons	46.75	H317 - May cause an allergic skin reaction	P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective gloves P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							P501 - Dispose of contents/container to a licensed waste disposal collection site
5	BARITE	Weighting agent	Used to increase the density of non-aqueous drilling fluids and water-based drilling fluids	tons	50600	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
6	AVADEFOAM NS	Antifoam agent	Used to prevent the formation of foam during the stirring of the water-based drilling fluid	tons	44	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
7	NewZan™ D (Xanthan Gum)	Viscosifier Xanthan gum	Used to increase the viscosity of the water-based drilling fluid	tons	165	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
8	NewEdge™ (AVALIG NE)	Additive for fluid loss - Humalite	Used to reduce liquid loss from the water-based drilling fluid	tons	114.4	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
9	Calcium Chloride	Borehole stability control	Used to increase the salinity of the non-aqueous drilling fluid in order to reduce its reactiveness with shales	tons	6237	H319 - Causes serious eye irritation	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear eye protection/face protection equipment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/ attention P501 - Dispose of contents/container to a licensed waste disposal collection site
10	Calcium Chloride Brine	Borehole stability control	Used to increase the salinity of the non-aqueous drilling fluid in order to reduce its reactiveness with shales	tons	6237	H319 - Causes serious eye irritation	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear eye protection/face protection equipment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							P337 + P313 - If eye irritation persists: Get medical advice/ attention
11	DEG 327	Hydrate inhibitor	Prevents the formation of hydrates	tons	110	H302 - Harmful if swallowed	P261 - Avoid breathing dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P270 - Do not eat, drink or smoke when using this product P312 - Call a POISON CENTER or doctor/physician if you feel unwell P330 - Rinse mouth P501 - Dispose of contents/container to a licensed waste disposal collection site
12	AVAGLYCO	Shale inhibitor	Drilling fluid	tons	110	H318 - Causes serious eye damage	P280 - Wear eye protection/face protection equipment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
13	AVAGLYCO MP	Shale inhibitor	Drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
14	POTASSIUM IODIDE	Fluoroscien dye,	Drilling fluid	tons	11	H312 - Harmful in contact with skin H372 - Causes damage to organs through prolonged or repeated exposure if inhaled H412 - Harmful to aquatic life with long lasting effects	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P264 – Wash skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves and clothing P312 - Call a POISON CENTER or doctor/physician if you feel unwell P501 - Dispose of contents/container to a licensed waste disposal collection site
15	Sodium Chloride 98.5% (Sea Salt)	brine	Used to increase salinity of the completion fluid	tons	1100	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
16	Micromax®	Weighing material	Drilling fluid	tons	3850	H361: Suspected of damaging fertility or the unborn child.	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves/protective clothing/eye protection/face protection/face protection. P308+P313: IF exposed or concerned: Get

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							medical advice/ attention. P405: Store locked up. P501: Dispose of the contents/container in compliance with local/national regulations.
17	AVADES 100	H2S corrosion inhibitor	Used to decompose H2S molecules in the water-based drilling fluid	tons	22	H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H317 - May cause an allergic skin reaction H332 - Harmful if inhaled H341 - Suspected of causing genetic defects H350 - May cause cancer H373 - May cause damage to organs through prolonged or repeated exposure H411 - Toxic to aquatic life with long lasting effects	P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
18	AVAGUM	Guar gum	Used to increase viscosity of water-based drilling fluid	Guar gum	33	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
19	AVAWASH WBM	Casing string cleaning agent for water-based drilling fluid	Used to eliminate drilling mud from the casing string during well cleaning from water-based drilling fluid	tons	66	H302 - Harmful if swallowed H318 - Causes serious eye damage	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear eye protection/face protection equipment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P501 - Dispose of contents/container to a licensed waste disposal collection site
20	AVAGEL	Viscosifier - Bentonite	Used to increase the viscosity of the water-based drilling fluid	tons	110	H350 - May cause cancer	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - If exposed: Call a POISON CENTER or doctor/physician P405 - Store locked up P501 - Dispose of contents/container to a

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							licensed waste disposal collection site
21	Natrosol™ 250 HHRP Hydroxyethylcellulose ™	Viscosifier Hydroxyethylcellulose	Used to increase the viscosity of the water-based drilling fluid	tons	11	H319-Causes serious eye irritation.	Chemical product classified as non-hazardous.
22	Sodium Bicarbonate	Calcium removing agent	Used to eliminate calcium ions from water-based drilling fluid	tons	22	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
23	ESCAID™ 110	Basic hydrocarbons for NAF	Used for the continuous phase of nonaqueous drilling fluid	tons	5830	H304: May be fatal if swallowed and enters airways. EUH066: Repeated exposure may cause skin dryness or cracking.	P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting. Storing: P405: Store locked up. Disposal: P501: Dispose of the contents / container in compliance with local regulations.
24	EDC 95-11	Basic hydrocarbons for NAF	Used for the continuous phase of nonaqueous drilling fluid	tons	Same quantity as Escaid 110 if the decision is made to replace the basic hydrocarbon	H304 - May be fatal if swallowed and enters airways	P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331 - Do NOT induce vomiting.
25	EDC 99-DW	Basic hydrocarbons for NAF	Used for the continuous phase of nonaqueous drilling fluid	tons	Same quantity as Escaid 110 if the decision is made to replace the basic hydrocarbon	H304 - May be fatal if swallowed and enters airways	P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting
26	AVOIL PE-LT	Primary emulsifier for nonaqueous drilling fluid	Used for the nonaqueous drilling fluid – creates a stable emulsion between o basic hydrocarbons and brine	tons	165	H315 Causes skin irritation H317 - May cause an allergic skin reaction EUH208 - Contains (rosin; colophony). May cause an allergic reaction	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective gloves/protective clothing/eye protection/face protection P332 + P313 - If skin irritation occurs: Get medical advice/attention P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P501 - Dispose of the contents / container in compliance with local/regional/national and

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							international regulations, as appropriate.
27	AVOIL SE/LT	Secondary emulsifier for nonaqueous drilling fluid	Used for the nonaqueous drilling fluid – creates a stable emulsion between o basic hydrocarbons and brine	tons	176	H315 Causes skin irritation H317 - May cause an allergic skin reaction EUH208 - Contains colophony	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P273 - Avoid release to the environment P280 - Wear protective gloves P332 + P313 - If skin irritation occurs: Get medical advice/attention P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P501 - Dispose of the contents / container in compliance with local/regional/national and international regulations, as appropriate
28	AVOIL DW	Rheological additive	Used to control de viscosity of the nonaqueous drilling fluid	tons	66	H315 Causes skin irritation H319 - Causes serious eye irritation EUH208 - Contains Diethylenetriamine May cause an allergic reaction.	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear protective gloves and eye protection/face protection P302 + P352 - IF ON SKIN: Wash with soap and water P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
29	AVOIL FC	Fluid loss reducer	Used to reduce liquid loss in the nonaqueous drilling fluid	tons	231	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
30	AVOIL TN/LT	NAF Rheological additive	Drilling fluid	tons	22	H304 - May be fatal if swallowed and enters airways	P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting P405 - Store locked up P501 - Dispose of contents/container to a licensed waste disposal collection site
31	AVOIL FR-HT	NADF fluid loss reducer	Drilling fluid	tons	55	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
32	AVOIL WA-LT	NAF surfactant	Drilling fluid	tons	66	H315 Causes skin irritation H317 - May cause an allergic skin reaction	P261 - Avoid breathing dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							and wash it before reuse P501 - Dispose of the contents / container in compliance with local/regional/national and international regulations, as appropriate
33	AVOIL VS/LT	NAF Viscosifier Rheology	Drilling fluid	tons	66	H317 - May cause an allergic skin reaction	P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective gloves/protective clothing/eye protection/face protection P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P501 - Dispose of the contents / container in compliance with local/regional/national and international regulations, as appropriate
34	AVABENTOIL HY	High-efficiency viscosifier	Used to increase the viscosity of nonaqueous drilling fluid	tons	286	H350 - May cause cancer H372 - Causes damage to organs through prolonged or repeated exposure if inhaled	P201 - Obtain special instructions before use P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - If exposed: Call a POISON CENTER or doctor/physician P405 - Store locked up P501 - Dispose of contents/container to a licensed waste disposal collection site
35	OptiTrol™	NADF filter control agent	Used to reduce liquid loss in nonaqueous drilling fluid	tons	66	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
36	NDFT 305	NAF Viscosifier Rheology	Drilling mud	tons	66	H318 - H318 - Causes serious eye damage	P280 - Wear protective gloves and eye protection/face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
37	AVAWASH OBM	Low-toxicity casing string cleaning product	Used to remove drilling mud from the casing string during well cleaning from nonaqueous drilling fluid	tons	11	H304 - May be fatal if swallowed and enters airways H335 - May cause respiratory irritation H336 - May cause drowsiness or dizziness H411 - Toxic to aquatic life with long lasting effects H226 - Flammable liquid and vapour EUH066 - Repeated exposure may	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P273 - Avoid release to the environment P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting P370 + P378 - In case of fire: Use dry chemical

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
						cause skin dryness or cracking	substances, CO2, water spray or alcohol-resistant foam to extinguish P391 - Collect spillage
38	AVAWASH OBM/LT	Low-toxicity casing string cleaning product	Used to remove drilling mud from the casing string during well cleaning from nonaqueous drilling fluid	tons	165	H302 - Harmful if swallowed H318 - Causes serious eye damage H412 - Harmful to aquatic life with long lasting effects	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P273 - Avoid release to the environment P280 - Wear eye protection/face protection equipment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P501 - Dispose of contents/container to a licensed waste disposal collection site
39	Hydrated Lime	Alkalinity control agent	Used to stabilize the pH of nonaqueous drilling fluid	tons	517	H315 Causes skin irritation H318 - Causes serious eye damage H335 - May cause respiratory irritation	P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear protective gloves and eye protection/face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P321 - Specific treatment (see.? on this label)
40	INTAFLOW	Derivation agent	Drilling fluid	tons	682	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
41	NewCarb™	Return loss material	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	550	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
42	INTASOL F-M-C (F)	Return loss material	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	165	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
43	INTASOL F-M-C (M)	Return loss material	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	165	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
44	INTASOL F-M-C (C)	Return loss material	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
45	Soltex® E Additive	Liquid loss control additive	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
46	Micronized Barite	Weighing material	Used to increase the density of nonaqueous drilling fluid and water-based drilling fluid and for cementing	tons	550	H350 - May cause cancer H373 - May cause damage to organs through prolonged or repeated exposure	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - If exposed: Call a POISON CENTER or doctor/physician P501 - Dispose of contents/container to a licensed waste disposal collection site
47	AVAGREENLUBE	Lubricant	Drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
48	VICTOSAL HT	Fluid loss control additive	Drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
49	VISCO 83 SL	Loss reduction fluid WBM	Drilling fluid	tons	220	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
50	VISCO 83	Rheologic property control	Drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
51	Potassium Carbonate	Alkalinity control agent	Drilling fluid	tons	55	H315 Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation	P261 - Avoid breathing dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							exposed thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P362 - Take off contaminated clothing P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
52	NewStabil™ (AVAEXTEMP)	Fluid stabilizer	Drilling fluid	tons	110	H312 - Harmful in contact with skin H314 - Causes severe skin burns and eye damage H332 - Harmful if inhaled H335 - May cause respiratory irritation H412 - Harmful to aquatic life with long lasting effects	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower] P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
53	AVAPERM NF	Scale inhibitor	Drilling fluid	tons	330	H302 - Harmful if swallowed H312 - Harmful in contact with skin H314 - Causes severe skin burns and eye damage H317 - May cause an allergic skin reaction H331 - Toxic if inhaled H332 - Harmful if inhaled H335 - May cause respiratory irritation	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P321 - Specific treatment (see additional first-aid instructions on this label) P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
54	AVATENSIO LT	Pipe-freeing agent	Drilling fluid	tons	22	H304 - May be fatal if swallowed and enters airways H315 Causes skin irritation H317 - May cause an allergic skin	P280 - Wear protective gloves/protective clothing/eye protection/face protection P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
						reaction H318 - Causes serious eye damage H412 - Harmful to aquatic life with long lasting effects EUH066 - Repeated exposure may cause skin dryness or cracking	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting P273 - Avoid release to the environment
55	DE BLOCK'S LT	Pipe-freeing agent	Drilling fluid	tons	22	H314 - Causes severe skin burns and eye damage H317 - May cause an allergic skin reaction H410 – Extremely toxic to aquatic life with long lasting effects	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P321 - Specific treatment (see .? on this label) P391 - Collect spillage
56	Microflow	Solvent mixture	Drilling fluid	tons	22	H302 - Harmful if swallowed H319 - Causes serious eye irritation H335 - May cause respiratory irritation H336 - May cause drowsiness or dizziness H226 - Flammable liquid and vapour	P261 - Avoid breathing dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P312 - Call a POISON CENTER or doctor/physician if you feel unwell P370 + P378 - In case of fire: Use dry chemical substances, CO2, water spray or alcohol-resistant foam to extinguish P501 - Dispose of contents/container to a licensed waste disposal collection site P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P370 + P378 - In case of fire: use dry sand, dry chemical substances or alcohol-resistant foam to extinguish P403 + P235 - Store in a well-ventilated place. Keep cool
57	NanoFIX™	Fluid loss control	Drilling fluid	tons	330	H304 - May be fatal if swallowed and	P261 - Avoid breathing

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
		additive				enters airways H315 Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation	dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear protective gloves and eye protection/face protection P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting
58	AVAMICA F-M-C	Return loss material	Used to plug microfractures in formations in order to prevent the loss of nonaqueous drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
59	SAND SEAL	Fouling agent	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	220	Chemical product classified as non-hazardous.	P261 – Avoid breathing dust
60	GRANULAR F-M-C	Return loss material	Used to plug the pores of permeable formation in order to prevent the loss of nonaqueous drilling fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
61	PreFIX™	Return loss material	Used to plug the pores of permeable formation in order to prevent the loss of drilling fluid	tons	110	H351 - Suspected of causing cancer	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
62	ProppFIX™	Return loss material	Used to plug the pores of permeable	tons	110	H351 - Suspected of causing cancer Fraze	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
			formation in order to prevent the loss of drilling fluid				P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
63	FracFIX™	Additive for the borehole mechanical stability	Drilling fluid	Tons	55	H312 - Harmful in contact with skin H330 - Fatal if inhaled H351 - Suspected of causing cancer	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P310 - Immediately call a POISON CENTER or doctor/physician P321 - Specific treatment (see additional first-aid instructions on this label) P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
64	Portland Cement	Class-C cement	2-Supports the well tube and prevents fluid migration between the tube and the well	tons	0.1	H315 Causes skin irritation H318 - Causes serious eye damage H335 - May cause respiratory irritation	P280 Wear protective gloves/protective clothing/goggles. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P302+P352+P333+P313- IF ON SKIN: Wash with soap and water. If skin irritation or a rash occurs: Get medical advice. P261+P304+P340+P312 Avoid breathing dust.IF INHALED: Remove person to fresh air and keep comfortable for breathing.Call a POISON CENTER or doctor/physician if you feel unwell. P102 Keep out of reach of children. P501 Dispose of contents/container to a household waste recycling centre.
65	Portland Cement	G-class cement	3-Supports the well tube and prevents fluid migration between the tube and the well	tons	0.1	H315 Causes skin irritation H318 - Causes serious eye damage H335 - May cause respiratory irritation	P280 Wear protective gloves/protective clothing/goggles. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P302+P352+P333+P313- IF ON SKIN: Wash

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							with soap and water. If skin irritation or a rash occurs: Get medical advice. P261+P304+P340+P312 Avoid breathing dust.IF INHALED: Remove person to fresh air and keep comfortable for breathing.Call a POISON CENTER or doctor/physician if you feel unwell. P102 Keep out of reach of children. P501 Dispose of contents/container to a household waste recycling centre.
66	BARITE	Weighing additive	4-Increases the cement slurry density	tons	500	H351 - Suspected of causing cancer in case of inhalation H373 - May cause damage to organs through prolonged or repeated exposure	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/ attention P314 - Get medical advice/attention if you feel unwell
67	CALCIUM CHLORIDE LIQUID	Additive/accelerator (brine)	5-Reduces the cement thickening time	m^3	20	H319 - Causes serious eye irritation	P264 – Wash face, hands and any exposed skin thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/ attention
68	CFR-3	Cement friction reducer	2-Reduces friction between cement slurry and well string	m^3	50	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
69	CFR-3L	Cement friction reducer	2- Reduces friction between cement slurry and well string	m^3	50	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
70	ECONOLITE LIQUID	Light cement additive	2- Used in low-density cement slurry	m^3	50	H315 - Causes skin irritation H318 - Causes serious eye damage	P264 – Wash face, hands and any exposed skin thoroughly after handling P280 – Wear protective gloves/eye protection/face protection

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P332 + P313 - If skin irritation occurs: Get medical advice/attention
71	HR-4L	Cement set retarder	2-Increasing set time	m^3	10	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
72	MICRO MATRIX® CEMENT	Cement	2-Supports the well tube and prevents fluid migration between the tube and the well	tons	0.1	H315 - Causes skin irritation H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H335 - May cause respiratory irritation	P280 – Wear eye protection/face protection P302+P352- IF ON SKIN: Wash with soap and water... P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
73	MUSOL SOLVENT	Solvent	2-Solvent used in spacers	m^3	30	H302 - Harmful if swallowed H312 - Harmful in contact with skin H315 - Causes skin irritation H319 - Causes serious eye irritation H332 - Harmful if inhaled	P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P312 - IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell P302+P352- IF ON SKIN: Wash with soap and water P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER/doctor if you are unwell P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
74	SCR-100L	Retarder	2-Increasing set time	m^3	10	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
75	SILICALITE LIQUID	Light-cement additive	2- Used in low-density cement slurry	m^3	60	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
76	CEMENT - CLASS G	G-class cement	2-Supports the well	tons	10000	H315 - Causes skin irritation	P264 - Wash your face, hands and any skin area

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
	LAFARGE		tube and prevents fluid migration between the tube and the well			H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H335 - May cause respiratory irritation H351 - Suspected of causing cancer in case of inhalation H373 - May cause damage to organs through prolonged or repeated exposure	exposed thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
77	NF-6	Antifoam agent	2-Prevents the formation of cement foam during mechanical mixing	m^3	10	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
78	GASSTOP LIQUID	Gas blocking material	2- It prevents gaseous hydrocarbons from entering the cement while setting	m^3	30	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
79	HALAD® 300L NS	Liquid loss additive	2-Reduces the loss of free water from cement	m^3	60	H317 - May cause an allergic skin reaction H350 - May cause cancer EUH071 - Corrosive to the respiratory tract	P201 - Obtain special instructions before use P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/ attention P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
80	MICROBOND HT NS	Cement additive	2-Increases setting	m^3	5	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
81	SEM-1205	Surfactant	2-Disperses chemical substance particles into the water	m^3	30	H315 - Causes skin irritation H318 - Causes serious eye damage H412 - Harmful to aquatic life with long lasting effects	P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P302+P352- IF ON SKIN: Wash with soap and water... P332 + P313 - If skin irritation occurs: Get medical advice/attention P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							or doctor/physician
82	ECOSPACER II	Suspension agent	2-Medium visocsifier for spacer viscosity increase at low concentrations	m^3	5	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
83	LATEX 4000	Additive	2-liquid loss reducer, prevents gas migration, lower ECD	m^3	10	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
84	C-Dye 530	Additive	3-UV lead tracing dye	m^3	5	H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure if swallowed	P260- Do not breathe mist or vapours P314- Get medical advice/attention if you feel unwell P501- Dispose of contents/container to a licensed waste disposal collection site
85	CleanTrol™	Fluid loss control additive	3-Conservation fluid	tons	110	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
86	CleanTrol™ HD	Fluid loss control	3 – Conservation fluid	tons	Same quantity as for Cleantrol if the decision is made to use it	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
87	Deoxy DEHA	Oxygen scavenger	3- Conservation fluid	tons	55	H412 - Harmful to aquatic life with long lasting effects	P273 - Avoid release to the environment P501 - Dispose of contents/container to a licensed waste disposal collection site
88	NALCO® 73500	Biocide	3 – conservation fluid Prevents bacteria growth in brine-based fluids	tons	44	H302 + H332 Harmful if swallowed or inhalation. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled . H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.	P261 Avoid breathing dust/fume/ gas/mist/ vapours/spray. . P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P284 In case of inadequate ventilation wear respiratory protection. Answer: P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
89	INCORR	Corrosion inhibitor	3 – Conservation fluid	tons	55	H319 - Causes serious eye irritation H412 - Harmful to aquatic life with long lasting effects Phrases	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P273 - Avoid release to the environment P280 - Wear eye protection/face protection

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							equipment P337 + P313 - If eye irritation persists: Get medical advice/ attention P501 - Dispose of contents/container to a licensed waste disposal collection site
90	Calcium Bromide	Brine weighing material	3-Conservation fluid	tons	165	H318 - Causes serious eye damage	P280 - Wear protective gloves/protective clothing/eye protection/face protection P302 + P352 - IF ON SKIN: Wash with soap and water P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P501 - Dispose of contents/container to a licensed waste disposal collection site
91	Calcium Bromide Brine	Brine basis	3-Conservation fluid	tons	1045	H318 - Causes serious eye damage	P280 - Wear eye protection/face protection equipment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
92	Potassium Chloride	Shale inhibitor	3- Conservation fluid	tons	1100	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
93	AVA K 157	K+ ion source	3- shale stabilizer	tons	Same quantity as for $CaBr_2$ if the decision is made to replace the brine	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
94	Potassium Formate	K+ ion source	3- shale stabilizer	tons	Same quantity as for $CaBr_2$ if the decision is made to replace the brine	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
95	Sodium Formate Brine	Completion brine	3- conservation fluid	tons	Same quantity as for $CaBr_2$ if the decision is	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
					made to replace the brine		
96	N-FLOW™325	Breaker	3-Dissolve NADF mud cake	m^3	248.6	H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage	P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing . P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
97	ORCA™ 4	Breaking surfactant	3-Conservation fluid	tons	11	H302 - Harmful if swallowed H315 Causes skin irritation H318 - Causes serious eye damage H335 - May cause respiratory irritation H336 - May cause drowsiness or dizziness H411 - Toxic to aquatic life with long lasting effects H226 - Flammable liquid and vapour	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P273 - Avoid release to the environment P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P370 + P378 - In case of fire: Use dry chemical substances, CO2, water spray or alcohol-resistant foam to extinguish P391 - Collect spillage
98	ORCA™ A	Breaker acid precursor	3 – conservation fluid	tons	11	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
99	ORCA™ B	Breaker acid precursor	3 - conservation fluid	tons	11	H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting
100	ORCA™ E	Breaker acid precursor	3 – conservation fluid	tons	11	H319 - Causes serious eye irritation	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P280 - Wear eye protection/face protection equipment P337 + P313 - If eye irritation persists: Get medical advice/ attention
101	MUSOL SOLVENT	Tubing Pickle – Solvent	3-Removes scales for pipes and OBM in the drilling pipe.	m^3	1.1	H302 Harmful if swallowed H312 Harmful in contact with skin H315 Causes skin irritation H319 Causes serious eye irritation H332 Harmful if inhaled	P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P302+P352 IF ON SKIN: Wash with soap and water P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
102	DCA-17006	Corrosion inhibitor (Pickle)	3 – conservation fluid	m^3	0.22	H224 Extremely flammable liquid and vapour H290 - May be corrosive to metals H302 - Harmful if swallowed H314 - Causes severe skin burns and eye damage H317 - May cause an allergic skin reaction H331 - Toxic if inhaled H335 - May cause respiratory irritation H371 - May cause damage to organs H411 - Toxic to aquatic life with long lasting effects	P280 - Wear protective gloves/protective clothing/eye protection/face protection P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308 + P313 - IF exposed or concerned: Get medical advice/attention
103	HCL Base Acid	Tubing Pickle - acid	3- Conservation fluid Removes rust from drilling pipe.	m^3	9.68	H290 - May be corrosive to metals H314 - Causes severe skin burns and eye damage H335 - May cause respiratory irritation	P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]..

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310 - Immediately call a POISON CENTER or doctor/physician P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
104	AVAWASH 500	Casing Detergent	3 – Conservation fluid	tons	22	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
105	Natrosol™ 250 HHRP Hydroxyethylcellulose ™	Viscosifier	3 - Conservation fluid	tons	11	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
106	Methanol K46	Hydrate inhibitor	3 - Conservation fluid	tons	11	H301 - Toxic IF SWALLOWED H311 - Toxic in contact with skin H331 - Toxic if inhaled H370 - Causes damage to organs H225 - Highly Flammable liquid and vapour	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P501 - Dispose of contents/container in accordance with the local, regional, national and international regulations, as the case may be
107	Monoethylene Glycol (MEG)	Hydrate inhibitor	3 - Conservation fluid	tons	385	H302 - Harmful if swallowed H373 - May cause damage to organs through prolonged or repeated exposure	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray P264 - Wash your face, hands and any skin area exposed thoroughly after handling P270 - Do not eat, drink or smoke when using this product P301 + P312 - IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/container to a licensed waste disposal collection site
108	BaraCide W-960	DFS-GFP - Biocid	3-Bacteria control in water-based	m^3	1.32	H302 - Harmful if swallowed H314 - Causes severe skin burns and	P260 - Do not breathe dust/fume/gas/mist/vapours/ spray

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
			fluids			eye damage H373 - May cause damage to organs through prolonged or repeated exposure H400 - Very toxic to aquatic life H411 - Toxic to aquatic life with long lasting effects	P264 - Wash your face, hands and any skin area exposed thoroughly after handling P270 - Do not eat, drink or smoke when using this product P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P391 - Collect spillage
109	HT BREAKER	(DFS-GFP – Breaker)	3-conservation fluid	m^3	0.7	H242 - Heating may cause a fire H226 - Flammable liquid and vapour H302 - Harmful if swallowed H311 - Toxic in contact with skin H314 - Causes severe skin burns and eye damage H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H330 - Fatal if inhaled H335 - May cause respiratory irritation H341 - Suspected of causing genetic defects H351 - Suspected of causing cancer H411 - Toxic to aquatic life with long lasting effects	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 - Keep only in original container. P260 - Do not breathe dust/fume/gas/mist/vapours/spray P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P370 + P378 - In case of fire: use dry sand, dry chemical substances or alcohol-resistant foam to extinguish.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							P391 - Collect spillage P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
110	K-34	DFS-GFP - Buffer	3-pH control	tons	132.0	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
111	DCA-22001	DFS-GFP - Surfactant	3-Used to change brine completion fluid rheology.	m^3	1.3	H225 - Highly Flammable liquid and vapour H315 - Causes skin irritation H318 - Causes serious eye damage H336 - May cause drowsiness or dizziness H400 - Very toxic to aquatic life H412 - Harmful to aquatic life with long lasting effects	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P280 - Wear protective gloves/protective clothing/eye protection/face protection P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing . P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
112	DCA-25006	DFS-GFP - Xanthan	3-Viscosifier (Viscosifier for gravel pack fluids)	tons	105.6	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
113	DCA-25017	KMAX - HEC	3-Viscosifier (Viscosifier for LCM pill)	tons	33.0	H412 - Harmful to aquatic life with long lasting effects Phrases	P273 - Avoid release to the environment P501 - Dispose of contents/container to a licensed waste disposal collection site
114	DCA-19004	KMAX - Xlink	3-Corsllinker for gel in LCM pills)	m^3	2.75	Chemical product classified as non-hazardous.	Chemical product classified as non-hazardous.
115	BaraSure™ W-674	Clay control	3-Clay inhibitor for water-based fluids	m^3	13.2	H302 - Harmful if swallowed H312 - Harmful in contact with skin H315 - Causes skin irritation H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H335 - May cause respiratory irritation H412 - Harmful to aquatic life with long lasting effects	P280 - Wear protective gloves/protective clothing/eye protection/face protection P301 + P312 - IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell P302+P352: IF ON SKIN: Wash with soap and water P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
116	Transaqua HT2	BOP control and antifreeze protection	4-Conveying pressure to close and open BOP frames and valves	m³	2.8	H302 - Harmful if swallowed. H373 - May cause damage to organs through prolonged or repeated exposure	P260 - Do not breathe vapours. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. P314 - Get medical advice/attention if you feel unwell. P301 + P312 , P330 - IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P501 - Dispose of the contents / container in compliance with local/regional/national and international regulations.
117	PELAGIC 100 H	Hydraulic fluid for the underwater control system	5 - SPS	m³	0.6	H302-Harmful if swallowed. H315-Causes skin irritation. H319 -Causes serious eye irritation. H373-May cause damage to organs through prolonged or repeated exposure.	P260 - Do not breathe vapours P280 Wear protective gloves/protective clothing/eye protection/face protection. P314 Get medical advice/attention if you feel unwell. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth P501 Dispose of contents/container to a licensed waste disposal collection site

2. **List of chemical substances and preparations assessed to be used during the construction/installation**

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
1	Hydrosure™ HD-5002	Hydrotest chemical product	Used to hydrotest pipes and feed/supply pipes at 500 ppm	m^3	35,0	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H373 May cause damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. EUH031 Contact with acids liberates toxic gas.	P260 Do not breathe dust/fume/gas/mist/vapours/ spray. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 IF SWALLOWED: Rinse

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing.
2	Hydrosure Corrosion Inhib Stick	Corrosion inhibitor	Used during pipe and feed/supply pipe hydrotesting	kg	4,0	H315 Causes skin irritation. H318 Causes serious eye damage.	P280 Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with soap and water. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
3	Hydrosure Red Dye Stick	Pigment	Used during pipe and feed/supply pipe hydrotesting	kg	6,0	H319 Causes serious eye irritation.	P264 Wash skin thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
4	Hydrosure Oxygen Scav E2 Stick	Oxygen scavenger	Used during pipe and feed/supply pipe hydrotesting	kg	5,0	H318 Causes serious eye damage. EUH031 Contact with acids liberates toxic gas.	P280 Wear protective gloves/protective clothing/eye protection/face protection. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician.
5	Hydrosure Biocide Stick	Biocide	Used during pipe and feed/supply pipe hydrotesting	kg	3,5	H302 + H312 Harmful if swallowed or in case of skin contact. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects.	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P273 Avoid release to the environment. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. P302 + P352 + P312 IF ON SKIN: Wash with soap and water. Call a POISON CENTER/doctor if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 + P310 Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							rinsing. Call a POISON CENTER/doctor immediately.
6	Methanol	Hydrate inhibitor	Well start initiation	m^3	250 m^3/well 530 m^3 (chemical cores and tanks first fill)	H225 Highly Flammable liquid and vapour. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H370 Causes damage to organs (eyes).	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust/fume/gas/mist/vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. P303 + P361 + P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water. P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
7	Triethylene Glycol	Gas dehydration	First fill	m^3	350 First tank fill and underwater commissioning	Chemical product not classified as hazardous.	P314 Get medical advice/attention if you feel unwell. P401 Store in accordance with local regulations.
8	Pelagic 100 H	Underwater hydraulic liquid – aquatic actuating liquid	Underwater valve actuation liquid	m^3	76	H302 Harmful if swallowed H319 Causes serious eye irritation. H315 Causes skin irritation. H373 May cause damage to organs through prolonged or repeated exposure.	P260 - Do not breathe vapours P280 Wear protective gloves/protective clothing/eye protection/face protection P314 Get medical advice/attention if you feel unwell. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you are unwell. Rinse mouth P501 Dispose of contents/container to a licensed waste disposal collection site
9	CORR12452A	Corrosion inhibitor	First fill	m3	26 (chemical cores and tank first fill)	H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.	P260 Avoid breathing dust/fume/gas/mist/vapours/spray. P273 Avoid release to the environment. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P302 + P352 + P312 IF ON SKIN: Wash with soap and water. Call a POISON CENTER/doctor if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							breathing. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
10	SCAL13370A	Scale inhibitor	First fill	m3	27 (chemical cores and tank first fill)	H373 May cause damage to organs through prolonged or repeated exposure.	P260 Avoid breathing dust/fume/gas/mist/vapours/spray. P314 Get medical advice/attention if you feel unwell. P501 Dispose of contents/container to a licensed waste disposal collection site.
11	AFMR20400A	Antifoam agent	First fill	m3	16 (chemical cores and tank first fill)	H312 + H332 Harmful in contact with skin or if inhaled. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302 + P352 + P312 IF ON SKIN: Wash with soap and water. Call a POISON CENTER/doctor if you are unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
12	Multi-use product aerosol (WD40)	lubricant	Industrial use	m3	0,01	Highly flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters the respiratory tract. May cause drowsiness or dizziness.	Keep away from heat, sparks, open flames, hot surfaces. - No Smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not puncture or burn, even after use. Avoid breathing vapors or mist. Use only outdoors or in a well-ventilated area.
13	Diesel fuel	Low Sulphur Fuel Oil	fuel	m3	33745	H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H332 Harmful if inhaled. H351 Suspected of causing cancer (skin). H373 May cause damage to organs (thymus, liver, bone marrow) through prolonged or	P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
						repeated exposure. H411 Toxic to aquatic life with long lasting effects.	clothing/eye protection/face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331 Do NOT induce vomiting. P501 Dispose of content and container in accordance with the regulations
14	Ship fuel	Low Sulphur Fuel Oil	fuel	m3	31.657	H350 May cause cancer. H332 Harmful if inhaled. H361d Suspected of damaging the unborn child H373 May cause damage to organs (blood, tymus, liver) through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.	P201 Obtain special instructions before use. P260 Do not breathe vapours. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P308 + P313 If exposed: Call a POISON CENTER or doctor/physician. P501 Dispose of content and container in accordance with regulations in force
15	CARBOTHANE 134 HG PART A	Product used to cover industrial multicomponents	Used to paint and cover equipment and pipes	m3	0,02	H225 Highly Flammable liquid and vapour H315 Causes skin irritation H319 Causes serious eye irritation. H350 May cause cancer H361 Suspected of damaging fertility or the unborn child H372 - Causes damage to organs through prolonged or repeated exposure if inhaled	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P235 Keep cool P260 Do not breathe dust/fume/gas/mist/vapours/spray P264 Wash your face, hands and any skin area exposed thoroughly after handling P280 Wear protective gloves/protective clothing/eye protection/ face protection. P284 In case of inadequate ventilation wear respiratory protection P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+313 - If exposed: Call a POISON CENTER or doctor/physician P314 Get medical advice/attention if you feel unwell. P332+313 - If skin irritation occurs: Get medical advice/attention P403+233 Store in a well-ventilated place. Keep container tightly closed
16	Carboline Urethane Converter 811	Painting product	Used to paint pipes and	cubic meter	0,02	H226 Flammable liquid and vapour H317 May cause an allergic skin reaction	P210 A Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
			equipment			H332 Harmful if inhaled H335 May cause respiratory irritation H412 Harmful to aquatic life with long lasting effects	No smoking. P240 Ground and bond container and receiving equipment.. P241 Use explosion-proof equipment. P242 Use only non-sparking tools. P243 Take precautionary measures to prevent static discharges P261 Avoid breathing vapours/spray P271 Use only outdoors or in a well-ventilated area.. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with soap and water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P321 Specific treatment (see doctor's advice on this label). P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water mist to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/container to a licensed waste disposal collection site
17	AMERLOCK 400C 400GF CURE	Cover paint	Used to paint and cover equipment and pipes	m3	0,03	Flammable liquid and vapour. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
						May cause cancer. Suspected of damaging fertility or the unborn child	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
18	AMERLOCK 2/400 Pearl Gray RESIN	Cover paint	Used to paint and cover equipment and pipes	m3	0,03	Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. May cause cancer.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
19	AMERLOCK 2/400 Light Tint RESIN	Cover paint	Used to paint and cover equipment and pipes	m3	0,03	Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of causing cancer.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							Contaminated work clothing should not be allowed out of the workplace.
20	AMERCOAT 450H CURE	Cover paint	Used to paint and cover equipment and pipes	m3	0,02	Flammable liquid and vapour. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.	Wear protective gloves, protective clothing and eye protection/face protection. Wear a respiratory protection mask. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Contaminated work clothing should not be allowed out of the workplace.
21	Acrylic LACQUER THINNER	Painting product	Used to paint and cover equipment and pipes	m3	0,04	Highly Flammable liquid and vapour. Harmful if swallowed. Causes serious eye irritation. Causes skin irritation. Suspected of damaging the unborn child. Suspected of causing cancer. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), auditory organs, Kidneys, liver)	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling. Keep container tightly closed. Do not eat, drink or smoke when using this product.
22	THINNER 21-25	Paint thinner	Used to paint and cover equipment and pipes	m3	0,01	Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), auditory organs, Kidneys, liver)	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							Keep container tightly closed. Do not eat, drink or smoke when using this product.
23	Super Mud Dry	Viscosifier	Used to increase the viscosity of the completion fluid	m3	0,01	Product not classified as hazardous according to the US/EU regulations	May cause slight skin irritation, especially with prolonged or repeated exposure. May cause eye irritation which should stop when the product is removed. Inhalation of dust can cause irritation of the respiratory system. Very slippery underfoot when wet. Rough handling can create dust - as with many organic powders, airborne dust clouds can cause an explosion hazard. Use personal protective equipment appropriate for the respective task. Respiratory protection may be required if dust is created during cleaning operations. Avoid creating dust clouds in the air. The products become very slippery underfoot when wet.
24	MOBILGREASE 28	Multiple use grease	Maximum 0.01 (as needed)	m3	0,01	Injection under pressure under the skin can cause serious injury. Excessive exposure may cause eye, skin or respiratory irritation. Secondary amines or materials containing secondary amines should not be added to this product due to the risk of forming nitrosamines, some of which have been shown to be carcinogenic in laboratory animals.	Prevent spills to avoid slip hazard. Contains sodium nitrite. Do not add amines that can form cancer-causing nitrosamines.
25	PPG THINNER 2	Industrial coverage thinner	Used to paint and	m3	0,04	H225 Highly Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361 Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), auditory organs, Kidneys, liver).	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P235 Keep cool. P260: Do not breathe dust/fume/gas/mist/vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 Wear respiratory protection. P301 + 310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P305 + 351 + 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + 313 IF exposed or concerned: Get

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							medical advice/attention P314 Get medical advice/attention if you feel unwell. P331 Do NOT induce vomiting. P332 + 313 If skin irritation occurs: Get medical advice/attention. P403 + 233 Store in a well-ventilated place. Keep container tightly closed.
26	PPG THINNER 215	Industrial coverage thinner	coverage	m3	0,03	H226 Flammable liquid and vapour	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P403+233 Store in a well-ventilated place. Keep container tightly closed
27	Loctite® Clear Silicone Sealant	Silicone sealant	Used to install equipment	m3	Maximum 0.01 (as needed)	Skin irritation 2 Eye irritation 2a Skin sensitization 1	Avoid breathing vapours, mist or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection and face protection. Wear protective gloves. IF ON SKIN: Wash with soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Remove contaminated clothing. Dispose of contents and/or container in accordance with federal, state/provincial and local government regulations.
28	Locite PL Premium Max Construction Adhesive	Adhesive	Used to install equipment	m3	0.008	Inhalation of acute toxicity 4 Skin irritation 2 Serious eye damage 1 Respiratory sensitization 1 Skin sensitization 1 Carcinogenicity 1a Repeated exposure 1	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or smoke. Wash affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, for eyes and face. In case of inadequate ventilation, wear respiratory protection. IF ON SKIN: Wash with soap and water. IF INHALED: Remove person to fresh air and

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If irritation or rash occurs: Get medical attention. Remove contaminated clothes. Store locked up. Dispose of contents and/or container in accordance with governmental, regional and local regulations.
29	MOBIL 15W-30	Engine oil	Used for vehicles used for onshore building works	m3	Maximum 0.01 as needed)	Injection under pressure under the skin can cause serious injury. Excessive exposure may cause eye, skin or respiratory irritation.	Avoid contact with the used product. Prevent small leaks and spills to avoid the danger of slipping. The material may accumulate static charges that may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark may ignite any flammable liquid vapors or residues that may be present. Use proper grounding procedures.

3. List of chemical substances and compounds estimated to be used in the construction/installation phase

Annex 1 to Environmental Agreement no.14/28.06.2024

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
1	Hydrosure™ HD-5002	Hydrotesting chemical product	Used to hydrotest pipes and feed/supply pipes at 500 ppm	m^3	35,0	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H373 May cause damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. EUH031 Contact with acids liberates toxic gas.	P260 Do not breathe dust/fume/gas/mist/vapours/ spray. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. P301 + P330 + P331 ÎN CAZ IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse SKIN with water.
2	Hydrosure Corrosion Inhib Stick	Corrosion inhibitor	Used during pipe and feed/supply pipe hydrotesting	kg	4,0	H315 Causes skin irritation. H318 Causes serious eye damage.	P280 Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with soap and water P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
3	Hydrosure Red Dye Stick	Pigment	Used during pipe and feed/supply pipe hydrotesting	kg	6,0	H319 Causes serious eye irritation.	P264 Wash skin thoroughly after handling. P280e Wear protective gloves/protective clothing/eye protection/face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
4	Hydrosure Oxygen Scav E2 Stick	Oxygen scavenger	Used during pipe and feed/supply pipe hydrotesting	kg	5,0	H318 Causes serious eye damage. EUH031 Contact with acids liberates toxic gas.	P280e Wear protective gloves/protective clothing/eye protection/face protection. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
5	Hydrosure Biocide Stick	Biocide	Used during pipe and feed/supply pipe	kg	3,5	H302 + H312 Harmful if swallowed or in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage.	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P273 Avoid release to the environment. P301 + P312 + P330 IF SWALLOWED: Call a

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
			hydrotesting			H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects.	POISON CENTER/ doctor if you feel unwell. Rinse mouth. P302 + P352 + P312 IF ON SKIN: Wash with soap and water. Call a POISON CENTER/doctor if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 + P310 Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor immediately.
6	Methanol	Hydrate inhibitor	Well commissioning initialization	m^3	250 m^3/well 530 m^3 (chemical cores and tanks first fill)	H225 Highly Flammable liquid and vapour. H301 + H311 + H331 Toxic IF SWALLOWED, in contact with skin or if inhaled. H370 Causes damage to organs (Eyes).	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust/fume/gas/mist/vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
7	Triethylene Glycol	Gas dehydration	First fill	m^3	350 First tank fill and underwater commissioning	Chemical product not classified as hazardous.	P314 Get medical advice/attention if you feel unwell. P401 Store in accordance with local legislation
8	Pelagic 100 H	Underwater hydraulic liquid – aquatic actuating liquid	Underwater valve actuation liquid	m^3	76	H302 Harmful if swallowed H319 Causes serious eye irritation. H315 Causes skin irritation. H373 May cause damage to organs through prolonged or repeated exposure.	P260 - Do not breathe vapours P280 Wear protective gloves/protective clothing/eye protection/face protection P314 Get medical advice/attention if you feel unwell. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you are unwell. Rinse mouth

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							P501 Dispose of contents/container to a licensed waste disposal collection site
9	CORR12452A	Corrosion inhibitor	First fill	m3	26 (chemical cores and tank first fill)	H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.	P260 Do not breathe dust/fume/gas/mist/vapours/ spray. P273 Avoid release to the environment. P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you are unwell. Rinse mouth. P302 + P352 + P312 IF ON SKIN: Wash with soap and water. Call a POISON CENTER/doctor if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
10	SCAL13370A	Scale inhibitor	First fill	m3	27 (chemical cores and tank first fill)	H373 May cause damage to organs through prolonged or repeated exposure.	P260 Do not breathe dust/fume/gas/mist/vapours/ spray. P314 Get medical advice/attention if you feel unwell. P501 Dispose of contents/container to a licensed waste disposal collection site.
11	AFMR20400A	Antifoam agent	First fill	m3	16 (chemical cores and tank first fill)	H312 + H332 Harmful in contact with skin or through inhalation. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302 + P352 + P312 IF ON SKIN: Wash with soap and water. Call a POISON CENTER/doctor if you feel unwell. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you are unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
12	Multi-use product aerosol (WD40)	lubricant	Industrial use	m3	0,01	Extremely flammable aerosol. Contains gas under pressure; may explode if heated.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
						It can be fatal if swallowed and enters the respiratory tract. May cause drowsiness or dizziness.	source. Pressurized container: Do not puncture or burn, even after use. Avoid breathing vapours or mist. Use only outdoors or in a well-ventilated area.
13	Diesel fuel	Low Sulphur Fuel Oil	fuel	m3	33745	H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H332 Harmful if inhaled. H351 Suspected of causing cancer (skin). H373 May cause damage to organs (tymus, liver, spine) in case or prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.	P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331 Do NOT induce vomiting. P501 Dispose of content and container in accordance with regulations in force
14	Ships fuel	Low Sulphur Fuel Oil	fuel	m3	31.657	H350 May cause cancer. H332 Harmful if inhaled. H361d Suspected of damaging the unborn child H373 May cause damage to organs (blood, thymus, liver) through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.	P201 Obtain special instructions before use. P260 Do not breathe vapours. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P308 + P313 If exposed: Call a POISON CENTER or doctor/physician. P501 Dispose of content and container in accordance with regulations in force
15	CARBOTHANE 134 HG PART A	Product used to cover industrial multicomponents	Used to paint and cover equipment and pipes	m3	0,02	H225 Highly Flammable liquid and vapour H315 Causes skin irritation H319 Causes serious eye irritation. H350 May cause cancer H361 Suspected of damaging fertility or the unborn child H372 - Causes damage to organs through prolonged or repeated exposure if inhaled	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P235 Keep cool P260 Do not breathe dust/fume/gas/mist/vapours/ spray P264 Wash your face, hands and any skin area exposed thoroughly after handling P280 Wear protective gloves/protective clothing/eye protection/ face protection. P284 In case of inadequate ventilation wear respiratory protection P305+351+338 IF IN EYES: Rinse cautiously

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+313 - If exposed: Call a POISON CENTER or doctor/physician P314 Get medical advice/attention if you feel unwell. P332+313 - If skin irritation occurs: Get medical advice/attention P403+233 Store in a well-ventilated place. Keep container tightly closed
16	Carboline Urethane Converter 811	Painting product	Used to paint and cover equipment and pipes	cubic meter	0,02	H226 Flammable liquid and vapour H317 May cause an allergic skin reaction H332 Harmful if inhaled H335 May cause respiratory irritation H412 Harmful to aquatic life with long lasting effects	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use only non-sparking tools. P243 Take precautionary measures to prevent static discharges P261 Avoid breathing vapours/spray P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with soap and water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P321 Specific treatment see doctor’s advice on this label). P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use foam, carbon

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							dioxide, dry powder or water mist to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up. P501 Dispose of contents/container to a licensed waste disposal collection site
17	AMERLOCK 400C 400GF CURE	Cover paint	Used to paint and cover equipment and pipes	m3	0,03	Flammable liquid and vapour. Auses severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
18	AMERLOCK 2/400 Pearl Gray RESIN	Cover paint	Used to paint and cover equipment and pipes	m3	0,03	Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of causing cancer.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
19	AMERLOCK 2/400 Light Tint RESIN	Cover paint	Used to paint and cover equipment	m3	0,03	Flammable liquid and vapour. Causes skin irritation.	Obtain special instructions before use. Do not handle until all safety precautions have

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
			and pipes			May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of causing cancer.	been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
20	AMERCOAT 450H CURE	Cover paint	Used to paint and cover equipment and pipes	m3	0,02	Flammable liquid and vapour. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.	Wear protective gloves, protective clothing and eye protection/face protection. Wear a respiratory protection mask. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Contaminated work clothing should not be allowed out of the workplace.
21	Acrylic LACQUER THINNER	Painting product	Used to paint and cover equipment and pipes	m3	0,04	Highly Flammable liquid and vapour. Harmful if swallowed. Causes serious eye irritation. Causes skin irritation. Suspected of damaging the unborn child. Suspected of causing cancer. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs by prolonged or repeated exposure. (central nervous system (CNS), auditory organs, kidneys, liver)	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling. Keep container tightly closed. Do not eat, drink or smoke when using this

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
							product.
22	THINNER 21-25	Paint thinner	Used to paint and cover equipment and pipes	m3	0,01	Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. Suspected of causing cancer. Causes damage to organs by prolonged or repeated exposure. (central nervous system (CNS)))	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid breathing vapours. Wash hands thoroughly after handling. Keep container tightly closed. Do not eat, drink or smoke when using this product.
23	Super Mud Dry	Viscosifier	Used to increase the viscosity of well completion fluid	m3	0,01	Product not classified as hazardous according to the US/EU regulations	May cause slight skin irritation, especially through prolonged or repeated exposure. May cause eye irritation which should stop when the product is removed. Inhalation of dust can cause irritation of the respiratory system. Very slippery underfoot when wet. Rough handling can create dust - as with many organic powders, airborne dust clouds can cause an explosion hazard. Use personal protective equipment appropriate for the task at hand. Respiratory protection may be required if dust is created during cleaning operations. Avoid creating dust clouds in the air. The products become very slippery underfoot when wet.
24	MOBILGREASE 28	Multiple use grease	Maximum 0,01 (as needed)	m3	0.01	Injection under pressure under the skin can cause serious injury. Excessive exposure may cause eye, skin or respiratory irritation. Secondary amines or materials containing secondary amines should not be added to this product due to the risk of forming nitrosamines, some of which have been shown to be carcinogenic in laboratory animals.	Prevent spills to avoid slip hazard. Contains sodium nitrite. Do not add amines that can form cancer-causing nitrosamines.
25	PPG THINNER 2	Industrial coverage thinner	Used to paint and	m3	0.04	H225 Highly Flammable liquid and vapour. H304 May be fatal if swallowed and enters	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
						airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361 Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.	smoking. P235 keep cool. P260: Do not breathe dust/fume/gas/mist/vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 Wear respiratory protection. P301 + 310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P305 + 351 + 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + 313 F exposed or concerned: Get medical advice/attention P314 Get medical advice/attention if you feel unwell. P331 Do NOT induce vomiting. P332 + 313 If skin irritation occurs: Get medical advice/attention. P403 + 233 Store in a well-ventilated place. Keep container tightly closed.
26	PPG THINNER 215	Industrial coverage thinner	coverage	m3	0,03	H226 Flammable liquid and vapour	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P403+233 Store in a well-ventilated place. Keep container tightly closed
27	Loctite® Clear Silicone Sealant	Silicone sealant	Used to install equipment	m3	Maximum 0.01 (as needed)	Skin irritation 2 Eye irritation 2a Skin sensitization 1	Avoid breathing vapours, mist or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection and face protection. Wear protective gloves. IF ON SKIN: Wash with soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Remove contaminated clothing. Dispose of contents and/or container in accordance with federal, state/provincial and local government regulations.
28	Locite PL Premium	Adhesive	Used to install	m3	0,008	Inhalation of acute toxicity 4	Obtain special instructions before use.

It. no.	Name of the chemical product	Description	Use	UM	Quantity	Risk and hazard phrases	Precautionary and safety phrases
	Max Construction Adhesive		equipment			Skin irritation 2 Serious eye damage 1 Respiratory sensitization 1 Skin sensitization 1 Carcinogenicity 1a Repeated exposure 1	Do not handle until all safety precautions have been read and understood. Du not breathe dust or smoke. Wash the affected area thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye protection and face protection. In case of inadequate ventilation, wear respiratory protection. IF ON SKIN: Wash with soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If irritation or rash occurs: Get medical attention. Remove contaminated clothing. Store locked up. Dispose of contents and/or container in accordance with governmental, regional and local regulations.
29	MOBIL 15W-30	Engine oil	Used for the vehicles used for the onshore building works	m3	Maximum 0.01 (as needed)	Injection under pressure under the skin can cause serious injury. Excessive exposure may cause eye, skin or respiratory irritation.	Avoid contact with the used product. Prevent small leaks and spills to avoid the danger of slipping. The material may accumulate static charges that may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark may ignite any flammable liquid vapors or residues that may be present. Use adequate grounding procedures.

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Residual Impact Assessment Table

ANPIC name	Impact	Affected species/habitat	Affected parameter	Prevention, avoidance measure	Residual impact
ROSAC0273 Cape Tuzla marine area	Habitat alteration	1110 Shallow submerged sandbanks	Habitat area	MS 4	Minimal
			Characteristic invertebrate species	MS 4	Minimal
			Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSAC0273 Cape Tuzla marine area	Habitat alteration	1170 Reefs	Habitat area	MS 1, MS 4	Minimal
			Area of habitat subtypes	MS 1, MS 4	Minimal
			Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSAC0273 Cape Tuzla marine area	Habitat alteration	8330 Completely or partially submerged caves	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSAC0273 Cape Tuzla marine area	Disruption of species activity Habitat alteration	*Alosa tanaica*	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSAC0273 Cape Tuzla marine area	Disruption of species activity Habitat alteration	*Alosa immaculata*	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSAC0273 Cape Tuzla marine area	Disruption of species activity Habitat alteration	*Tursiops truncatus*	Spatial and temporal pattern, intensity of habitat use	Not applicable	Minimal
			Size and diversity of prey species	Not applicable	Minimal
			Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSAC0273 Cape Tuzla marine area	Disruption of species activity Habitat alteration	*Phocoena phocoena*	Spatial and temporal pattern, intensity of habitat use	Not applicable	Minimal
			Size and diversity of prey species	Not applicable	Minimal
			Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	1110 Shallow submerged sandbanks	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	1170 Reefs	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	1140 Areas of sand and silt at low tide	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	8330 Completely or partially submerged caves	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal

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ANPIC name	Impact	Affected species/habitat	Affected parameter	Prevention, avoidance measure	Residual impact
ROSCI0293 Costinești - 23 August	Habitat alteration	*Alosa tanaica*	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	*Alosa immaculata*	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	*Tursiops truncatus*	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0293 Costinești - 23 August	Habitat alteration	*Phocoena phocoena*	Ecological status of water based on physico-chemical indicators	MS 5, MS 6	Minimal
ROSCI0311 Viteaz Canyon	Reducing of populations through accidental injury or killing	*Tursiops truncatus*	Population size	MS 7, MS 8	Minimal
	Disruption of species activity		Distribution pattern	Not applicable	Minimal
			Ecological status of water based on environmental indicators	MS 6, MS 9	
ROSCI0311 Viteaz Canyon	Habitat alteration	1170	Ecological status of water based on environmental indicators	MS 6, MS 9	Minimal
ROSCI0311 Viteaz Canyon	Habitat alteration	1180	Ecological status of water based on environmental indicators	MS 6, MS 9	Minimal
ROSPA0076 Black Sea	Disruption of species activity Habitat alteration	*Chlidonias hybridus, Chlidonias niger, Gavia arctica, Gavia stellata, Gelochelidon nilotica, Larus genei, Larus melanocephalus, Larus minutus, Mergus albellus, Pelecanus crispus, Phalaropus Iobatus, Puffinus yelkouan, Sterna albifrons, Stema caspia, Sterna hirundo, Sterna sandvicensis, Anas penelope, Anas platyrhynchos, Anas streper,a, Aythya ferina, Aythya fuligula, Bucephala clangula, Fulica atra, Larus cachinnans, Larus canus, Larus fuscus, Larus ridibundus, Limosa limosa, Mergus merganser, Mergus serrator, Phalacrocorax carbo, Podiceps cristatus, Podiceps grisegena, Podiceps nigricollis, Tachybaptus ruficollis.*	Ecological status rating in terms of physico-chemical quality elements	MS 5, MS 6	Minimal
ROSPA0076 Black Sea	Disruption of species activity	*Gavia arctica, Gavia stellata, Pelecanus crispus*	Distribution pattern	Not applicable	Minimal
Outside of ANPIC	Losses of habitat area outside ANPIC	8330 Completely or partially submerged caves	Habitat area	MS 2, MS 3, MS 4	Minimal

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ANPIC name	Impact	Affected species/habitat	Affected parameter	Prevention, avoidance measure	Residual impact
Outside of ANPIC	Losses of habitat area outside ANPIC	1170-2 *Mytilus galloprovincialis* biogenic reefs	Habitat subtype area	MS 4	Minimal
Not listed in ROSCI0311 Viteaz Canyon	Reducing of populations through accidental injury or killing	*Phocoena phocoena*	Population size	MS 7, MS 8	Minimal

It. No	ANPIC code and name	Natura 2000 Components	Natura 2000 code	Habitat/ species scientific name	Location in relation to the project (in metres)	Spatial data source	Source of information	Conservation state	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Impact quantification (u.m.)	Potential impact fwithout measures)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	ROSAC0273 Marine area of Cape Tuzla	Habitats	1110	Shallow submerged sandbars	The habitat is present in the project area. Subtype 1110-9 was identified in the barge anchoring points: T3.1, T3.5, but also in the neighbourhood of the protected natural area and of the analysed project: T4.1, T5.1, T6.5, T 6.1, T6.3, T7.5, P29. No NATURA 2000 habitate was identified on the route of the gas pipeline	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the favourable conservation status	Habitat surface Surface of subtype 1110-3 Surface of subtype 1110-4 Surface of subtype 1110-5 Surface of subtype 1110-6 Surface of subtype 1110-9	ha	_	_	450	YES	The anchors will be placed in two locations where the presence of habitat 1110 has been identified. Moreover, excavation activities in the coastal area, even if they are not carried out in the perimeter of the ROSAC0273 site, will contribute to increasing turbidity by bringing small sediment particles and their subsequent settlement in nearby habitats.	$50 m^2$(0.005 ha)/0.001% - Temporary occupation of the habitat. Turbidity increase on- approx. 5 ha	Insignificant	The area temporarily occupied by the anchors is very small (50 m^2) and will be restored shortly (1 year) after the completion of the works. The area where the works are to be carried out is an area with intense hydrodynamic activity. It is an area where intense coastal erosion took place, which contributed to bringing sedimentary material of terrigenous origin into the water mass. With each storm, sediments are resuspended and turbidity increases in the area for long periods of time. The habitat is periodically affected by the clogging process.	In order to limit the expansion of sediment plumes, turbidity curtains will be installed around the working areas at sea	Insignificant
2	ROSAC0273 Marine area of Cape Tuzla	Habitats	1110	Shallow submerged sandbars	The habitat is present in the project area. Subtype 1110-9 was identified in the barge anchoring points: T3.1, T3.5, but also in the neighbourhood of the protected natural area and of the analysed project. No NATURA 2000 habitate was identified on the route of the gas pipeline	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the favourable conservation status	Characteristic invertebrate species	Species abundence/ mp	Will be documented within 3 years from the issue of the ANANP decision	_	At least 30	YES	The organisms within habitat 1110 are adapted to periodic increases in water turbidity (storms, erosion of the loess cliffs) so that no significant mortality is anticipated that would affect the abundance of species within the habitat	It cannot be quantified	Insignificant	The area where the works are to be carried out is an area with intense hydrodynamic activity. It is an area where intense coastal erosion took place, which contributed to bringing sedimentary material of terrigenous origin into the water mass. With each storm, sediments are resuspended and turbidity increases in the area for long periods of time. Organisms in the area are adapted to these conditions and can survive periods of high turbidity. Consequently, due to these adaptations, the number of affected/dead organisms will be very small.	In order to limit the expansion of sediment plumes, turbidity curtains will be installed around the working areas at sea	Insignificant
3	ROSAC0273 Marine area of Cape Tuzla	Habitats	1110	Shallow submerged sandbars	The habitat is present in the project area. Subtype 1110-9 was identified in the barge anchoring points: T3.1, T3.5, but also in the neighbourhood of the protected natural area and of the analysed project: T4.1, T5.1, T6.5, T 6.1, T6.3, T7.5, P29. No NATURA 2000 habitate was identified on the route of the gas pipeline	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the favourable conservation status	Species that indicate disturbances	Presence/Absence	The habitat must be permanently covered with water	_	Absence	NO	Green algae are naturally present at site ROSAC0273. The resuspension of nutrients from the sediment will be accompanied by an increase in turbidity, which will limit the penetration of light into the water and implicitly will not stimulate the development of green algae.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
4	ROSAC0273 Marine area of Cape Tuzla	Habitats	1110	Shallow submerged sandbars	The habitat is present in the project area. Subtype 1110-9 was identified in the barge anchoring points: T3.1, T3.5, but also in the neighbourhood of the protected natural area and of the analysed project: T4.1, T5.1, T6.5, T 6.1, T6.3, T7.5, P29. No NATURA 2000 habitate was identified on the route of the gas pipeline	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the favourable conservation status	Water depth	m	_	_	At least 0.5	NO	The activities carried out by the project in the vicinity of the ROSAC0273 site will not contribute to the modification of the bathymetry of the site. Habitat 1110 and its subtypes will remain permanently covered by water.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
5	ROSAC0273 Marine area of Cape Tuzla	Habitats	1110	Shallow submerged sandbars	The habitat is present in the project area. Subtype 1110-9 was identified in the barge anchoring points: T3.1, T3.5, but also in the neighbourhood of the protected natural area and of the analysed project: T4.1, T5.1, T6.5, T 6.1, T6.3, T7.5, P29. No NATURA 2000 habitate was identified on the route of the gas pipeline	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	The ecological condition of the water based on physical and chemical indicators	Ecological condition rating	_	_	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to produce important changes in the chemical state and the physicical and hemical elements that define the state ecology of water bodies.	Not applicable	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
6	ROSAC0273 Marine area of Cape Tuzla	Habitats	1110	Shallow submerged sandbars	The habitat is present in the project area. Subtype 1110-9 was identified in the barge anchoring points: T3.1, T3.5, but also in the neighbourhood of the protected natural area and of the analysed project: T4.1, T5.1, T6.5, T 6.1, T6.3, T7.5, P29. No NATURA 2000 habitate was identified on the route of the gas pipeline	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	The ecologic condition of the water based on ecologic indicators	Ecological condition rating	_	_	At least a good ecological status	NO	Perennial phytobenthal specimens (macroalgae and angiosperms) will not be affected. During excavations in the trench area, the substrate with the macrozoobenthic organisms will be relocated, but these works will not take place inside the natural protected area and are not able to change the distribution of the indicator species in the water body. The activities carried out within the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Not applicable	Insignificant	From the laboratory analyzes carried out, no exceedances were shown in relation to the pollutant concentration valuesin water and sediments from the project area according to Order no. 161/2006. On the route of the gas production pipeline, including the segment subject to excavation activities, the presence of habitat 1110 was not reported. The temporary changes in the phytoplankton composition will not contribute to altering the quality of the biological elements characterizing the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant
7	ROSAC0273 Marine area of Cape Tuzla	Habitats	1170	Reefs	Following the observations made in the project area 3 habitat subtypes were identified: 1170-8: T1.1, T2.1, T7.4, T8.4; 1170-9: T2.5, T3.1, T6.1, T6.3, T7.5 ; 1170-2:P7, P9, P10, P23, A1, A3 . The following anchoring points/positions inside ROSAC0273 intersect with the analysed habitat: T1.1, T2.1, T2.5, T3.1 and T8.4.	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	Habitat surface	ha	_	_	At least 1285	YES	During the excavation activities in the shore area, a barge will be used, which will have anchors placed on the seabed to maintain the working position. In the working areas for the microtunnel manhole, which is less than 100m away from ROSAC0273, part of the anchors (4 anchors - 7 anchor points/positions) will be left on the water bottom inside the site. Anchors reaching the bottom of the water will locally disturb the sediment as well as the sessile organisms on the hard substrate. The repositioning of the barge will be done gradually by lifting and then changing the position of the anchors while the chains will be constantly tensed. Anchors will cause crushing and/or denudation of the hard substrate populated by marine organisms. Due to the fact that excavation/dredging works will be carried out in the vicinity of ANPIC, the habitat could be affected by increasing water turbidity.	225 m^2 (0,0225 ha)/0.0017% - impact on habitat 1170 following the mechanical action on sessile benthic organisms and those with reduced mobility. Turbidity increase- approx. 70 ha	Insignificant	The stone underlayer in these anchorages has little or no alga or edifice mollusc cover of habitat subtypes 1170-8 Infralittoral rock with photophilic algae and 1170-9: Infralittoral rock with Mytilus galloprovincialis. Where the existing physical and chemical conditions of the marine environment are favourable for the fixation and development of marine benthic organisms, they will recolonize, in a short period of time after the completion of the works (1-2 years), the surfaces on which mechanical actions have been exercised by anchor handling. The dredging/excavation of the trench will be done outside the ANPIC. Most of the suspended sediment particles will resediment near the trench (500-700 m). A large part of the surface where the concentration of suspended solid particles in the protected natural area will increase is represented by bare rock (without organisms characteristic of habitat 1170), and the low concentrations of suspended particles (1-5 mg/l) are not in not likely to affect biofiltering organisms as are within the normal limits of water turbidity in coastal areas.	The anchor plan that minimizes (7 positions) the use of anchors in ROSAC0273 will be compliend with. Any change to the planning of anchorages in ROSAC0273 will be made only after informing and with thea approval of the environmental protection authorities (APM and ANANP). In order to limit the expansion of the sediment plume inside and outside the ANPIC, turbidity curtains will be installed around the working areas, which will retain most of the suspended sediments.	Insignificant
8	ROSAC0273 Marine area of Cape Tuzla	Habitats	1170	Reefs	Following the observations made in the project area 3 habitat subtypes were identified: 1170-8: T1.1, T2.1, T7.4, T8.4; 1170-9: T2.5, T3.1, T6.1, T6.3, T7.5 ; 1170-2:P7, P9, P10, P23, A1, A3 . The following anchoring points/positions inside ROSAC0273 intersect with subtype 1170-9:T2.5 and T3.1.	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	The surface of the habitat subtypes The surface of subtype 1170-9	ha	No information is available cconcerning the subtype surface, except for subtype 1170-9	_	Must be defined within 3 years. At least 586.23	YES	The anchors will be placed in two locations where the presence of subtype 1170-9 has been identified. Moreover, excavation activities in the coastal area, even if they are not carried out in the perimeter of the ROSAC0273 site, will contribute to increasing turbidity by bringing small sediment particles and their subsequent settlement in nearby habitats.	Approx. 75 m^2=0.0075 ha/0,013%-impact on subtype 1170-9 following the mechanical action on sessile benthic organisms and those with reduced mobility. Turbidity increase- approx. 70 ha	Insignificant	The activities proposed by the project in or near site ROSAC0273 will not result in surface losses from habitat subtype 1170-9 and will not result in changes to the conservation status. The surfaces on which mechanical actions were exerted by manipulating the anchors will be restored in a short period of time after the completion of the works (1-2 years). Given that the characteristic species Mytilus galloprovincialis is tolerant to increased turbidity for short periods of time, such as during strong storms when TSS values of 75 mg/l can also be recorded (Pantea, 2020), we can anticipate the occurrence of negative effects as a result of the high concentration of suspended particles, in the case of the given species, from TSS values higher than 80 mg/l (Buhbe, 2005). The concentration of solid particles in the water mass generated by the works within the project will not exceed valuesof 1-5 mg/l inside the natural protected area, which are within the normal turbidity limits of coastal waters.	Not applicable	Insignificant
9	ROSAC0273 Marine area of Cape Tuzla	Habitats	1170	Reefs	Following the observations made in the project area 3 habitat subtypes were identified: 1170-8: T1.1, T2.1, T7.4, T8.4; 1170-9: T2.5, T3.1, T6.1, T6.3, T7.5 ; 1170-2:P7, P9, P10, P23, A1, A3 . The following anchoring points/positions inside ROSAC0273 intersect with the analysed habitat: T1.1, T2.1, T2.5, T3.1 and T8.4.	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	Spatial integrity of the habitat/ connectivity	number of fragments	No data are available about the habitat fragmentation on site. It must be documented within 3 years from the issue of the ANANP decision	_	At most 2	NO	The activities carried out in the vicinity of the ROSAC0273 site will not contribute to habitat fragmentation. Excavation activities are carried out off-site. No permanent constructions will be made on the site.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
10	ROSAC0273 Marine area of Cape Tuzla	Habitats	1170	Reefs	Following the observations made in the project area 3 habitat subtypes were identified: 1170-8: T1.1, T2.1, T7.4, T8.4; 1170-9: T2.5, T3.1, T6.1, T6.3, T7.5 ; 1170-2:P7, P9, P10, P23, A1, A3 . The following anchoring points/positions inside ROSAC0273 intersect with the analysed habitat: T1.1, T2.1, T2.5, T3.1 and T8.4.	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	Presence of species indicating disturbances	presence/absence	The parameter value must be documentat documented within 3 years from the issue of the ANANP decision	_	0	NO	Green algae are naturally present at site ROSAC0273. The resuspension of nutrients from the sediment will be accompanied by an increase in turbidity, which will limit the penetration of light into the water and implicitly will not stimulate the developmen	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
11	ROSAC0273 Marine area of Cape Tuzla	Habitats	1170	Reefs	Following the observations made in the project area 3 habitat subtypes were identified: 1170-8: T1.1, T2.1, T7.4, T8.4; 1170-9: T2.5, T3.1, T6.1, T6.3, T7.5 ; 1170-2:P7, P9, P10, P23, A1, A3 . The following anchoring points/positions inside ROSAC0273 intersect with the analysed habitat: T1.1, T2.1, T2.5, T3.1 and T8.4.	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	The ecological condition of the water based on physical and chemical indicators	Ecological condition rating	_	_	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physico-chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physico-chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
12	ROSAC0273 Marine area of Cape Tuzla	Habitats	1170	Reefs	Following the observations made in the project area 3 habitat subtypes were identified: 1170-8: T1.1, T2.1, T7.4, T8.4; 1170-9: T2.5, T3.1, T6.1, T6.3, T7.5 ; 1170-2:P7, P9, P10, P23, A1, A3 . The following anchoring points/positions inside ROSAC0273 intersect with the analysed habitat: T1.1, T2.1, T2.5, T3.1 and T8.4.	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status favorabile	The ecologic condition of the water based on ecologic indicators	Ecological condition rating	_	_	At least a good ecological status	NO	Perennial phytobenthal specimens (macroalgae and angiosperms) will not be affected. The habitat surfaces affected by the anchors are small (225 m^2), sparsely populated by macrozoobenthic organisms, so no deterioration of the state of the biological elements that define the ecological state of the water bodies is expected.	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in relation to the pollutant concentration valuesin water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant
13	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Habitat surface	ha	_	_	At least 0.7	NO	The activities carried out by the project do not overlap/intersect with the area ofhabitat 8330 inside the ANPIC. Moreover, excavation activities near the site will not result in clogging of the habitat and damage to the characteristic zoobenthic organisms.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	In order to prevent the impact on the habitat 8330 in the ANPIC: 1. The anchoring plan that reduces to a minimum (7 positions) the use of anchors in ROSAC0273 must be compl;ied with. 2. Any change to the planning of anchorages in ROSAC0273 will be made only after informing and with the approval of the environmental protection authorities (APM and ANANP). The following additional measures will be applied in order to prevent the impact on the habitat surface identified in 2023 outside ANPIC, on one of the barge anchoring positions involved in the microtunneling works: 1. Limiting the expansion of the sediment plume, they will be installed around the work areas on the sea turbidity curtains. 2. For the anchor that overlaps the charted area of habitat 8330, a new position will be identified in the vicinity that will not intersect habitats on hard underlayer. 3. The anchoring work will be assisted by biodiversity conservation specialists and the anchoring areas will be inspected before initiating work using ROV equipment.	Insignificant
14	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Number of caves	no.	_	_	At least 7	NU	The activities carried out by the project do not overlap/intersect with the area ofhabitat 8330 inside the ANPIC. Also, excavation activities near the site will not result in clogging of the habitat and damage to the characteristic zoobenthic organisms.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
15	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Internal dimensions of the caves	m	_	_	Must be defined within 2 years	NO	The activities carried out by the project do not overlap/intersect with the area ofhabitat 8330 inside the ANPIC. Also, excavation activities near the site will not result in clogging of the habitat and damage to the characteristic zoobenthic organisms.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
16	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Number of species in the biocenoses characteristic to the site	Number of species	_	_	Must be defined within 2 years	NO	The activities carried out by the project do not overlap/intersect with the area ofhabitat 8330 inside the ANPIC. Also, excavation activities near the site will not result in clogging of the habitat and damage to the characteristic zoobenthic organisms.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
17	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Spatial model of the characteristic biocenoses	Types of biocenoses and their distribution inside individual caves	_	_	Must be defined within 2 years	NO	The activities carried out by the project do not overlap/intersect with the area ofhabitat 8330 inside the ANPIC. Also, excavation activities near the site will not result in clogging of the habitat and damage to the characteristic zoobenthic organisms.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
18	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Density of the *Halichondria panicea* population îin the habitat	Number of colonies on 1 m^2	_	_	At least 1	NO	Habitat 8330 is located in the northern part of the site, so no mortality occurence is expected to affect the frequency *Halichondria panicea.*	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant

It. No	ANPIC code and name	Natura 2000 Components	Natura 2000 code	Habitat/ species scientific name	Location in relation to the project (in metres)	Spatial data source	Source of information	Conservation state	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Impact quantification (u.m.)	Potential impact fwithout measures)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
19	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Frequency of *Hemimysis serrata* in grottos	%	_	_	At least 80	NO	Habitat 8330 is located in the northern part of the site, so no mortality occurence is expected to affect the frequency of the species *Hemimysis serrata* in grotts	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
20	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Ecological condition of the water based on the physical and chemical indicators	Ecological status rating	_	_	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physico-chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physico-chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
21	ROSAC0273 Marine area of Cape Tuzla	Habitats	8330	Submerged or partially submerged sea caves	The habitat is mentioned in the site standard form as having a 0.7 ha surface and is located in the northern part of the protected natural area (> 2km from the project site in the marine area). No mapping of the distribution of this habitat within the site has been carried out so far. The nearest surface of the habitat (BMF observations in 2023), not mentioned previously, was located at approx. 500 m south from the pipeline, outside the boundaries of ROSAC0273 and overlaps the position of anchor T6.3	Observations in the 2023 project area	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unknown (in PM) and Good (in the updated SS) Clarifying the conservation status within 2 years from the issue of the ANANP Decizion	Improving or maintaining the conservation status	Ecological condition of the water based on the ecological indicators	Ecological status rating	_	_	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in relation to the pollutant concentration valuesin water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant
22	ROSAC0273 Marine area of Cape Tuzla	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore, up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Population size	Number of individuals	_	_	Must be defined within 3 years	NO	The activities carried out by the project near the site ROSAC0273 are not likely to affect the size of the*Alosa immaculata* population. Excavation activities, through the turbidity generated, can create a temporary barrier in the migration path of the species. This barrier will not prevent the migration of the species to the spawning areas represented by the rivers in the north-west of the Black Sea.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
23	ROSAC0273 Marine area of Cape Tuzla	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore, up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Composition of the population on age classes	Presence of juvenile fish in capture at scientific fishing with tawl on the shore (individuals/ ton)	≥3 ind./ton	_	At least 3	NO	Project activities cannot influence the presence of juveniles in captures. Their presence is dependent on other factors such as: the physiology of the species, the survival of juveniles and fishing captures.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
24	ROSAC0273 Marine area of Cape Tuzla	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore, up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Habitat surface adecvat speciei	ha	_	_	Must be defined within 3 years	NO	Project activities will not contribute to the degradation of the habitat.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
25	ROSAC0273 Marine area of Cape Tuzla	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore, up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Invasive/non-native fish species	Presence/absence Abundence	No invasive/non-native fish species were identified acc. to PM	_	Absence 0	NO	Ships used in the project will not contribute to the introduction of invasive/non-native fish species. In accordance with the IMO convention on the management of ballast water and sediments, ships coming from other regions of the globe in the Black Sea, replace ballast water periodically, as well as at the entrance to the Black Sea (at a distance of at least 200 miles from by the port of destination).	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
26	ROSAC0273 Marine area of Cape Tuzla	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore, up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Ecological condition of the water body based on the physical and chemical indicators	Ecological status rating	_	_	At least good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physico-chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physico-chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
27	ROSAC0273 Marine area of Cape Tuzla	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore, up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Ecological condition of the water body based on the ecological indicators	Ecological status rating	_	_	At least good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in relation to the pollutant concentration valuesin water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant
28	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Population size	Number of individuals	_	_	Must be defined within 3 years	NO	The activities carried out by the project near site ROSAC0273 are not likely to affect the population size of *Alosa tanaica* . Excavation activities, through the turbidity generated, can create a temporary barrier in the migration path of the species. This barrier will not prevent the migration of the species to the spawning areas represented by the rivers in the north-west of the Black Sea.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
29	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Population density	Number of individuals/100 m2	No information is available.	_	Must be defined within 3 years	NO	The activities carried out by the project near site ROSAC0273 are not likely to affect the population size of *Alosa tanaica* . Excavation activities, through the turbidity generated, can create a temporary barrier in the migration path of the species. This barrier will not prevent the migration of the species to the spawning areas represented by the rivers in the north-west of the Black Sea.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
30	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Composition of the population on age classes	Presence of juvenile fish in scientific fishing by trawl on the shore (individuals / ton)	≥3 ind./ton	_	At least 3	NO	Project activities cannot influence the presence of juveniles in captures. Their presence is dependent on other factors such as: the physiology of the species, the survival of juveniles and fishing captures.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
31	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Habitat surface	ha	_	_	Must be defined within 3 years	NO	Project activities will not contribute to the degradation of the habitat.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
32	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Invasive/non-native fish species	Presence/absence Abundance	No invasive/non-native fish species were identified acc. to PM	_	Absence 0	NO	Ships used in the project will not contribute to the introduction of invasive/non-native fish species. In accordance with the IMO convention on the management of ballast water and sediments, ships coming from other regions of the globe in the Black Sea, replace ballast water periodically, as well as at the entrance to the Black Sea (at a distance of at least 200 miles from by the port of destination).	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
33	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Ecological condition of the water body based on the physical and chemical indicators	Ecological status rating	_	_	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physico-chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physico-chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
34	ROSAC0273 Marine area of Cape Tuzla	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, towards the mouths of the Danube, in spring. The species is present on the entire surface of the site and over the entire surface of the project, up to a water depth of 40-50 m.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Favourable	Maintaining the conservation status	Ecological condition of the water body based on the ecological indicators	Ecological status rating	_	_	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in relation to the pollutant concentration valuesin water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant
35	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Population size	Number of individuals	5	20	At least 20	NO	The noise generated will temporarily reduce the number of*Tursiops truncatus* specimens present within a radius of 100 m around the work areas, but will not affect the population size. No injuries or accidental killings of cetaceans are anticipated as a result of the proposed works in the ANPIC area.	Not applicable	Insignificant	Within the construction activities in the shore area, the main activities generating vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period of these activities, specimens of *Tursiops truncatus ponticus* will move away from the area where works are carried out. Specimens of *Tursiops truncatus ponticus* will not be affected by the noise and vibrations generated so that cases of accidental injury or killing occur and will return to the area after the cessation of construction activities.	Not applicable	Insignificant
36	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Population size trend	Reproductive unit trend	_	_	Stable or growing	NO	The activities carried out in the vicinity of the ROSAC0273 site will not contribute to affecting the size of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
37	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Population structure	Structure on age classes	_	_	Presence of al generations	NO	The activities carried out in the vicinity of the ROSAC0273 site will not contribute to affecting the age classs structure of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
38	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Habitat surface	Ha	_	_	At least 4,900	NO	The activities carried out within the project will not affect the supporting capacity of the habitats inside the ANPIC.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
39	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	A monitoring program must be implemented within 2 years from the issue of the ANANP Decision	_	Without a significant decrease of the spatial, temporal pattern or of the intensity of use of habitats other than those resulting from natural variations	YES	Specimens of *Tursiops truncatus ponticus* will avoid the work area due to the vibrations and noise produced by the tunnel boring and excavation activities.	Insignificant change in the pattern of spatial, temporal distribution or intensity of habitat use	Insignificant	Within the construction activities in the shore area, the main activities generating vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period of these activities, specimens of *Tursiops truncatus ponticus* will move away from the area where works are carried out. Specimens of *Tursiops truncatus ponticus* will not be affected by the noise and vibrations generated so that cases of accidental injury or killing occur and will return to the area after the cessation of construction activities. The distribution pattern will not be affected in the medium or long term.	Not applicable	Insignificant
40	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Size and diversity of prey species	Number of fish species Fish species abundance	_	_	Must be defined within 2 years	YES	The activities carried out within the project will result in the temporarly driving away fish species from the work area.	Temporary decrease in the presence of fish species in the work area	Insignificant	The building activities that will take place near site ROSAC0273 will contribute to the temporary increase in turbidity, as well as the generation of vibrations and noises in the aquatic environment. These will have directly result in driving away fish populations from the work area. This will be temporary while the works are being carried out and will not cause mortality among fish or cetacean species, which are highly mobile organisms.	Not applicable	Insignificant
41	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Ecological condition of the water based on the physical and chemical indicators	Ecological status rating	_	_	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physico-chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
42	ROSAC0273 Marine area of Cape Tuzla	Mammals	1349	*Tursiops truncatus*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable - inadequate	Improving the conservation status	Ecological condition of the water based on the ecological indicators	Ecological status rating	_	_	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in relation to the pollutant concentration valuesin water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant

It. No	ANPIC code and name	Natura 2000 Components	Natura 2000 code	Habitat/ species scientific name	Location in relation to the project (in metres)	Spatial data source	Source of information	Conservation state	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Impact quantification (u.m.)	Potential impact fwithout measures)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
43	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Population size	Number of individuals	5	20	At least 20	NO	The noise generated will temporarily reduce the number of *Phocoena phocoena relicta* specimens present within a radius of 920 m around the work areas, but will not affect the population size. No injuries or accidental killings of cetaceans are anticipated as a result of the proposed works in the ANPIC area.	Not applicable	Insignificant	Within the construction activities in the shore area, the main activities generating vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period of these activities, specimens of *Phocoena phocoena relicta* will move away from the area where works are carried out. Specimens of *Phocoena phocoena relicta* will not be affected by the noise and vibrations generated so that cases of accidental injury or killing occur and will return to the area after the cessation of construction activities.	Not applicable	Insignificant
44	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Population size trend	The tendency of reproductive units	–	–	Stable or growing	NO	The activities carried out in the vicinity of site ROSAC0273 will not affect the population size	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
45	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Population structure	Structure on ages	–	–	Presence of al generations	NO	The activities carried out in the vicinity of site ROSAC0273 will not affect the age class structure of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
46	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Habitat surface	Ha	–	–	At least 4,900	NO	The activities carried out in the vicinity of site ROSAC0273 will not affect the conservation status of the habitats.	Not applicable	Insignificant	The project activities will not affect the supporting capacity of the habitats in the ANPIC.	Not applicable	Insignificant
47	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	–	–	Without a significant decrease of the spatial, temporal pattern or of the intensity of use of habitats other than those resulting from natural variations	YES	*Phocoena phocoena relicta* specimens will avoid the work area (within a maximum radius of 920 m) due to the vibrations and noise produced by the tunnel boring and excavation activities.	Insignificant change in the pattern of spatial, temporal distribution or intensity of habitat use.	Insignificant	Within the construction activities in the shore area, the main activities generating vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period of these activities, specimens of *Phocoena phocoena relicta* will move away from the area where works are carried out. Specimens of *Phocoena phocoena relicta* will not be affected by the noise and vibrations generated so that cases of accidental injury or killing occur and will return to the area after the cessation of construction activities. The distribution pattern will not be affected in the medium or long term	Not applicable	Insignificant
48	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Size and diversity of prey species	Number of fish species	–	–	Must be defined within 3 years	YES	The activities carried out within the project will result in the temporary driving away fish species from the work area..	Temporary decrease in the presence of fish species in the work area	Insignificant	The building activities that will take place near site ROSAC0273 will contribute to the temporary increase in turbidity, as well as the generation of vibrations and noises in the aquatic environment. These will have directly result in driving away fish populations from the work area. This will be temporary while the works are being carried out and will not cause mortality among fish or cetacean species, which are highly mobile organisms.	Not applicable	Insignificant
49	ROSAC0273 Marine area of Cape Tuzla	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Ecological condirtion of the water based on the physical and chemical indicators	Ecological status rating	–	–	At least good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
50	50	Mammals	1351	*Phocoena phocoena*	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	Observations in the 2018-2019, 2023 project area Management plan	Management plan Specific Conservation Objectives (SCO) acc. to ANANP Decision Data from observations in the 2018-2019, 2023 project influence area	Unfavourable-serious	Improving the conservation status	Ecological condition of the water based on the ecological indicators	Ecological status rating	–	–	At least good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in relation to the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body inside the ANPIC.	Not applicable	Insignificant

Ir. no.	ANPIC code and name	Componente Natura 2000	Natura 2000 Code	scientific name of the species	Presence type (only for birds)	Location in relation to the project (in metres)	Annex I (only for birds)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameters	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	ROSPA0076 The Black Sea	Birds	A396	*Branta ruficollis*	passage	The species was noticed in the project area in the 2018-2019 monitoring campaign, at a distance of approx. 1.4 km from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	200	300	250	NO	The species can be seen only in the passage. There is no risk of collisio because the species flies at sufficiently high altitudes. The species doe not use the water surface inside the ANPIC as a feeding and/or resting place	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
2	ROSPA0076 The Black Sea	Birds	A396	*Branta ruficollis*	passage	The species was noticed in the project area in the 2018-2019 monitoring campaign, at a distance of approx. 1.4 km from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
3	ROSPA0076 The Black Sea	Birds	A396	*Branta ruficollis*	passage	The species was noticed in the project area in the 2018-2019 monitoring campaign, at a distance of approx. 1.4 km from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	The species does not use the arable land or the water surface in the project area as feeding, resting and/or lovernight stay place.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
4	ROSPA0076 The Black Sea	Birds	A396	*Branta ruficollis*	passage	The species was noticed in the project area in the 2018-2019 monitoring campaign, at a distance of approx. 1.4 km from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	ha	_	_	31,100	NO	The project will not affect this parameter. No permanent constructions will be made in the protected natural area. There will be a temporary occupation of the water surface by barge and support vessels involved in coastal water activities and offshore pipeline laying activities, but the species uses the surface of ROSPA0076 only for passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
5	ROSPA0076 The Black Sea	Birds	A196	*Chlidonias hybridus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was also noticed in the 2023 monitoring campaign, at a distance of approx. 345 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	4000	5000	at least 4.500	NO	There will be no deaths among the population of Chlidonias hybridus	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
6	ROSPA0076 The Black Sea	Birds	A196	*Chlidonias hybridus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was also noticed in the 2023 monitoring campaign, at a distance of approx. 345 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
7	ROSPA0076 The Black Sea	Birds	A196	*Chlidonias hybridus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was also noticed in the 2023 monitoring campaign, at a distance of approx. 345 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	ha	_	_	At least 40.500	NO	The project will not affect this parameter. No permanent constructions will be made in the protected area (the marine area). There will be a temporary occupation of the water surface by the barge and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
8	ROSPA0076 The Black Sea	Birds	A196	*Chlidonias hybridus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was also noticed in the 2023 monitoring campaign, at a distance of approx. 345 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	There are no favorable habitats for the species on the onshore side of the project. On the offshore side, the species is in the passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
9	ROSPA0076 The Black Sea	Birds	A196	*Chlidonias hybridus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was also noticed in the 2023 monitoring campaign, at a distance of approx. 345 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project.	Realizarea lucrărilor de excavare din zona de mal doar în perioade cu mare calmă. Realizarea planurilor de intervenție în caz de poluare accidentală. Prezența la bordul barjelor și navelor a echipamentelor de intervenție în caz de poluare accidentală.	Insignificant
10	ROSPA0076 The Black Sea	Birds	A196	*Chlidonias hybridus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was also noticed in the 2023 monitoring campaign, at a distance of approx. 345 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected.	The activities carried out within the project will not contribute to the deterioration of the biological elements that define the ecological state of water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were noticed in relation to the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Possible temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological state of the water body in the ANPIC.	Not applicable	Insignificant
11	ROSPA0076 The Black Sea	Birds	A197	*Chlidonias niger*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the location. The species was noticed in the project area in the 2023 monitoring campaign, at a distance of approx. 275 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	120	140	130	NO	There will be no deaths among the population of Chlidonias niger.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

12	ROSPA0076 The Black Sea	Birds	A197	*Chlidonias niger*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the location. The species was noticed in the project area in the 2023 monitoring campaign, at a distance of approx. 275 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
13	ROSPA0076 The Black Sea	Birds	A197	*Chlidonias niger*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the location. The species was noticed in the project area in the 2023 monitoring campaign, at a distance of approx. 275 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	at least 90.500	NO	The project will not affect this parameter. No permanent constructions will be made in the protected area (the marine area). There will be a temporary occupation of the water surface by the barge and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
14	ROSPA0076 The Black Sea	Birds	A197	*Chlidonias niger*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the location. The species was noticed in the project area in the 2023 monitoring campaign, at a distance of approx. 275 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	There are no favorable habitats for the species on the onshore side of the project. On the offshore part of the project, the species will be in the passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
15	ROSPA0076 The Black Sea	Birds	A197	*Chlidonias niger*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the location. The species was noticed in the project area in the 2023 monitoring campaign, at a distance of approx. 275 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	NO	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project.	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships.	Insignificant
16	ROSPA0076 The Black Sea	Birds	A197	*Chlidonias niger*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the location. The species was noticed in the project area in the 2023 monitoring campaign, at a distance of approx. 275 m from the project location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
17	ROSPA0076 The Black Sea	Birds	A038	*Cygnus cygnus*	wintering	According to the data in the Management Plan (2014-2015), the species is not present on site, in the project area being reported at approx. 8 km south and 17,5 km north from the project area. The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size during the wintering	Number of individuals	1,000	1,500	1,250	NO	The species was not seen in the project area and is not reported in the Management Plan as being present in the project implementation area. Its presence was not reported even during field activities. It is unlikely that there will be any victims as a result of the activities required for the implementation and operation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
18	ROSPA0076 The Black Sea	Birds	A038	*Cygnus cygnus*	wintering	According to the data in the Management Plan (2014-2015), the species is not present on site, in the project area being reported at approx. 8 km south and 17,5 km north from the project area. The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
19	ROSPA0076 The Black Sea	Birds	A038	*Cygnus cygnus*	wintering	According to the data in the Management Plan (2014-2015), the species is not present on site, in the project area being reported at approx. 8 km south and 17,5 km north from the project area. The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	At least 62.200	NO	The project will not lead to the permanent occupation of the feeding habitat outside the natural protected area, nor of the aquatic habitats on the site. The project will not permanently occupy the water surface. No constructions will be carried out inside the protected natural area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
20	ROSPA0076 The Black Sea	Birds	A038	*Cygnus cygnus*	wintering	According to the data in the Management Plan (2014-2015), the species is not present on site, in the project area being reported at approx. 8 km south and 17,5 km north from the project area. The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	–	–	Without significant decreases other than those resulting from natural variations	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
21	ROSPA0076 The Black Sea	Birds	A002	*Gavia arctica*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. It was identified in the location area druring the on-site campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size during the wintering	Number of individuals	230	300	265	NO	The species can use the water surface during periods of passage and during wintering. There will be no deaths among the population of Gavia arctica, under normal operating conditions of vessels involved in the works carried out in coastal waters.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

22	ROSPA0076 The Black Sea	Birds	A002	*Gavia arctica*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. It was identified in the location area druring the on-site campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
23	ROSPA0076 The Black Sea	Birds	A002	*Gavia arctica*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. It was identified in the location area druring the on-site campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	ha	_	_	105,100	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected natural area. There will be a temporary occupation of the water surface by the barge and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
24	ROSPA0076 The Black Sea	Birds	A002	*Gavia arctica*	wintering	According to the information in the Management Plan and the distribution maps,as well as the information reported by Romania for the Directive Birds in 2013, the species is reported on site in the project area. Observations on site in the project area made in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	YES	During the gas pipeline laying activities, certain individuals will avoid the water surface in the work areas, but after the works are completed, the habitat will be used as before the implementation of the project.	The temporarily occupied area shall not exceed 1 ha	Insignificant	Not applicable	Not applicable	Insignificant
25	ROSPA0076 The Black Sea	Birds	A002	*Gavia arctica*	wintering	According to the information in the Management Plan and the distribution maps,as well as the information reported by Romania for the Directive Birds in 2013, the species is reported on site in the project area. Observations on site in the project area made in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships .	Insignificant
26	ROSPA0076 The Black Sea	Birds	A002	*Gavia arctica*	wintering	According to the information in the Management Plan and the distribution maps,as well as the information reported by Romania for the Directive Birds in 2013, the species is reported on site in the project area. Observations on site in the project area made in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	Din analizele de laborator efectuate nu au fost evidențiate depășiri ale valorilor concentrațiilor poluanților în apă și sedimente din zona proiectului conform Ordinului nr 161/2006 . Posibile modificări temporare din compoziția fitoplanctonului și a zoobentosului, în zona lucrărilor de excavare/dragare, nu vor contribui la alterarea calității elementelor biologice care caracterizează starea ecologică a corpului de apă din interiorul ANPIC.	Not applicable	Insignificant
27	ROSPA0076 The Black Sea	Birds	A001	*Gavia stellata*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area (in the location). The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size during the wintering	Number of individuals	100	200	At least 150	NO	The species can use the water surface during passage and wintering periods. There will be no deaths among the population of Gavia stellata, under normal operating conditions of vessels involved in the works carried out in coastal waters.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
28	ROSPA0076 The Black Sea	Birds	A001	*Gavia stellata*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area (in the location). The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	The type of activities that will be carried out on the surface of the site (the marine area) and the equipment used will not contribute to the occurrence of mortalities among bird populations.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
29	ROSPA0076 The Black Sea	Birds	A001	*Gavia stellata*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area (in the location). The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	At least 113.600	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected natural area. There will be a temporary occupation of the water surface by the barge and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
30	ROSPA0076 The Black Sea	Birds	A001	*Gavia stellata*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area (in the location). The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	YES	During gas pipeline laying activities, certain individuals will avoid the water surface in work areas.	The temporarily occupied area shall not exceed 1 ha	Insignificant	After the completion of the works inside ROSPA0076, the habitat will be used in the same way as before the implementation of the project as it was found based on observations made and within the projects for the reduction of coastal erosion on the Romanian Black Sea coast.	Not applicable	Insignificant

31	ROSPA0076 The Black Sea	Birds	A001	*Gavia stellata*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area (in the location). The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	DA	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
32	ROSPA0076 The Black Sea	Birds	A001	*Gavia stellata*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area (in the location). The species was not noticed in the monitoring campaigns carried out in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC.	Not applicable	Insignificant
33	ROSPA0076 The Black Sea	Birds	A189	*Gelochelidon nilotica*	passage	the species was noticed in the project area, in the spring migration of 2023, at at very small distance from the site (approx. 60 m)	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	320	350	At least 335	NO	The species can use the water surface during passage and wintering periods. There will be no deaths among the population of Gelochelidon nilotica under normal operating conditions of vessels involved in the works carried out in coastal waters	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
34	ROSPA0076 The Black Sea	Birds	A189	*Gelochelidon nilotica*	passage	the species was noticed in the project area, in the spring migration of 2023, at at very small distance from the site (approx. 60 m)	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	Tipul activităților care se vor desfășura pe suprafața sitului (the marine area) și echipamentele utilizate nu vor contribui la apariția de mortalități în rândul populațiilor de păsări.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
35	ROSPA0076 The Black Sea	Birds	A189	*Gelochelidon nilotica*	passage	the species was noticed in the project area, in the spring migration of 2023, at at very small distance from the site (approx. 60 m)	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	55,800	NO	The project will not affect this parameter. No permanent constructions will be made in the protected natural area. There will be a temporary occupation of the water surface by barge and support vessels involved in coastal water activities and offshore pipeline laying activities, but the species uses the surface of ROSPA0076 only for passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
36	ROSPA0076 The Black Sea	Birds	A189	*Gelochelidon nilotica*	passage	the species was noticed in the project area, in the spring migration of 2023, at at very small distance from the site (approx. 60 m)	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	Small numbers arrive in the study area. The species was observed only in passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
37	ROSPA0076 The Black Sea	Birds	A189	*Gelochelidon nilotica*	passage	the species was noticed in the project area, in the spring migration of 2023, at at very small distance from the site (approx. 60 m)	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
38	ROSPA0076 The Black Sea	Birds	A189	*Gelochelidon nilotica*	passage	the species was noticed in the project area, in the spring migration of 2023, at at very small distance from the site (approx. 60 m)	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	Creșterea nesemnificativă a concentrației particulilelor solide în suspensie și a nutrienților, pe o perioadă scurtă de timp, nu va afecta comunitățile planctonice și bentice din cadrul ANPIC și în consecință nu vor fi afectate verigile superioare ale lanțului trofic cum ar fi ihtiofauna, avifauna și mamiferele marine.	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Making intervention plans in case of accidental pollution.	Insignificant
39	ROSPA0076 The Black Sea	Birds	A180	*Larus genei*	passage	The species was reported in the project area in the 2023 campaign, at a distance of approx. 115 m from the location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	1000	1500	1250	NO	The species was reported in 2023 (2 individuals) in the project implementation area. It is unlikely that accidental deaths will occur as a result of the activities required for the implementation and operation of the project.	Not applicable	Insignificant	Not applicable	The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant

40	ROSPA0076 The Black Sea	Birds	A180	*Larus genei*	passage	The species was reported in the project area in the 2023 campaign, at a distance of approx. 115 m from the location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
41	ROSPA0076 The Black Sea	Birds	A180	*Larus genei*	passage	The species was reported in the project area in the 2023 campaign, at a distance of approx. 115 m from the location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	43,100	NO	The project will not affect this parameter. No permanent constructions will be made in the protected natural area. There will be a temporary occupation of the water surface by barge and support vessels involved in coastal water activities and offshore pipeline laying activities, but the species uses the surface of ROSPA0076 only for passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
42	ROSPA0076 The Black Sea	Birds	A180	*Larus genei*	passage	The species was reported in the project area in the 2023 campaign, at a distance of approx. 115 m from the location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	The species can be seen only in passage, along the shoreline. The project does not cause a barrier effect.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
43	ROSPA0076 The Black Sea	Birds	A180	*Larus genei*	passage	The species was reported in the project area in the 2023 campaign, at a distance of approx. 115 m from the location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
44	ROSPA0076 The Black Sea	Birds	A180	*Larus genei*	passage	The species was reported in the project area in the 2023 campaign, at a distance of approx. 115 m from the location.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
45	ROSPA0076 The Black Sea	Birds	A176	*Larus melanocephalus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	12000	15000	At least 13500	NO	There will be no mortality in the population of*Larus melanocephalus*. The species is adapted to human presence and anthropic activities.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
46	ROSPA0076 The Black Sea	Birds	A176	*Larus melanocephalus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
47	ROSPA0076 The Black Sea	Birds	A176	*Larus melanocephalus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	ha	_	_	107,300	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
48	ROSPA0076 The Black Sea	Birds	A176	*Larus melanocephalus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	The species is adapted to the presence of ships in feeding and resting habitats. The activities proposed by the project are not likely to affect the distribution pattern in ROSPA0076.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
49	ROSPA0076 The Black Sea	Birds	A176	*Larus melanocephalus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships .	Insignificant

50	ROSPA0076 The Black Sea	Birds	A176	*Larus melanocephalus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
51	ROSPA0076 The Black Sea	Birds	A177	*Larus minutus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	_	_	11,000	NO	There will be no mortality in the population of*Larus minutus*. The species is adapted to human presence and anthropic activities.The activities proposed by the project are not likely to affect the distribution pattern in ROSPA0076.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
52	ROSPA0076 The Black Sea	Birds	A177	*Larus minutus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
53	ROSPA0076 The Black Sea	Birds	A177	*Larus minutus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	102,900	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
54	ROSPA0076 The Black Sea	Birds	A177	*Larus minutus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	The species is adapted to human presence and anthropic activities. The activities proposed by the project are not likely to affect the distribution pattern in ROSPA0076.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
55	ROSPA0076 The Black Sea	Birds	A177	*Larus minutus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
56	ROSPA0076 The Black Sea	Birds	A177	*Larus minutus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
57	ROSPA0076 The Black Sea	Birds	A068	*Mergus albellus*	wintering	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 43 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size during the wintering	Number of individuals	1,000	1,500	1,250	NO	The species is not reported in the Management Plan as being present in the project implementation area. The presence in the project area was not reported even during field monitoring activities. It is unlikely that victims will occur as a result of the activities required for the implementation and operation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
58	ROSPA0076 The Black Sea	Birds	A068	*Mergus albellus*	wintering	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 43 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	Nu exista relatie de cauzalitate	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
59	ROSPA0076 The Black Sea	Birds	A069	*Mergus albellus*	wintering	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 43 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	58,900	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

60	ROSPA0076 The Black Sea	Birds	A069	*Mergus albellus*	wintering	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 43 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NU	The species was not seen in the aquatic habitats in the project area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
61	ROSPA0076 The Black Sea	Birds	A070	*Mergus albellus*	wintering	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 43 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments.There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships .	Insignificant
62	ROSPA0076 The Black Sea	Birds	A070	*Mergus albellus*	wintering	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 43 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
63	ROSPA0076 The Black Sea	Birds	A020	*Pelecanus crispus*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 84 km) from the project location. The species was seen in the passage, 70 m from the location, during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	70	120	At least 95	NO	Individuals of the given species (3 individuals) can be observed in the coastal and marine habitats during migration periods, but there will be no mortality among the population of P. crispus, under normal operating conditions of the vessels involved in the works provided by the project. The observed individuals use the marine surface in the project area only occasionally and make long-distance feeding trips.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
64	ROSPA0076 The Black Sea	Birds	A020	*Pelecanus crispus*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 84 km) from the project location. The species was seen in the passage, 70 m from the location, during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
65	ROSPA0076 The Black Sea	Birds	A020	*Pelecanus crispus*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 84 km) from the project location. The species was seen in the passage, 70 m from the location, during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	80,400	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
66	ROSPA0076 The Black Sea	Birds	A020	*Pelecanus crispus*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 84 km) from the project location. The species was seen in the passage, 70 m from the location, during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	YES	During gas pipeline laying activities, certain individuals will avoid the water surface in work areas.	The temporarly occupied surface shall not exceed 1 ha	Insignificant	After the completion of the works inside ROSPA0076, the habitat will be used in the same way as before the implementation of the project as it was found based on observations made and within the projects for the reduction of coastal erosion on the Romanian Black Sea coast	Not applicable	Insignificant
67	ROSPA0076 The Black Sea	Birds	A020	*Pelecanus crispus*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 84 km) from the project location. The species was seen in the passage, 70 m from the location, during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant

68	ROSPA0076 The Black Sea	Birds	A020	*Pelecanus crispus*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 84 km) from the project location. The species was seen in the passage, 70 m from the location, during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
69	ROSPA0076 The Black Sea	Birds	A170	*Phalaropus lobatus*	passage	According to the data in the Management Plan (2014-2015) the species was not seen on site. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	700	1,200	950	NO	The species is not reported in the Management Plan as being present in the project implementation area. The presence in the project area was not reported even during field activities. The species prefers lacustrine areas, including paramarine lakes.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
70	ROSPA0076 The Black Sea	Birds	A170	*Phalaropus lobatus*	passage	According to the data in the Management Plan (2014-2015) the species was not seen on site. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	No	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
71	ROSPA0076 The Black Sea	Birds	A170	*Phalaropus lobatus*	passage	According to the data in the Management Plan (2014-2015) the species was not seen on site. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	25,000	No	The habitats characteristic to the species cannot be found in the project area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
72	ROSPA0076 The Black Sea	Birds	A170	*Phalaropus lobatus*	passage	According to the data in the Management Plan (2014-2015) the species was not seen on site. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	No	There is no causal relationship. The distribution pattern of the species in ROSPA0076 is not known. The presence of the species in the site requires confirmation as long as no monitoring program carried out from the preparation of the PM (inclusive) until the time of preparation of this documentation has signaled the passage of the species in the ANPIC.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
73	ROSPA0076 The Black Sea	Birds	A170	*Phalaropus lobatus*	passage	According to the data in the Management Plan (2014-2015) the species was not seen on site. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
74	ROSPA0076 The Black Sea	Birds	A170	*Phalaropus lobatus*	passage	According to the data in the Management Plan (2014-2015) the species was not seen on site. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
75	ROSPA0076 The Black Sea	Birds	A464	*Puffinus yelkouan*	passage	According to the data in the Management Plan (2014-2015) the species was identified on site, being reported at more than 120 km north from the project location. However, in 2023, the species was seen in the passage in the project area (including the location).	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	10,000	17,000	13,500	No	Large numbers make yearly trip along the coastal area for feeding. The likelihood of collision with the ships involved in the project is very low. The main threats to the species during passage are related to bycatch in fishing nets and oil pollution of seawater	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
76	ROSPA0076 The Black Sea	Birds	A464	*Puffinus yelkouan*	passage	According to the data in the Management Plan (2014-2015) the species was identified on site, being reported at more than 120 km north from the project location. However, in 2023, the species was seen in the passage in the project area (including the location).	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	No	The analyzed project is not able to influence the size of the population. *P. yelkouan* is a migratory species. The population size is influenced by hazards present in nesting habitats. The size of the population can also be influenced in case of major oil pollution accidents.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
77	ROSPA0076 The Black Sea	Birds	A464	*Puffinus yelkouan*	passage	According to the data in the Management Plan (2014-2015) the species was identified on site, being reported at more than 120 km north from the project location. However, in 2023, the species was seen in the passage in the project area (including the location).	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	ha	_	_	1,500	No	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

78	ROSPA0076 The Black Sea	Birds	A464	*Puffinus yelkouan*	passage	According to the data in the Management Plan (2014-2015) the species was identified on site, being reported at more than 120 km north from the project location. However, in 2023, the species was seen in the passage in the project area (including the location).	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	–	–	Without significant decreases other than those resulting from natural variations	No	The activities proposed by the project will not generate a barrier effect to the migration of the species*P. yelkouan*	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
79	ROSPA0076 The Black Sea	Birds	A464	*Puffinus yelkouan*	passage	According to the data in the Management Plan (2014-2015) the species was identified on site, being reported at more than 120 km north from the project location. However, in 2023, the species was seen in the passage in the project area (including the location).	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	–	–	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
80	ROSPA0076 The Black Sea	Birds	A464	*Puffinus yelkouan*	passage	According to the data in the Management Plan (2014-2015) the species was identified on site, being reported at more than 120 km north from the project location. However, in 2023, the species was seen in the passage in the project area (including the location).	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	–	–	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
81	ROSPA0076 The Black Sea	Birds	A195	*Sterna albifrons*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 320 m.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	300	500	400	NO	There will be no deaths among the population of Sterna albifrons. The species migrates along the shore being rarely seen (2 individuals in 2023) in the marine sector of the project area .	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
82	ROSPA0076 The Black Sea	Birds	A195	*Sterna albifrons*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 320 m.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	–	–	Stable or growing	NO	Tipul activităților care se vor desfășura pe suprafața sitului (the marine area) și echipamentele utilizate nu vor contribui la apariția de mortalități în rândul populațiilor de păsări.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
83	ROSPA0076 The Black Sea	Birds	A195	*Sterna albifrons*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 320 m.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	–	–	26,300	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
84	ROSPA0076 The Black Sea	Birds	A195	*Sterna albifrons*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 320 m.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	–	–	Without significant decreases other than those resulting from natural variations	NO	Small numbers arrive in the study area. The species was observed only in passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
85	ROSPA0076 The Black Sea	Birds	A195	*Sterna albifrons*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 320 m.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	–	–	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant

86	ROSPA0076 The Black Sea	Birds	A195	*Sterna albifrons*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 320 m.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
87	ROSPA0076 The Black Sea	Birds	A190	*Sterna caspia*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	500	1,000	At least 750	NO	There will be no deaths among the population of Sterna caspia, because the species was observed near the shore (<200 m) where no works will be carried out and no vessels involved in the activities provided for in the project will be present.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
88	ROSPA0076 The Black Sea	Birds	A190	*Sterna caspia*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	The type of activities that will be carried out on the surface of the site (the marine area) and the equipment used will not contribute to changes in the size of the population. The Black Sea ROSPA0076 is important for bird migration and wintering, so the possibility of affecting breeding and nesting habitats is excluded.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
89	ROSPA0076 The Black Sea	Birds	A190	*Sterna caspia*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	92,400	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
90	ROSPA0076 The Black Sea	Birds	A190	*Sterna caspia*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	Small numbers arrive in the study area. The species was observed only in passage.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
91	ROSPA0076 The Black Sea	Birds	A190	*Sterna caspia*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant
92	ROSPA0076 The Black Sea	Birds	A190	*Sterna caspia*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the on-site campaign carried out in 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
93	ROSPA0076 The Black Sea	Birds	A193	*Sterna hirundo*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaning the passage population	Number of individuals	8,000	10,000	At least 9.000	NO	There will be no deaths among the population of Sterna hirundo. The species can often be seen feeding near ships without any potential risk of collision being identified.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
94	ROSPA0076 The Black Sea	Birds	A193	*Sterna hirundo*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	The type of activities that will be carried out on the surface of the site (the marine area) and the equipment used will not contribute to changes in the size of the population. The Black Sea ROSPA0076 is important for bird migration and wintering, so the possibility of affecting breeding and nesting habitats is excluded.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

95	ROSPA0076 The Black Sea	Birds	A193	*Sterna hirundo*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	131,900	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
96	ROSPA0076 The Black Sea	Birds	A193	*Sterna hirundo*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	The species is adapted to the presence of ships in feeding habitats. The activities proposed by the project are not likely to affect the distribution pattern in ROSPA0076	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
97	ROSPA0076 The Black Sea	Birds	A193	*Sterna hirundo*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships .	Insignificant
98	ROSPA0076 The Black Sea	Birds	A193	*Sterna hirundo*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
99	ROSPA0076 The Black Sea	Birds	A191	*Sterna sandvicensis*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Maintaining the passage population	Number of individuals	_	_	At least 5,600	NO	There will be no deaths among the population of Sterna sandvicensis. The species can often be seen feeding near ships without any potential risk of collision being noticed	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
100	ROSPA0076 The Black Sea	Birds	A191	*Sterna sandvicensis*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Population size trend	Change %	_	_	Stable or growing	NO	The type of activities that will be carried out on the surface of the site (the marine area) and the equipment used will not contribute to changes in the size of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
101	ROSPA0076 The Black Sea	Birds	A191	*Sterna sandvicensis*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Habitat surface	Ha	_	_	At least 92,800	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
102	ROSPA0076 The Black Sea	Birds	A191	*Sterna sandvicensis*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	Without significant decreases other than those resulting from natural variations	NO	The species is adapted to the presence of ships in feeding habitats. The activities proposed by the project are not likely to affect the distribution pattern in ROSPA0076	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
103	ROSPA0076 The Black Sea	Birds	A191	*Sterna sandvicensis*	passage	According to the data in the Management Plan (2014-2015) the species was reported on site, in the project area. The species was noticed in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)	_	_	At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships	Insignificant

104	ROSPA0076 The Black Sea	Birds	A191	*Sterna sandvicensis*	passage	According to the information in the Management Plan and the distribution maps,as well as the information reported by Romania for the Directive Birds in 2013, the species is reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	favourable	maintaining the conservation status	Ecological status rating from the point of view of the biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)	_	_	At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
105	ROSPA0076 The Black Sea	Birds	A050	*Anas penelope*	passage	According to the data in the Management Plan (2014-2015), the species was seen on site in the project influence area. The species was seen in the project area during the on-site campaign carried out in the 2018-2019 period, at a distance of approx. 130 m from the project location.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaning the passage population	Number of individuals in the passage	1,200	1,500	At least 1,350	NO	The species may arrive in short time intervals in the project area, near the shore. The risk of collision is minimal for anatids, due to the fact that they can avoid most obstacles in flight.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
106	ROSPA0076 The Black Sea	Birds	A053	*Anas platyrhynchos*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	7,000	9,000	At least 8,000	NO	The risk of collision is minimal for anatids, due to the fact that they can avoid most obstacles in flight. The species prefers beach cells protected by dikes and harbour enclosures for wintering.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
107	ROSPA0076 The Black Sea	Birds	A051	*Anas strepera*	wintering	The species was noticed in the project area during the campaigns carried on site in 2018-2019, at a distance of approx. 130 m from the project location.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	340	410	At least 375	NO	The risk of collision is minimal for anatids, due to the fact that they can avoid most obstacles in flight. The species prefers beach cells protected by dikes and harbour enclosures for wintering.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
108	ROSPA0076 The Black Sea	Birds	A059	*Aythya ferina*	wintering	According to the data in the Management Plan (2014-2015), the species was seen on site in the project influence area.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	18,000	20,000	At least 19,000	NO	The risk of collision is minimal for anatids, due to the fact that they can avoid most obstacles in flight. The species prefers beach cells protected by dikes and harbour enclosures for wintering.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
109	ROSPA0076 The Black Sea	Birds	A061	*Aythya fuligula*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site at a distance of approx. 1,6 km north from the project location.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	6,300	7,450	At least 6875	NO	The risk of collision is minimal for anatids, due to the fact that they can avoid most obstacles in flight. The species prefers beach cells protected by dikes and harbour enclosures for wintering.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
110	ROSPA0076 The Black Sea	Birds	A067	*Bucephala clangula*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site at a distance of approx. 1,7 km north from the project location.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	1,500	3,000	At least 2,250	NO	The risk of collision is minimal for anatids, due to the fact that they can avoid most obstacles in flight. The species prefers beach cells protected by dikes and harbour enclosures for wintering.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
111	ROSPA0076 The Black Sea	Birds	A125	*Fulica atra*	wintering	The species was noticed in the project area during the on-site campaign carried out in the 2018-2019 period , at a distance of at least. 130 m.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	25,000	40,000	At least 32,500	NO	The species can use the marine habitats in the project area during the transition period and in winter. There will be no mortalities within the Fulica atra population because they prefer beach cells protected by dikes and harbour enclosures for wintering.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
112	ROSPA0076 The Black Sea	Birds	A459	*Larus cachinnans*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project influence area.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaning the passage population	Number of individuals in the passage	25,000	30,000	At least 27,500	NO	There will be no mortality among the population of*Larus cachinnans*. The species is adapted to human presence and anthropic activities.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
113	ROSPA0076 The Black Sea	Birds	A182	*Larus canus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site ,in the project influence area. The species was noticed in the project area during the on-site campaign carried out in the 2018-2019 period, at a distance of approx. 200 m from the location.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaning the passage population	Number of individuals in the passage	12,000	15,000	At least 13,500	NO	There will be no mortality among the population of *Larus canus*. The species is adapted to human presence and anthropic activities	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
114	ROSPA0076 The Black Sea	Birds	A183	*Larus fuscus*	passage	According to the data in the Management Plan (2014-2015), the species was seen on site in the project influence area. The species was noticed in the project area (inclusiv pe amplasament) during the campaigns carried on site in din the 2018-2019 period, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaning the passage population	Number of individuals in the passage	12,000	15,000	At least 13,500	NO	There will be no mortality among the population of*Larus fuscus* because the representatives of this species are adapted to human presence and anthropic activities.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
115	ROSPA0076 The Black Sea	Birds	A179	*Larus ridibundus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was noticed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaning the passage population	Number of individuals in the passage	20,000	50,000	At least 35.000	NO	here will be no mortality among the population of Larus ridibundus. The species is adapted to human presence and anthropic activities	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
116	ROSPA0076 The Black Sea	Birds	A156	*Limosa limosa*	passage	According to the data in the Management Plan (2014-2015), the species was reported north (approx. 17,4 km) si la sud (la cca. 8,3 km) from the project location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaning the passage population	Number of individuals in the passage	2,000	5,000	At least 3.500	NO	The species is not reported to be present in the project implementation area. It is unlikely that there will be any casualties as a result of the activities required for the implementation and operation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

117	ROSPA0076 The Black Sea	Birds	A070	*Mergus merganser*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area. The species was noticed in the project area during the on-site campaign carried out in 2023, at a distance of approx. 115 m.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	120	180	At least 160	NO	Two individuals were observed in the monitoring campaign of 2023. It is unlikely that victims will appear as a result of the activities necessary for the implementation and operation of the project. The species adapted to the presence of crafts in coastal waters, including recreational and fishing ones.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
118	ROSPA0076 The Black Sea	Birds	A069	*Mergus serrator*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area, în nord la cca. 1,5 km nord. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Maintaining the passage population	Number of individuals in the passage	230	340	At least 285	NO	The species was rarely observed in the project area. It is unlikely that there will be any victims as a result of the activities required for the implementation and operation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
119	ROSPA0076 The Black Sea	Birds	A017	*Phalacrocorax carbo*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. Widespread species often observed in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	10,000	27,000	At least 18.500	NO	Common species, adapted to human presence and anthropogenic activities. The type of activities that will be carried out on the surface of the site (the marine area) and the equipment used will not contribute to the occurrence of mortalities among bird populations.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
120	ROSPA0076 The Black Sea	Birds	A005	*Podiceps cristatus*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was seen in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size in the passage	Number of individuals in the passage	4,500	6,000	At least 5.250	NO	There will be no deaths among the population of Podiceps cristatus resulting from the collision of birds with the elements built on land or with the vessels used during the implementation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
121	ROSPA0076 The Black Sea	Birds	A006	*Podiceps grisegena*	passage	According to the data in the Management Plan (2014-2015), the species was reported on site, in the project area, 1 individ at a distance of approx. 1,7 km from the location. The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size in the passage	Number of individuals in the passage	500	1,000	At least 750	NO	The species was rarely seen in the project area. There will be no deaths among the population of Podiceps grisegena resulting from th collision of birds with the elements built on land or with the vessels used during the implementation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
122	ROSPA0076 The Black Sea	Birds	A008	*Podiceps nigricollis*	wintering	According to the data in the Management Plan (2014-2015), the species was reported on site in the project area. The species was seen in the project area (including the location) during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size during the wintering	Number of individuals during winter	2,000	20,000	At least 11.000	NO	There will be no deaths among the population of Podiceps nigricollis resulting from the collision of birds with the elements built on land or with the vessels used during the implementation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
123	ROSPA0076 The Black Sea	Birds	A004	*Tachybaptus ruficollis*	passage	According to the data in the Management Plan (2014-2015), the species was reported south from the project location (approx. 8 km). The species was not seen in the project area during the campaigns carried on site in 2018-2019, 2023.	Species with regular migration mentioned in Annex I of the Birds Directive	Management plan, observations in the project area made in 2018-2019, 2023	Management plan and OSC (ANANP Decision no. 195/2023), data from observations in the project area made in 2018-2019, 2023	good	maintaining the conservation status	Population size in the passage	Number of individuals in the passage	1,200	1,500	At least 1.350	NO	There will be no deaths among the population of Tachybaptus ruficollis resulting from the collision of birds with the elements built on land or with the vessels used during the implementation of the project.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
124										good		Population size trend	Change %			Stable or growing	NO	The type of activities that will be carried out on the surface of the site (the marine area) and the equipment used will not contribute to changes in the size of the populations.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
125												Habitat surface	ha			At least 31.100	NO	The project will not affect feeding and resting habitat. No permanent constructions will be made in the protected area. There will be a temporary occupation of the water surface by the barges and support vessels involved in the excavation activities in the shore area and in the pipe laying activities in the offshore area	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
126												Distribution pattern	Spatial and temporal pattern, intensity of habitat use			Without significant decreases other than those resulting from natural variations	NO	Species adapted to the presence of ships in feeding habitats. The activities proposed by the project are not likely to affect the distribution pattern in ROSPA0076	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
127												Ecological status rating from the point of view of the quality physical and chemical elements	Ecological status rating (1-very good, 2-good, 3 moderate)			At least good (2)	YES	The activities in the shore area will contribute to the temporary increase of local turbidity in the area where the excavations will be carried out. Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase in nutrients and possibly some pollutants present in the sediments. There is a risk of accidental oil or fuel pollution from machinery or vessels involved in the construction process.	The activities carried out within the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration by sediment resuspension will not contribute to the modification of the physical and chemical indicators that characterize the ecological status of the water body. Thus, the good chemical status according to the Updated Management plan of the Danube River, Danube Delta, Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of the barges and ships .	Insignificant
128												Ecological status rating from the point of view of the quality biological elements	Ecological status rating (1-very good, 2-good, 3 average, 5-bad)			At least good (2)	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities in the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected .	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological status of water bodies	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments from the project area according to Order no. 161/2006. Potential temporary changes in the composition of phytoplankton and zoobenthos, in the area of excavation/dredging works, will not contribute to altering the quality of the biological elements that characterize the ecological status of the water body in the ANPIC	Not applicable	Insignificant
129													Ecological status rating (1-very good, 2-good, 3 average, 5-bad)										

It no.	ANPIC code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in meters)	Spatial data source	Information source	Conservation status	Conservation objective	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	ROSCI031 1 Viteaz Canyon	Habitats	1170	Reefs	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the conservation status	Habitat surface	ha	No information is available	_	At least 5050	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	Without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1170 was not reported	Not applicable	Insignificant
2	ROSCI031 1 Viteaz Canyon	Habitats	1170	Reefs	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Habitat subtype surface	ha	No information is available about the subtype surface	_	Must be defined within 2 years	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1170 was not reported	Not applicable	Insignificant
3	ROSCI031 1 Viteaz Canyon	Habitats	1170	Reefs	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Habitat spatial integrity/ connectivity	number of fragments	No information is available about the habitat fragmentation on site	_	Must be defined within 2 years	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1170 was not reported	Not applicable	Insignificant
4	ROSCI031 1 Viteaz Canyon	Habitats	1170	Reefs	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Water ecological status based on the physical and chemical factors	Ecological status rating	_	_	Good ecological status	NO	This parameter must be redefined in compliance with the Marine Strategy Framework Directive. Thus, the following MSFD descriptors will not be affected since the substances listed in the indicators (including the priority ones) are not found in the composition of the chemical products used: D**8 Contaminants; D9 Contaminant concentrations present in fish and other living resources intended for human consumption**. The substances checked for presence in water, sediment and living organisms are: organochlorine pesticides, heavy metals, aromatic hydrocarbons, chlorinated biphenyls. The substances listed above are not found in the composition of the effluent.	Not applicable	Insignificant	The sufficiently large distance from the discharge area to the protected natural area ensures the dilution of these pollutants and the concentration of substances inside the protected natural area will be very low.	Preparing intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships.	Insignificant
5	ROSCI031 1 Viteaz Canyon	Habitats	1170	Reefs	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Water ecological status based on the ecological indicators	Ecological status rating	_	_	Good ecological status	YES	This parameter must be redefined in compliance with the Marine Strategy Framework Directive. The cooling water, treated with sodium hypochlorite (biocide) and then discharged through the caisson can affect the zooplankton in the water column in a greater proportion than the other chemicals in the composition of the effluent, because this group of organisms shows an increased sensitivity to sodium hypochlorite /chlorine. The toxic effect will manifest itself mainly in the discharge area of the effluent, with an uneven distribution in the water column, which will also depend on the physical and chemical, seasonal conditions of the marine environment.	Can be quantified only in the monitoring period in the operation stage	Insignificant	The discharged effluents (including the chlorine resulting from hypochlorite) will comply with all the provisions established by the operating licenses and defined in the national legislation (NTPA 001 - concerning the establishment of pollutant loading limits of industrial and urban wastewater when discharged into natural receivers). Zooplankton biomass values, in general, will not be affected by the substances discharged during the technological process. We estimate that some changes in the biomass will be detectable only if the sampling/monitoring point for zooplankton will be located near the Neptun Alpha platform, on the main direction of the effluent plume – southwest (result from the DREAM simulation) .	Carrying out the ecotoxicity study by performing chronic toxicity tests, for all chemical substances that will be discharged into the sea, including biocide and methanol, meant to to validate/prove that the maximum admissible limit values established for discharge into the marine environment, at the level of each chemical substance, ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to accomplish the environmental objectives established by the Marine Strategy Framework Directive (2008/56/EC). If the chronic toxicity study will show negative effects on the biological components of the marine environment, the Client will have the obligation to adapt/reconsider the substances used (Action in compliance with the requirements of the Water Rights Permit)	Insignificant
6	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Habitat surface Surface of subtype 1- Reefs with surface bubble emissions subtype 2- "Pinches"	ha	_	_	At least 15500. Must be defined within 2 years	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	Without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1180 was not reported.	Not applicable	Insignificant
7	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Spatial distribution of the habitat	Spatial pattern	_	_	Without significant decreases of the spatial pattern tiparului spațial	NO	Emisii în apele marine de larg a unor compusi chimici care au potențial de afectare a mediului acvatic se realizează la o distanță de cca. 13,2 km de limita ANPIC. Compușii chimici conținuți în efluent au potențial de afectare a organismele zooplanctonice și zoobentice (nematode și oligochete) în coloana de apă cuprinsă între 40 m si 120 m adâncime, pe o distanță de cca. 7 km de la cheson.	Without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1180 was not reported.	Not applicable	Insignificant
8	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Specii vegetale caracteristice Subtype 1 characteristic vegetal species	Presence/Absence on spatial monitoring unit	_	_	Presence	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	Without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1180 was not reported.	Not applicable	Insignificant

9	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Characteristic invertebrate species	Presence/Absence Number of species/sample	–	–	The presence must be defined within 2 years	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	Without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1180 was not reported.	Not applicable	Insignificant
10	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Species (vegetal and animal) that indicate disturbances	Presence/Absence	No information is available	_	0	NO	Emissions into offshore marine waters of some chemical compounds that have the potential to affect the aquatic environment are carried out at a distance of approx. 13.2 km from the ANPIC limit. The chemical compounds contained in the effluent have the potential to affect zooplankton and zoobenthic organisms (nematodes and oligochaetes) in the water column between 40 m and 120 m deep, over a distance of approx. 7 km from the caisson.	Without habitat surface loss	Insignificant	The modelling that was carried out shows that the plume of effluent likely to affect (EIF >5%) macrozoobenthos and zooplankton will extend over a distance of approx. 7 km in the south-west direction and 2 km around the platform in the other directions. Taking into account the distance of approx. 13.2 km from the Neptun Alpha platform to the protected natural area ROSCI0311 Viteaz Canyon, we consider that the risk that this habitat could be damaged is very low. At the same time, following the observations made along the pipeline route and in the area of the Neptun Alpha platform, the presence of habitat 1180 was not reported.	Not applicable	Insignificant
11	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excellent	Maintaining the favourable conservation status	Water ecological status based on the physical and chemical indicators	Ecological status rating	_	_	Good ecological status	NO	This parameter must be redefined in compliance with the Marine Strategy Framework Directive. Thus, the following MSFD descriptors will not be affected since the substances listed in the indicators (including the priority ones) are not found in the composition of the chemical products used: **D8 Contaminants; D9 Contaminant concentrations present in fish and other living resources intended for human consumption**. The substances checked for presence in water, sediment and living organisms are: organochlorine pesticides, heavy metals, aromatic hydrocarbons, chlorinated biphenyls. The substances listed above are not found in the composition of the effluent.	Not applicable	Insignificant	The sufficiently large distance from the discharge area to the protected natural area ensures the dilution of these pollutants and the concentration of substances inside the protected natural area will be very low..	Preparing intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships.	Insignificant
12	ROSCI031 1 Viteaz Canyon	Habitats	1180	Underwater structures created by gas emissions	There is no data for the accurate location of the habitat, Minimum distance approx. 1.26 km from the gas production pipeline and approx. 13.2 km from the Neptun Alpha Platform in the offshore area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Excelentă	Maintaining the conservation status favorabile	Water ecological status based on the ecological indicators	Ecological status rating	_	_	Good ecological status	YES	This parameter must be redefined in compliance with the Marine Strategy Framework Directive. The cooling water, treated with sodium hypochlorite (biocide) and then discharged through the caisson can affect the zooplankton in the water column in a greater proportion than the other chemicals in the composition of the effluent, because this group of organisms shows an increased sensitivity to sodium hypochlorite /chlorine. The toxic effect will manifest itself mainly in the discharge area of the effluent, with an uneven distribution in the water column, which will also depend on the physical and chemical, seasonal conditions of the marine environment	Can be quantified only in the monitoring period in the operation stage	Insignificant	The discharged effluents (including the chlorine resulting from hypochlorite) will comply with all the provisions established by the operating licenses and defined in the national legislation (NTPA 001 - concerning the establishment of pollutant loading limits of industrial and urban wastewater when discharged into natural receivers). Zooplankton biomass values, in general, will not be affected by the substances discharged during the technological process. We estimate that some changes in the biomass will be detectable only if the sampling/monitoring point for zooplankton will be located near the Neptun Alpha platform, on the main direction of the effluent plume – southwest (result from the DREAM simulation).	Carrying out the ecotoxicity study by performing chronic toxicity tests, for all chemical substances that will be discharged into the sea, including biocide and methanol, meant to to validate/prove that the maximum admissible limit values established for discharge into the marine environment, at the level of each chemical substance, ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to accomplish the environmental objectives established by the Marine Strategy Framework Directive (2008/56/EC). If the chronic toxicity study will show negative effects on the biological components of the marine environment, the Client will have the obligation to adapt/reconsider the substances used (Action in compliance with the requirements of the Water Rights Permit)	Insignificant
13	ROSCI031 1 Viteaz Canyon	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Population size	Number of individuals	10	1000	At least 1000	YES	Due to the noise generated by the activity of fixing the jacket of the Neptun Alpha platform, individuals of T. truncatus in the immediate vicinity of the work area may be affected. Very high noise levels (185 dB) can injure or even kill marine mammals.	The affected area(R= 100 m) in the case of the species *T. truncatus* does not overlap the limits of ROSCI0311. Potentially affected 1-5 individuals.	Insignificant (in the case of the species Tursiops truncatus)	Individuals will leave the work area quickly, as soon as the unloading and positioning of the jacket begins, and will not approach the sources of loud noise and vibration until after the disturbing activities have ceased. The duration of these works is short (2-3 days), and the specimens will return to the waters near the platform after the completion of the underwater works.	**Imposing a marine mammal exclusion zone. The platform fixing work will only start if no dolphins are present in the 500m exclusion zone around the work after a 30 minute observation period. 2. In order to avoid the occurrence of potential injuries or accidental killings in the case of cetaceans, as a result of noise and vibration emissions, at the beginning of the work of fixing the pillars to the platform jacket, only 20% of the installation power of for driving such pillars will be used for 120 minutes (soft start procedure), so that individuals in the affected area (3.5 km in the case of T. truncatus and D. delphis; 19-20 km in the case of the P.phocoena species) can safely leave the area affected by the project . The soft start procedure will be applied every time the works of fixing pillars will be interrupted for more than 60 minutes.**	Insignificant
14	ROSCI031 1 Viteaz Canyon	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Population size trend	Reproductive unit trend	_	_	Stable or increasing	NO	The project is not susceptible to impact the trend of the population in ANPIC	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
15	ROSCI031 1 Viteaz Canyon	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Population structure	Structure on age classes	_	_	Presence of all generations	NO	The activities carried out near the ROSCI0311 site will not contribute to affecting the age structure of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
16	ROSCI031 1 Viteaz Canyon	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Habitat surface	Ha	_	_	At least 35.300	NO	Project activities will not affect the support capacity in ANPIC.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

17	ROSCI0311 Viteaz Canyon	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	_	_	No significant decrease in the spatial, temporal pattern or intensity of use of habitats other than those resulting from natural variations	YES	Due to the noise generated by the activity of fixing the jacket of the Neptun Alpha platform, the specimens of T. truncatus will leave and avoid the waters of the assembly area within a radius of approx. 3.5 km.	The affected area (R= 3.5 km) in the case of the species *T. truncatus* does not overlap the limits of ROSCI0311. Potentially affected 8-10 individuals.	Insignificant	The duration of the works is short (2-3 days), and the specimens will return to the waters near the platform after the completion of the underwater works.	Not applicable	Insignificant
18	ROSCI0311 Canionul Viteaz	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Prey species diversity and size	Number of fish species Abundence of fish species	_	_	Must be defined within 2 years	NO	The areas of growth, reproduction and feeding of the main fish species in the Black Sea are concentrated up to the 50 - 60 m isobath and isolated up to depths of maximum 100 m. The site of the exploitation platform is located outside the traditional habitats of the three species of dolphins.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
19	ROSCI0311 Canionul Viteaz	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Water ecological status based on the physical and chemical indicators	Ecological status rating	_	_	Must be defined within 2 years	NO	This parameter must be redefined in compliance with the Marine Strategy Framework Directive. Thus, the following MSFD descriptors will not be affected since the substances listed in the indicators (including the priority ones) are not found in the composition of the chemical products used: **D8 Contaminants; D9 Contaminant concentrations present in fish and other living resources intended for human consumption.** The substances checked for presence in water, sediment and living organisms are: organochlorine pesticides, heavy metals, aromatic hydrocarbons, chlorinated biphenyls. The substances listed above are not found in the composition of the effluent.	Not applicable	Insignificant	The sufficiently large distance from the discharge area to the protected natural area ensures the dilution of these pollutants and the concentration of substances inside the protected natural area will be very low.	Preparing intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships.	Insignificant
20	ROSCI0311 Viteaz Canyon	Mammals	1349	Tursiops truncatus	Species identified the project influence area	GIS coordinates of ROSCI0311 from the MMAP site	Specific Conservation Objectives (SCO)	Unknown - clarification of the conservation status within 2 years from the issue of the ANANP note	Maintaining or improving the conservation status	Water ecological status based on the ecological indicators	Ecological status rating	_	_	Must be defined within 2 years	YES	This parameter must be redefined in compliance with the Marine Strategy Framework Directive. The cooling water, treated with sodium hypochlorite (biocide) and then discharged through the caisson can affect the zooplankton in the water column in a greater proportion than the other chemicals in the composition of the effluent, because this group of organisms shows an increased sensitivity to sodium hypochlorite /chlorine. The toxic effect will manifest itself mainly in the discharge area of the effluent, with an uneven distribution in the water column, which will also depend on the physical and chemical, seasonal conditions of the marine environment	Can be quantified only in the monitoring period in the operation stage	Insignificant	The discharged effluents (including the chlorine resulting from hypochlorite) will comply with all the provisions established by the operating licenses and defined in the national legislation (NTPA 001 - concerning the establishment of pollutant loading limits of industrial and urban wastewater when discharged into natural receivers). Zooplankton biomass values, in general, will not be affected by the substances discharged during the technological process. We estimate that some changes in the biomass will be detectable only if the sampling/monitoring point for zooplankton will be located near the Neptun Alpha platform, on the main direction of the effluent plume – southwest (result from the DREAM simulation).	Carrying out the ecotoxicity study by performing chronic toxicity tests, for all chemical substances that will be discharged into the sea, including biocide and methanol, meant to to validate/prove that the maximum admissible limit values established for discharge into the marine environment, at the level of each chemical substance, ensure the protection of the marine environment, have a low impact on the marine aquatic ecosystem and do not lead to the failure to accomplish the environmental objectives established by the Marine Strategy Framework Directive (2008/56/EC). If the chronic toxicity study will show negative effects on the biological components of the marine environment, the Client will have the obligation to adapt/reconsider the substances used (Action in compliance with the requirements of the Water Rights Permit)	Insignificant

It. No.	ANPIC Code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in metres)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Habitat surface Surface of subtypeuri	Ha	–	–	At least 1220 Must be defined within 2 years	NO	The activities carried out by the project do not overlap/intersect with the surface of the habitats inside the ANPIC. Excavation activities carried out near the site will not affect the characteristic zoobenthic organisms either (e.g.:: Upogebia pusilla).	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2.6 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
2	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Spatial integrity of the habitat/connectivity	Number of fragments	No information is available on habitat distribution or subtypes	–	Must be defined within 2 years	NO	The activities carried out by the project do not overlap/intersect with the surface of the habitats inside the ANPIC. Excavation activities carried out near the site will not affect the characteristic zoobenthic organisms either (e.g.:: Upogebia pusilla).	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2.6 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
3	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Coverage of macrophyte *Zostera noltii* for subtype11 10-1	%/fragment	–	–	At least 50	NO	The closest known and documented population of Zostera noltii is located more than 18 km away from the project location, within ROSCI0094 Mangalia underewater sulfur springs. The species was not identified in ROSCI0293.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
4	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Characteristic invertebrate species	Abundence of number of individuals/m2. For 1110-1 *Paloemon adspersus* For 1110-7 *Necallianassa truncata*	–	–	At least 1	NO	Invertebrates adapted to temporary increases in turbidity. The abundance of these species will not suffer changes caused by the implementation of the project	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2.6 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
5	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaning the conservation status	Species that indicate disturbances	Presence/absence	–	–	Absence	NO	The project will not cause long-term changes in water quality and will not cause changes in the structure and composition of biocenoses in such a way as to favour opportunistic disturbance indicator species.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2.6 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
6	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2028 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Water depth-subtype 1110-1 Water depth-subtype 1110-7	m	–	–	At least 0.2; At least 0.5	NO	The project activities carried near site ROSCI0293 site will not contribute to the modification of the bathymetry of the site. Habitat 1110 and its subtypes will remain permanently covered by water.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
7	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2.6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Ecological water status based on the physical and chemical indicators	Ecological status rating	–	–	A good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physico-chemical elements that define the ecological status of water bodies.	Not applicable	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physical and chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Preparing intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships	Insignificant
8	ROSCI0293 Costinesti- 23 August	Habitats	1110	Shallow submerged sandbars	South of the gas pipeline, at approx. 2,6 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Ecological water status based on the ecological indicators	Ecological status rating	–	–	A good ecological status	N0	Perennial phytobenthal specimens (macroalgae and angiosperms) will not be affected. During excavations in the trench area, the substrate with the macrozoobenthic organisms will be relocated, but these works will not take place inside the natural protected area and are not able to change the distribution of the indicator species in the water body. The project activities carried out will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Not applicable	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006	Not applicable	Insignificant
9	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Habitat surface	ha	It is necessary to map the habitat on the site within 2 years from the issue of the ANANP Note	–	At least 244	NO	No work will be carried out in the shoreline area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
10	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Habitat subtype surface	ha	No data on the area of each subtype are available	–	Must be defined within 2 years	NO	No work will be carried out in the shoreline area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
11	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Spatial integrity of the habitat/connectivity	Number of fragments	No data are available in relation to the habitat fragmentation on site	–	Must be defined within 2 years	NO	No work will be carried out in the shoreline area.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
12	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Surface of sediment not covered by vegetation	%/fragment	The value of the parameter must be documented within 2 years from the issue of the ANANP Note	–	At least 80	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

It. No.	ANPIC Code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in metres)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
13	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Frequency of characteristic invertebrate species	%/fragments	The value of the parameter must be documented within 2 years from the issue of the ANANP Note	–	Must be defined within 2 years	NO	There is no causal relationship	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
14	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Species diversity	No. of sp/subtype	–	–	Must be defined within 2 years	NO	The habitat will not be disturbed due to the specific location (at breaking waves) and the fairly large distance from the project.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area, which is located at a minimum distance of approx. 2.6 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 1 mg/l.	Not applicable	Insignificant
15	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Ecological water status based on the physical and chemical indicators	Ecological status rating	–	–	Good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
16	ROSCI0293 Costinesti- 23 August	Habitats	1140	Sand and mud flats exposed at low tide	South of the gas pipeline, at approx. 4,3 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Ecological water status based on the ecological indicators	Ecological status rating	–	–	A good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant
17	ROSCI0293 Costinesti- 23 August	Habitats	1170	Reefs	South of the gas pipeline, at approx. 3,8 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excelentă	Maintaining the conservation status	Habitat surface	ha	No information is available on the area of the subtypes, or the existing subtypes in the site. It is necessary to map the habitat in the site.	–	At least 3418	NO	The project activities do not overlap/intersect with the surface of the habitat inside the ANPIC. The excavation activities near the site will not result in the clogging of habitat subtypes 1170-6 Upper upper mediolittoral and 1170-7 Lower mediolittoral rocks and will not damage to the characteristic zoobenthic organisms either.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
18	ROSCI0293 Costinesti- 23 August	Habitats	1170	Reefs	South of the gas pipeline, at approx. 3,8 km habitat 1170 is represented by 2 subtypesi: 1170-6 the upper midlittoral rock and 1170-7 the lower midlittoral rock.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excelentă	Maintaining the favourable conservation status	Habitat subtype surface	ha	No information is available on the area of the subtypes, or the existing subtypes in the site. It is necessary to map the habitat on site.	–	Must be defined within 2 years	NO	The project activities do not overlap/intersect with the surface of the habitat inside the ANPIC. The excavation activities near the site will not result in the clogging of habitat subtypes 1170-6 Upper upper mediolittoral and 1170-7 Lower mediolittoral rocks and will not damage to the characteristic zoobenthic organisms either.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
19	ROSCI0293 Costinesti- 23 August	Habitats	1170	Reefs	South of the gas pipeline, at approx.3,8 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status favorabile	Spatial integrity of the habitat/connectivity	Number of fragments	No data are available in relation to the habitat fragmentation on site	–	At least 2	NO	The works are not carried out inside the ANPIC, therefore there is no likelihood of fragmentation of the habitat. The project will not generate changes in the abiotic environmental factors (currents, waves, depths) inside the ANPIC either	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
20	ROSCI0293 Costinesti- 23 August	Habitats	1170	*Reefs*	South of the gas pipeline, at approx.3.8 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Vegetation coverage of Subtype11 70-8	At least 50	The value of the parameter must be documented within 2 years	–	–	NO	The sufficiently large distance (over 3km) from the area where the works are carried out at the pipeline trench to this habitat subtype (1170-8) ensures that there will be no changes to this parameter	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
21	ROSCI0293 Costinesti- 23 August	Habitats	1170	*Reefs*	South of the gas pipeline, at approx.3.8 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Presence of species indicating disturbances	Presence/absence	The value of the parameter must be documented within 2 years from the issue of the ANANP Note	–	0	NO	The project will not cause long-term changes in water quality and will not cause changes in the structure and composition of biocenoses in such a way as to favour opportunistic disturbance indicator species.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
22	ROSCI0293 Costinesti- 23 August	Habitats	1170	*Reefs*	South of the gas pipeline, at approx.3.8 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Ecological water status based on the physical and chemical indicators	Ecological status rating	–	–	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
23	ROSCI0293 Costinesti- 23 August	Habitats	1170	*Reefs*	South of the gas pipeline, at approx.3.8 km	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the favourable conservation status	Ecological water status based on the ecological indicators	Ecological status rating	–	–	A good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant

It. No.	ANPIC Code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in metres)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
24	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Habitat surface	ha	_	_	At least 0.3	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
25	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Number of caves	nr.	_	_	At least 3	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
26	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Cave internal dimensions	m	_	_	Must be defined within 2 years	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
27	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Number of species in the biocenoses characteristic to the site	Number of species	_	_	Must be defined within 2 years	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
28	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Modelul spațial al biocenozei or caracteristice	Types of biocenoses and their distribution inside individual caves	_	_	Must be defined within 2 years	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
29	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Density of the population of *Halichondria panicea* in the habitat	Number of colony/ m^2	_	_	Must be defined within 2 years	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
30	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Frequency of *Hemimysis serrata* in grottos	%	_	_	Must be defined within 2 years	NO	The project activities carried do not overlap/intersect with the surface of the habitat inside the ANPIC. The project excavation activities near the site will not result in clogging of the habitat and will not damage to the characteristic zoobenthic organisms located more than 5 km from the gas pipeline trench works.	Not applicable	Insignificant	The sediment plume will not clog the habitat in the protected natural area that is located more than 3 km from the project, because at this distance the concentration of solid particles in suspension will not exceed 0.1 mg/l.	Not applicable	Insignificant
31	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Ecological condition of the water based on the physical and chemical indicators	Ecological status rating	_	_	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
32	ROSCI0293 Costinesti- 23 August	Habitats	8330	*Submerged or partially submerged sea caves*	More than 5 km south of the gas pipeline	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status favorabile	Ecological condition of the water based on the ecological indicators	Ecological status rating	_	_	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant
33	ROSCI0293 Costinesti- 23 August	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Population size	Number of individuals	No data are available in relation to this parameter	_	Must be defined within 3 years	NO	The activities carried out by the project near the site ROSCI0293 are not likely to affect the population size of *Alosa immaculata* . The excavation activities, due to the turbidity generated, can create a temporary barrier in the migration path of the species. This barrier will not prevent the migration of the species to the spawning areas represented by the rivers in the north-west of the Black Sea.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
34	ROSCI0293 Costinesti- 23 August	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Composition of the population on age classes	Presence of juvenile fish in scientific fishing by trawl on the shore (individuals / ton)	_	_	Must be defined within 3 years	NO	Project activities cannot influence the presence of juveniles in captures. Their presence is dependent on other factors such as: the physiology of the species, the survival of juveniles and fishing captures.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant

It. No.	ANPIC Code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in metres)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
35	ROSCI0293 Costinesti- 23 August	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Habitat surface adequate to the species	ha	No data are available in relation to this parameter	–	Must be defined within 3 years	NO	The project activities will not contribute to the degradation of the habitate	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
36	ROSCI0293 Costinesti- 23 August	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Invasive/non-native fish species	Presence/absence Abundance	No data are available in relation to this parameter	–	Absence 0	NO	Ships used in the project will not contribute to the introduction of invasive/non-native fish species. In accordance with the IMO convention on the management of ballast water and sediments, ships coming from other regions of the globe in the Black Sea, replace ballast water periodically, as well as at the entrance to the Black Sea (at a distance of at least 200 miles from by the port of destination).	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
37	ROSCI0293 Costinesti- 23 August	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Ecological water status based on the physical and chemical indicators	Ecological status rating	–	–	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
38	ROSCI0293 Costinesti- 23 August	Fish	4125	*Alosa immaculata*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Ecological water status based on the ecological indicators	Ecological status rating	–	–	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant
39	ROSCI0293 Costinesti- 23 August	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Population size	Number of individuals	No data is available in relation to this parameter	–	Must be defined within 3 years	NO	The activities carried out by the project near the site ROSCI0293 are not likely to affect the population size of *Alosa tanaica*. The excavation activities, due to the turbidity generated, can create a temporary barrier in the migration path of the species. This barrier will not prevent the migration of the species to the spawning areas represented by the rivers in the north-west of the Black Sea.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
40	ROSCI0293 Costinesti- 23 August	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Composition of the population on age classes	Presence of juvenile fish in scientific fishing by trawl on the shore (individuals / ton)	–	–	Must be defined within 3 years	NO	Project activities cannot influence the presence of juveniles in captures. Their presence is dependent on other factors such as: the physiology of the species, the survival of juveniles and fishing captures.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
41	ROSCI0293 Costinesti- 23 August	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Habitat surface	ha	No data are available in relation to this parameter	–	Must be defined within 3 years	NO	The project activities will not contribute to the degradation of the habitate	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
42	ROSCI0293 Costinesti- 23 August	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Invasive/non-native fish species	Presence/absence Abundance	No data are available in relation to this parameter	–	Absence 0	NO	Ships used in the project will not contribute to the introduction of invasive/non-native fish species. In accordance with the IMO convention on the management of ballast water and sediments, ships coming from other regions of the globe in the Black Sea, replace ballast water periodically, as well as at the entrance to the Black Sea (at a distance of at least 200 miles from by the port of destination).	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
43	ROSCI0293 Costinesti- 23 August	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Ecological water status based on the physical and chemical indicators	Ecological status rating	–	–	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
44	ROSCI0293 Costinesti- 23 August	Fish	4127	*Alosa tanaica*	The species is present along the entire Romanian seashore up to the 40-50 m isobath. It migrates from south to north, near the mouths of the Danube, spring. The species is present on the entire surface of the site and on the entire surface of the project up to the water depth of 40-50 m.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Good	Maintaining the conservation status	Ecological water status based on the ecological indicators	Ecological status rating	–	–	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant
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It. No.	ANPIC Code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in metres)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
41	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Population size	Number of individuals		20	200 At least 200	NO	The noise generated will temporarily reduce the number of *Tursiops truncatus* present on a radius of 100 m around the work areas, but will not affect the population size. No injuries or accidental killings of cetaceans are anticipated as a result of the proposed works near the ANPIC area.	Not applicable	Insignificant	Among the construction activities in the shore area, the main activities that cause vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period when these activities are carried out, specimens of Tursiops truncatus ponticus will move away from the area where works are carried out. Specimens of Tursiops truncatus ponticus will not be affected by the noise and vibrations produced in such a way that cases of accidental injury or killing occur and will return to the area after the cessation of building activities.	Not applicable	Insignificant
42	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Population size trend	Reproductive unit trend	A species monitoring program must be implemented	–	Stable or growing	NO	The activities carried out near the ROSCI0293 site will not contribute to affecting the size of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
43	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Population structure	Structure on age classes	To be determined in 2 years	–	The presence of all generations	NO	The activities carried out near the ROSCI0293 site will not contribute to affecting the age structure of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
44	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Habitat surface	Ha	–	–	At least 4.800	NO	The activities carried out inside the project will not affect the supporting capacity of the habitats inside the ANPIC.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
45	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	–	–	Without a significant decrease of the spatial, temporal pattern or of the intensity of use of habitats other than those resulting from natural variations	NO	There will be no disturbance to individuals feeding inside the ANPIC. Vibrations and noises caused by tunnel boring and excavation activities will not cause behavioural changes. Taking into account the distance (2.3 km) to the ANPIC, the sediment plume will not have a high load so as to affect the food resource of the cetaceans (ichthyofauna) in the ANPIC.	Not applicable	Insignificant	Within the construction activities in the shore area, the main activities that cause vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period when these activities are carried out, specimens of Tursiops trucatus ponticus will move away from the area where the works are carried out, but without affecting the distribution pattern inside the ANPIC.	Not applicable	Insignificant
46	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Size and diversity of prey species	Number of fish species Abundence of fish species	a prey population monitoring program must be implemented, within 2 iears from the issue of the ANANP Note	–	Must be defined within 2 years	NO	Project activities carried will not temporarily drive away fish species from the ANPIC.	Not applicable	Insignificant	The construction activities that will be carried out near ROSCI0293 site will contribute to the temporary increase of turbidity, and will cause vibrations and noises in the aquatic environment. Due to the sufficiently large distance from the work area, there will fish populations inside the ANPIC and consequently cetaceans will not be driven away.	Not applicable	Insignificant
47	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Ecological condition of the water based on the physical and chemical indicators	Ecological status rating	–	–	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Carrying out excavation works in the shore area only during periods of calm sea. Making intervention plans in case of accidental pollution. The presence of intervention equipment in case of accidental pollution on board of barges and ships .	Insignificant
48	ROSCI0293 Costinesti- 23 August	Mammals	1349	Tursiops truncatus	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Ecological condition of the water based on the ecological indicators	Ecological status rating	–	–	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant
49	ROSCI0293 Costinesti- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Population size	Number of individuals		10	50 At least 50	NO	The generated noise will temporarily reduce the number of *Phocoena phocoena relicta* present on a radius of 920 m around the work areas, but will not affect the population size. No injuries or accidental killings of cetaceans are anticipated as a result of the proposed works near the ANPIC area.	Not applicable	Insignificant	Among the construction activities in the shore area, the main activities that cause vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period when these activities are carried out, specimens of *Phocoena phocoena relicta* will move away from the area where works are carried out. Specimens of P*hocoena phocoena relicta* will not be affected by the noise and vibrations produced in such a way that cases of accidental injury or killing occur and will return to the area after the cessation of building activities.	Not applicable	Insignificant

It. No.	ANPIC Code and name	Natura 2000 Components	Natura 2000 Code	Habitat/species scientific name	Location in relation to the project (in metres)	Spatial data source	Information source	Conservation status	Conservation objectives	Parameter	Parameter unit of measurement	Current (minimum)	Current (maximum)	Target value	Could it be affected by the project?	Explanation concerning the likelihood to be affectedt	Quantification of impacts (u.m.)	Potential impact (without measurements)	Motivation of the estimated impact	Actions taken to ensure insignificant residual impacts	Residual impact
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
50	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Population size trend	Reproductive unit trend	A species monitoring program must be implemented on site for the documentation of this parameter	–	Stable or growing	NO	The activities carried out near the ROSCI0293 site will not contribute to affecting the size of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
51	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Population structure	Structure on age classes	To be determined within 2 years	–	The presence of all generations	NO	The activities carried out near the ROSCI0293 site will not contribute to affecting the age structure of the population.	Not applicable	Insignificant	Not applicable	Not applicable	Insignificant
52	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Habitat surface	ha		–	At least 4.800	NO	The project activities carried will not affect the supporting capacity of the habitats inside the ANPIC.	Not applicable	Insignificant	The project activities will not affect the supporting capacity of the habitats inside the ANPIC.	Not applicable	Insignificant
53	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Distribution pattern	Spatial and temporal pattern, intensity of habitat use	A monitoring program must be implemented within 2 years from the issue of the ANANP Note	–	Without a significant decrease of the spatial, temporal pattern or of the intensity of use of habitats other than those resulting from natural variations	NO	There will be no disturbance to individuals feeding within the ANPIC. Vibrations and noises caused by tunnel boring and excavation activities will not cause behavioural changes. Taking into account the distance (2.3 km) to the ANPIC, the sediment plume will not have a high load so as to affect the food resource of the cetaceans (ichthyofauna) in the ANPIC.	Not applicable	Insignificant	Among the building activities in the shore area, the main activities generating vibration and noise are the tunnel boring activities that undercut the seawall and the shallow area and the trench excavation activities for the pipeline. During the period when these activities are carried out, specimens of Phocoena phocoena relicta will move away from the area where works are carried out, but without affecting the distribution pattern inside the ANPIC.	Not applicable	Insignificant
54	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Size and diversity of prey species	Number of fish species Fish species abundance	A monitoring program must be implemented within 2 years from the issue of the ANANP Note	–	Must be defined within 2 years	NO	The project activities carried will not result in the temporary removal of fish species from the ANPIC.	Not applicable	Insignificant	The construction activities carried ount near the site ROSCI0293 will contribute to the temporary increase of turbidity, as well as the generation of vibrations and noises in the aquatic environment. Due to the sufficiently large distance from the work area, the fish populations inside the ANPIC and consequently the cetaceans will not be driven away	Not applicable	Insignificant
55	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Obiective Specifice de Conservare (OSC) cnf. Notei ANANP	Excelentă	Maintaining the conservation status	Ecological condition of the water based on the physical and chemical indicators	Ecological status rating	–	–	At least a good ecological status	YES	Following the excavations, sediments will be resuspended in the water, which will also contribute to the temporary and local increase of nutrients and possibly some pollutants present in the sediments, but not able to generate significant changes in the chemical state and the physical and chemical elements that define the ecological status of water bodies.	The activities carried out in the project will not contribute to the deterioration of the chemical state and the physical and chemical elements that define the ecological state of the water bodies.	Insignificant	The temporary increase in turbidity and nutrient concentration through sediment resuspension will not contribute to changing the physico-chemical indicators that characterize the ecological state of the water body. Thus, the good chemical status according to the "Updated Management Plan of the Danube River, the Danube Delta, the Dobrogea Hydrographic Area and Coastal Waters" will not change following the implementation of the project	Realizarea lucrărilor de excavare din zona de mal doar în perioade cu mare calmă. Realizarea planurilor de intervenție în caz de poluare accidentală. Prezența la bordul barjelor și navelor a echipamentelor de intervenție în caz de poluare accidentală.	Insignificant
56	ROSCI0293 Costinești- 23 August	Mammals	1351	Phocoena phocoena	The species is present on the entire Romanian continental platform. It is present on the entire surface of the site and can be found on the entire surface of the project.	2023 observations in the project influence area	Data from observations in the 2018-2019, 2023 project influence area Specific Conservation Objectives (SCO) acc. to the ANANP Note	Excellent	Maintaining the conservation status	Ecological condition of the water based on the ecological indicators	Ecological status rating	–	–	At least a good ecological status	NO	The insignificant increase in the concentration of suspended solid particles and nutrients, over a short period of time, will not affect the planktonic and benthic communities within the ANPIC and consequently the higher links of the food chain such as ichthyofauna, avifauna and marine mammals will not be affected	The activities carried out in the project will not contribute to the deterioration of the state of the biological elements that define the ecological state of the water bodies.	Insignificant	From the laboratory analyzes carried out, no exceedances were found in the pollutant concentration values in water and sediments in the project area according to Order no. 161/2006.	Not applicable	Insignificant

I, **Popescu Sorina Mihaela**, a sworn interpreter and translator for English and French by virtue of Authorisation no. 1078/1999 issued by Romanian Ministry of Justice, certify the accuracy of the translation from Romanian into English, that the text presented to me was translated completely and without omissions, and that the translation of the document did not alter its content and meaning.

Sworn translator,
Popescu Sorina Mihaela