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Soil status report for the site of the planned SFDS construction

for

Nuklearna elektrarna Krško d.o.o.

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Kidričevo, 29 July 2020

Lahkota prihodnosti

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1 INTRODUCTION

This document contains a soil status report for the site of the planned SFDS construction for the client Nuklearna elektrarna Krško d.o.o., business address Vrbina 12, SI-8270 Krško (hereinafter: NEK d.o.o.), pursuant to a request for a tender no. 101592-2 of 9 June 2020.

As part of the NEK Safety Upgrade Project (PNV), NEK d.o.o. plans to upgrade the spent fuel (SF) storage technology by introducing dry storage. Within the existing nuclear facility complex on land parcel no 1197/44 in cadastral municipality 1321 Leskovec, it intends to construct a facility for the dry storage of spent fuel with a floor area of 3,312 m^2 and a height of 20.48 m. A more detailed description of the activity is provided in the technical specification ('Description of existing soil status and the implementation of a soil pollution analysis at the site of the planned construction of the SFDS, document author: Nuklearna elektrarna Krško d.o.o., report no.: SP-ES1371, report date: June 2020')

For the project in question, NEK d.o.o. submitted an application for a construction permit under the integrated (combined) procedure to the Ministry of the Environment and Spatial Planning, Dunajska cesta 48, SI-1000 Ljubljana. Among other things, the project involved the drafting of an environmental impact assessment (EIA) for the planned activity. The EIA was produced in accordance with the Decree on the method of drafting and on the content of the report on the effects of planned activities affecting the environment (Official Gazette of RS, Nos. 35/09, 40/17). During the process of acquiring the opinions on the acceptability of the construction under the integrated procedure for the granting of a construction permit for the project (with environmental impacts), the Slovenian Environment Agency, Vojkova 1b, SI-1000 Ljubljana requested a more detailed description of the status of the soil and of soil pollution at the site of the planned SFDS construction.

The soil status report for the site of the planned SFDS construction has been drafted in accordance with the requirements set out in:

- the Rules on the operational monitoring of soil status (Official Gazette of RS, Nos. 66/17, 4/18).
- the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04 [ZVO-1]);
- Decree on the criteria for determining the level of environmental pollution resulting from the contamination of soil with dangerous substances (Official Gazette of RS, No. 7/19).

2 OBJECTIVE OF RESEARCH AND DESCRIPTION OF SITE

The objective of the research is to describe the existing status of the soil and of soil pollution at the site of the planned SFDS construction on parcel no 1197/44 in cadastral municipality 1321 Leskovec.

Figure 1 below shows the site of the planned SFDS construction on a digital orthophotograph.

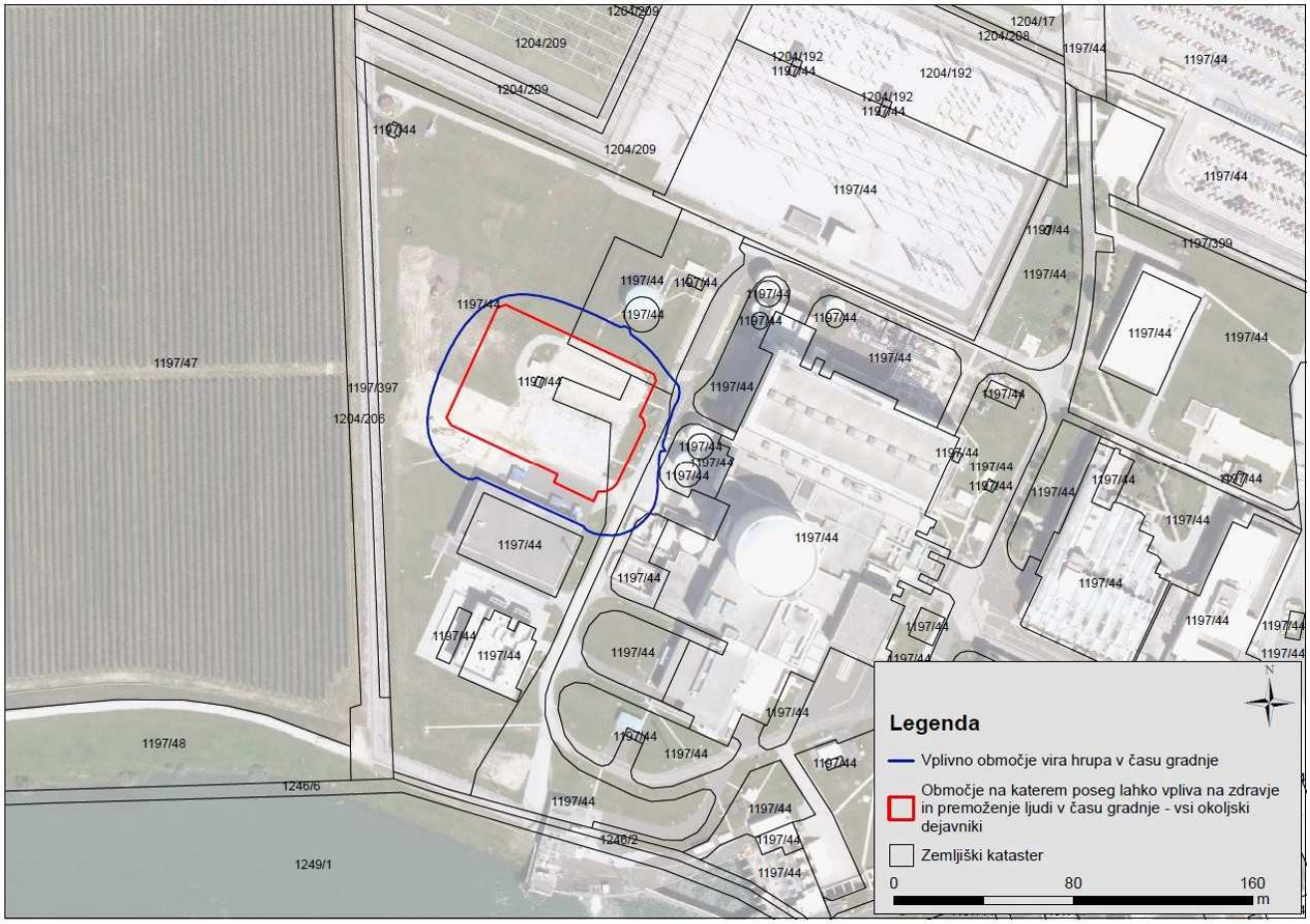


Figure 1: Presentation of the wider area under consideration. The red line traces the approximate extent of the activity during the construction period.

Legenda	**Key**
Vplivno območje vira hrupa v času gradnje	Area of impact of the noise source during the construction period
Območje na katerem poseg lahko vpliva na zdravje in premoženje ljudi v času gradnje – vsi okoljski dejavniki	Area in which the activity could have an impact on health and property in the construction period – all environmental factors
Zemljiški kataster	Cadastral register

The location in question is an anthropogenic area within the area of the Krško nuclear power plant. Soil has been entirely removed from or mixed into the major part of the area in the past. The selection of the sampling points was also adjusted to take account of this.

Figure 2: Presentation of the area under consideration. The red line marks the centroid of the construction area.

3 DESCRIPTION OF SOIL CHARACTERISTICS AT THE SITE

3.1 Description of soil and pedological conditions

Soil has been entirely or partly removed from, mixed into or covered with gravel in the major part of the area set aside for SFDS construction. Across the wider area, there is well-developed alluvial soil on predominantly carbonate gravel. The channel of the Sava river is located in the immediate vicinity. In the past, the soil arose from alluvial deposits from the Sava. The pH value of the soil is typically over 7, with very high saturation with base cations and a medium-heavy texture. Based on a field inspection, we can conclude that the soil is shallow to medium-deep. There are no noticeable signs of glazing.

3.2 Description of site

The location of the planned SFDS construction is an area within the Krško nuclear power plant complex. It has an entirely flat relief on the first Sava terrace and in the vicinity of the Sava channel. The surface and soil have been entirely changed by human activity. Detailed information on the site is given below.

Figure 3: Presentation of the central area under consideration. Pictured from the east (author: NEK, date: 22 June 2020).

Table 1: Basic information about the site under consideration.

Coordinates D48 (y,x) – centroid	540242, 88420
Height above sea level (m) – centroid	155.5
Incline (%)	0
Exposition	/
Macro relief	Flat
Micro relief	Flat
Form of surface at microlocation	Evenly variegated
Land use	Industrial area
Human impact	Very considerable
Bedrock	Predominantly carbonate gravel
Water permeability of soil	Very quick
Availability of water to main plant species	Sufficient
Saturation of soil with water	Rarely saturated
Floods	Not present
Groundwater	Not present
Surface rockiness and stoniness	No
Erosion	Natural erosion noticeable
Potential pollution sources	Industry

3.3 Description of geomorphological properties

The photographs below show the location of soil investigations for the planned SFDS construction.

Figure 4) a, b, c, d: Presentation of the area of the planned SFDS construction (author: NEK, date: 22 June 2020).

An analysis of the LIDAR data shows a flat surface with an even micro relief.

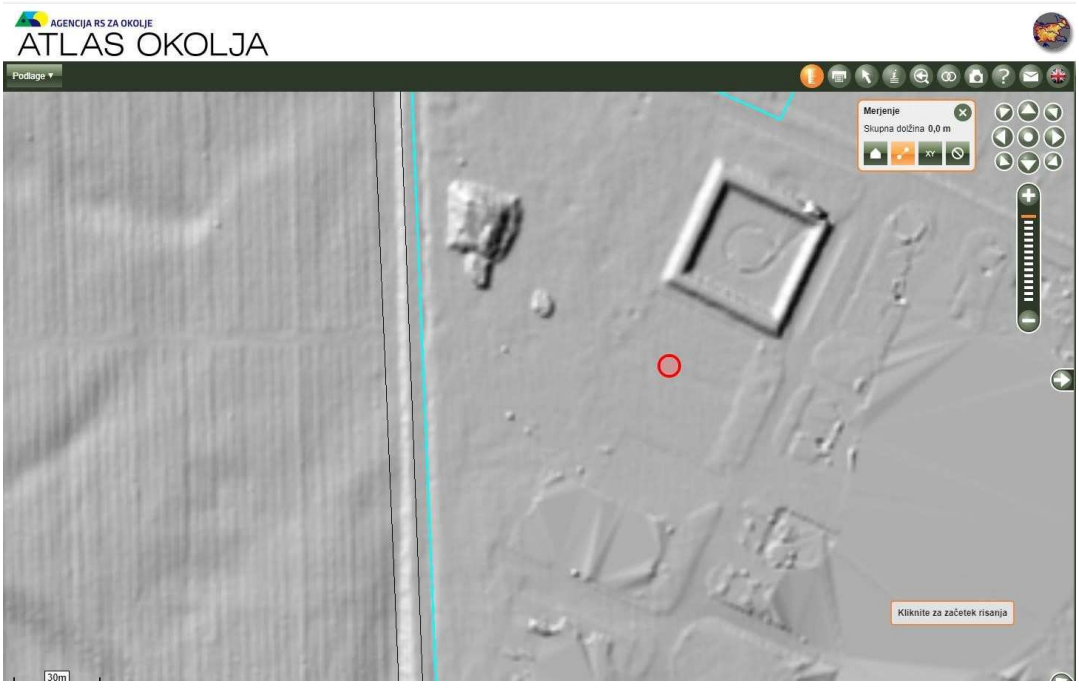


Figure 5: Presentation of the relief with the red line marking the centroid of the construction area (source: Environment Atlas, July 2020).

AGENCIJA RS ZA OKOLJE	SLOVENIAN ENVIRONMENT AGENCY
ATLAS OKOLJA	ENVIRONMENT ATLAS
Podlage	Bases
Merjenje	Measurement
Skupna dolžina 0,0 m	Total length 0.0 m
Kliknite za začetek risanja	Click to start drawing

3.4 Presentation of protected areas and areas of protected species

3.4.1 Water protection areas

The site under consideration (marked parcel no 1197/44, cadastral municipality 1321 Leskovec) is not located in a water protection area.

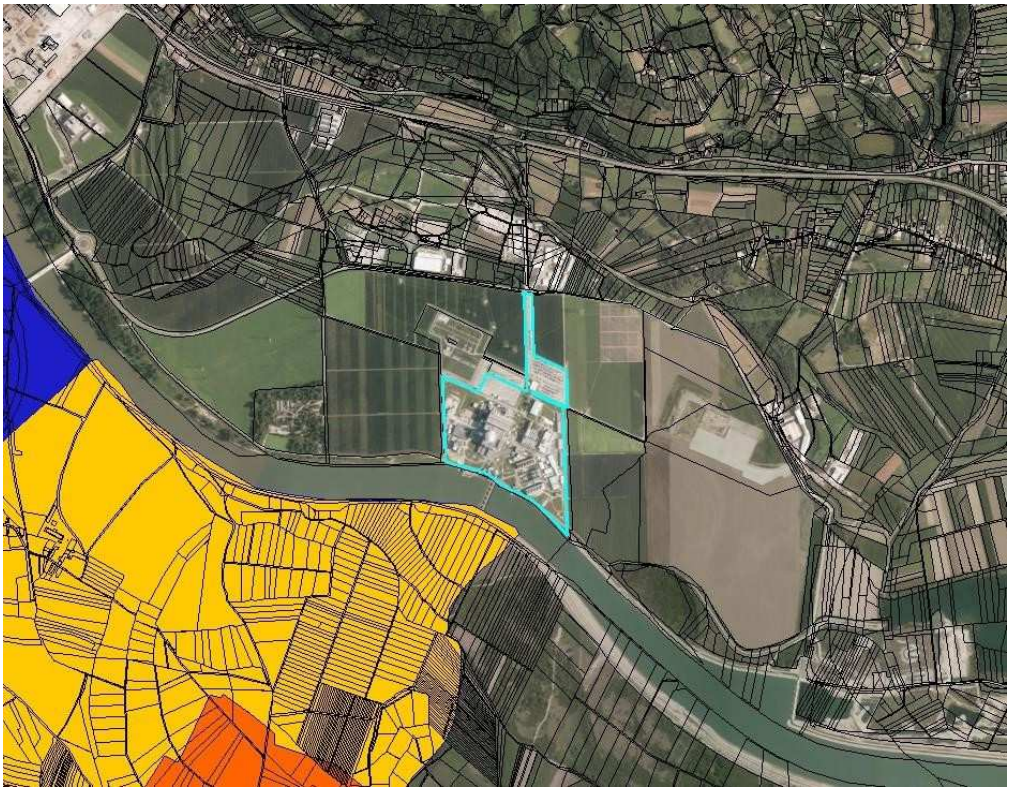


Figure 6: Location shown on the map of water protection areas (source: Environment Atlas, July 2020).

3.4.2 Other protected areas

Judging by selected sub-layers of the "Nature" layer in the Environment Atlas, the site under consideration is not located in the area of other protected areas.

4 RECORDING OF SOIL STATUS

4.1 Preparation of a sampling plan and the taking of soil samples

Before recording soil status, we assembled a working group tasked with preparing a sampling plan, paying due regard to the SIST ISO 10381-1, SIST ISO 10381-2 and SIST ISO 10381-5 standards, as well as to the Rules on the operational monitoring of soil status (Official Gazette of RS, Nos. 66/17 and 4/18).

Before commencing the sampling process, we presented the soil sampling plan to the client's representatives. On the basis of the additional information obtained from the client, we divided the entire location into four equally sized sub-areas. They cover the whole site sufficiently well. Each sampling point covered approx. ¼ of the area of the site of the planned SFDS construction. We took samples from two depths: – surface sample at a depth of (0–5) cm – lower sample at a depth of (5–20) cm.

The sampling depth was determined on the basis of preliminary soil soundings in the field. On most of the site under consideration, the soil has been completely removed, mixed in or covered with gravel. As the average depth of the remaining soil is approx. 20 cm, 0–5 and 5–20 cm were the depths selected for sampling. These two depths ensure that the actual properties of the soil are captured. The original natural soil is preserved in a very small (extreme southern) section of the site.

We recorded the soil status on 23 June 2020.

We took between 10 and 25 increments systematically within the network from both depths at every sampling point. This means that we obtained two average soil samples at every sampling point. The distribution of the parameters at the site is unknown. The soil samples were taken using a grooved probe on the same day. The figure below shows the soil sampling grid.

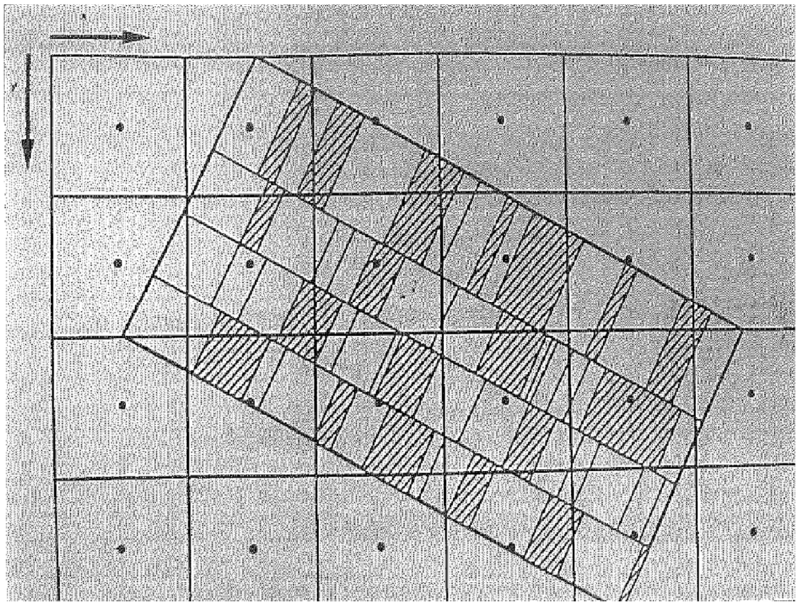


Figure 7: Presentation of the correct distribution of sampling points in the grid.

After the completion of sampling at a sampling point, we cleaned the tool and wiped it dry with a paper towel. We also followed the instruction to discard the first probe at every sampling point. We transported the soil samples to the laboratory in polypropylene (PP) containers. The document accompanying the samples is an integral part of the final report. A soil sampling record was also drawn up at each sampling point. The sampling points are shown below.

Figure 8: Presentation of the location of the four sampling points (TLANEK-1, TLANEK-2, TLANEK-3, TLANEK-4) and the locations of the three pedological profiles (1–3) across the entire site of the planned SFDS construction. The sampling points were chosen in line with the presence of soil in the area. No soil was present in the central section. The area is infilled with gravel. The digital orthophotograph is from 2011 and does not reflect the current situation in nature.

Three soil profiles were excavated and described at the site. The first, in the extreme southern part and constituting the original natural soil, does not represent the soil at the site under consideration, as this has been changed and removed as a result of human intervention (Figure 9). The second soil profile was described in the TLANEK-1 area (Figure 11) and the third in the TLANEK-4 area (Figure 13). The soil profiles are described in accordance with the EN ISO 25177 standard.

Figure 9: Presentation of profile no. 1 (eutric alluvial soil on gravel). This is the natural soil typical of the wider area.

Figure 10: Presentation of the wider area of the excavation of profile no. 1.

A description of the site and of the profile of the representative soils is given below.

Table 2: Data on location of profile no. 1 and general soil characteristics described in the field.

Date of description	23 June 2020
Pedologist	Tomaž Kralj
Location	Vrbina
Coordinates D48 (y,x)	540258, 88387
Height above sea level (m)	155
Incline (%)	0
Exposition	/
Macro relief	Flat
Micro relief	Flat
Form of surface at microlocation	Flat
Land use	Urban – industrial area
Human impact	Pronounced
Bedrock	Alluvial deposit
Water permeability of soil	Very good
Availability of water to main plant species	Sufficient
Saturation of soil with water	Rarely saturated
Floods	No
Groundwater	No
Surface rockiness and stoniness	0%
Erosion	Not noticeable
Potential pollution sources	Industry

Table 3: Data from terrain description of the morphological characteristics of profile no. 1.

Number	Label	Depth of horizon (cm)	Description of horizon
H1	A1	0–10	BOUNDARY: clear, slightly undulating. SKELETON: 3%, rounded, maximum 3 cm. STRUCTURE: cloddy, well-expressed, durable. MOISTURE: fresh. CONSISTENCY: friable. BIOLOGICAL ACTIVITY: not noticeable. ROOTS: medium thick. COLOUR: 10YR 4/3. TEXTURE: L-SL. ORGANIC MATTER: humus. OTHER MATERIALS: not noticeable. MARMORATION: not noticeable.
H2	A2	10–40	BOUNDARY: clear, slightly undulating. SKELETON: 3%, rounded, maximum 4 cm. STRUCTURE: cloddy, well-expressed, durable. MOISTURE: fresh. CONSISTENCY: friable. BIOLOGICAL ACTIVITY: not noticeable. ROOTS: thin. COLOUR: 10YR 4/3. TEXTURE: L-SL. ORGANIC MATTER: humus. OTHER MATERIALS: not noticeable. MARMORATION: not noticeable.
H3	C	40+	Predominantly carbonate gravel

On the basis of excavation and soil description, the soil is classified as: Alluvial soil, typical (deep, eutric, mollic, medium deep humus) on carbonate gravel.

Figure 11: Soil profile no. 2. Shallow anthropogenic rendzina.

Figure 12: Location of soil profile no. 2 in the TLANEK-1 area.

Table 4: Data on location of profile no. 2 and general soil characteristics described in the field.

Date of description	23 June 2020
Pedologist	Tomaž Kralj
Location	Vrbina
Coordinates D48 (y,x)	540274, 88417
Height above sea level (m)	155
Incline (%)	0
Exposition	/
Macro relief	Flat
Micro relief	Flat
Form of surface at microlocation	Flat
Land use	Urban – industrial area
Human impact	Pronounced
Bedrock	Alluvial deposit
Water permeability of soil	Very good
Availability of water to main plant species	Sufficient
Saturation of soil with water	Rarely saturated
Floods	No
Groundwater	No
Surface rockiness and stoniness	0%
Erosion	Not noticeable
Potential pollution sources	Industry

Table 5: Data from terrain description of the morphological characteristics of profile no. 2.

No.	Label	Depth of horizon (cm)	Description of horizon
H1	A	0–20	BOUNDARY: clear, slightly undulating. SKELETON: 1%, rounded, maximum 3 cm. STRUCTURE: cloddy, well-expressed, durable. MOISTURE: fresh. CONSISTENCY: friable. BIOLOGICAL ACTIVITY: not noticeable. ROOTS: medium thick. COLOUR: 10YR 4/3. TEXTURE: L-SL. ORGANIC MATTER: humus. OTHER MATERIALS: not noticeable. MARMORATION: not noticeable.
H2	C	40+	Predominantly carbonate gravel

On the basis of excavation and soil description, the soil is classified as: Rendzina, typical (shallow, slightly skeletal, anthropogenic) on carbonate gravel.

Figure 13: Soil profile no. 3. Shallow anthropogenic rendzina.

Figure 14: Presentation of the wider area of excavation of soil profile no. 3 in the TLANEK-4 area.

Table 6: Data on location of profile no. 3 and general soil characteristics described in the field.

Date of description	23 June 2020
Pedologist	Tomaž Kralj
Location	Vrbina
Coordinates D48 (y,x)	540214, 88420
Height above sea level (m)	155
Incline (%)	0
Exposition	/
Macro relief	Flat
Micro relief	Flat
Form of surface at microlocation	Flat
Land use	Urban – industrial area
Human impact	Pronounced
Bedrock	Alluvial deposit
Water permeability of soil	Very good
Availability of water to main plant species	Sufficient
Saturation of soil with water	Rarely saturated
Floods	No
Groundwater	No
Surface rockiness and stoniness	0%
Erosion	Not noticeable
Potential pollution sources	Industry

Table 7: Data from terrain description of the morphological characteristics of profile no. 3.

No.	Label	Depth of horizon (cm)	Description of horizon
H1	A	0–20	BOUNDARY: clear, slightly undulating. SKELETON: 1%, rounded, maximum 3 cm. STRUCTURE: cloddy, well-expressed, durable. MOISTURE: fresh. CONSISTENCY: friable. BIOLOGICAL ACTIVITY: not noticeable. ROOTS: medium thick. COLOUR: 10YR 4/2. TEXTURE: L-SL. ORGANIC MATTER: humus. OTHER MATERIALS: not noticeable. MARMORATION: not noticeable.
H2	CA	20–30	BOUNDARY: clear, slightly undulating. SKELETON: 60%, rounded, maximum 5 cm. STRUCTURE: cloddy, well-expressed, durable. MOISTURE: fresh. CONSISTENCY: friable. BIOLOGICAL ACTIVITY: not noticeable. ROOTS: medium thick. COLOUR: 10YR 4/2. TEXTURE: L-SL. ORGANIC MATTER: humus. OTHER MATERIALS: not noticeable. MARMORATION: not noticeable.
H3	C	30+	Predominantly carbonate gravel

On the basis of excavation and soil description, the soil is classified as: Rendzina, typical (shallow to medium deep, slightly skeletal, anthropogenic) on carbonate gravel.

The sampling point labels were assigned to ensure traceability. Information on the sampling points at the site of the planned SFDS construction is given in the table below.

Table 8: Information on the soil sampling points.

Sampling point label	Description of sampling point	GKX	GKY	Soil layer (cm)	Sample label
TLANEK-1	Figure 8 (sampling point 1)	88391	540263	0–5	TLANEK-1 0-5
				5–20	TLANEK-1 5-20
TLANEK-2	Figure 8 (sampling point 2)	88408	540270	0–5	TLANEK-2 0-5
				5–20	TLANEK-2 5-20
TLANEK-3	Figure 8 (sampling point 3)	88425	540255	0–5	TLANEK-3 0-5
				5–20	TLANEK-3 5-20
TLANEK-4	Figure 8 (sampling point 4)	88423	540217	0–5	TLANEK-4 0-5
				5–20	TLANEK-4 5-20

We used the following compulsory equipment for the sampling of soil in the field:

- trowel, knife, tape measure;
- probe (diameter at least 4 cm) or a drill and a tool for removing the sample from the probe or drill made from a material that does not affect the quality of the sample taken;
- topographical map (TTN, DOF, etc.);
- compass, altimeter, GPS;
- camera;
- Munsell Soil Color Chart;
- hydrochloric acid (1:3);
- pH indicator or indicator strips (pH 2–9);
- form for recording samples from Annex 3 to these rules;
- steel measuring tape (length 50 m) and tracers;
- buckets;
- bags for the taking of samples without impurities that could affect the quality of the sample;
- deionised water and paper towels for cleaning probes or drills and tools, and • cooler bags or a suitably arranged space (darkened and cooled) for the transport of samples.

4.2 Quantity of soil samples

The quantity of a sample for determining the various chemical parameters must be sufficient for the homogenisation, sampling, analysis and additional samples for the subcontractors.

A sample contains at least 300–500 g of fine soil (after the removal of larger particles), which applies to single as well as composite samples, where prior homogenisation is required. A sample taken for the purpose of providing reference material or for storage in the database must normally be heavier than 2,000 g. For the monitoring of soil status, they may also be up to 3,000 g.

Oversized particles are removed, weighed, evaluated, recorded and described, and the results compared with the composition of the original sample. This procedure must be conducted in compliance with the ISO 11464 standard. These instructions do not prescribe sampling for physical and biological investigations.

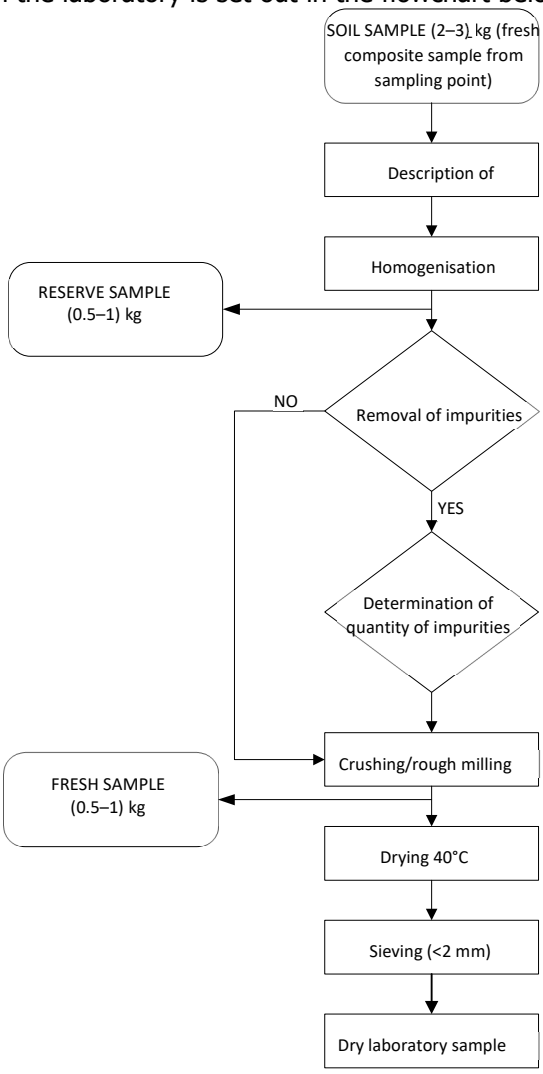
The containers are made from suitable material for the sampling and storage of soil so that the samples are not contaminated and that they meet the analytical requirements regarding the presence of organic (oils, tars, solvents, volatile compounds) and inorganic matter.

4.3 Transport and storage of samples

The samples are delivered to the laboratory after the sampling process is completed. Samples must be stored in a cool, dark place at a temperature of (4±2) °C. By cooling or freezing a sample, we can extend the period for which the initial sample composition remains stable. The instructions of an accredited laboratory must be followed for samples sent to a subcontractor's analyst.

4.4 Preparation of samples in the laboratory

The preparation of samples in the laboratory is set out in the flowchart below.



The sample must be examined in detail and entered in the sampling sheet for observation and any foreign unknown substances, remnants of vegetation and other relevant characteristics. The sample is photographed.

Homogenisation
We homogenise the field sample by shaking the PP sampling containers with a lid so that all the soil increments are equally distributed throughout the sample.

Reserve sample We archive approx. 0.5 kg of the sample in a glass container at the laboratory – reserve sample.

Removal of impurities and crushing
Any impurities, such as rubber, plastic, etc., and any larger pieces of bedrock or vegetation are removed. After the sample is dried into clumps, it has to be crushed, preferably with a wooden mallet. Prior to this, all stones, pieces of glass, refuse and other pieces larger than 1 cm must be removed, where care must be taken to remove as few of the fine particles that adhere to the larger ones as possible. The weight of the dried material and the weight of the material removed at this point are determined and recorded.

Taking of a fresh laboratory sample
After impurities, outgrowths and stones are removed, the part of the sample is again archived – fresh laboratory sample.

Drying
The drying procedure is prescribed in separate instructions.

Sieving
The dried and crushed sample must be sieved manually or by means of a mechanical shaker. The stones, fresh plant parts and glass that remain in the sieve (< 2 mm) are removed and weighed. The clods that remain in the sieve are crushed and returned back into the sample. The sample that remains in the sieve is handled separately. We take care to ensure that only the minimum quantity of fine material adhering to the larger particles is removed.

4.5 Recording of soil status

As part of the measurements of chemical soil status, the following were performed on the soil samples taken at the sampling points with the relevant labels:

- **measurements of the basic pedological parameters**: dry matter (d.m.), pH extraction with $CaCl_2$, share of organic matter, total nitrogen, plant-available phosphorus, plant-available potassium, graininess of soil (texture), cation exchange capacity (CEC), bulk density, electrical conductivity;
- **measurements of the concentrations of the indicative soil parameters**: parameters in accordance with Annex 1 to the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04); metals extracted using aqua regia: Cd, Cu, Ni, Pb, Zn, Cr, Hg, Co, Mo, As, total fluorides, BTEX (benzene, toluene, ethylbenzene, xylene), PAH, PCB, DDT/DDD/DDE, drins, HCH compounds, atrazine, simazine, hydrocarbons (mineral oils).

Data on the measurement methods and measuring equipment used for the taking of soil samples and chemical analyses of soil samples as part of measurements of the chemical status of soil is collected in the table below. The analytical methods used are in line with the criteria from the third and fourth paragraphs of Article 11 of the Rules on the operational monitoring of soil status (Official Gazette of RS, Nos. 66/17, 4/18).

For the analysis of soil samples, analytical methods are used (including laboratory, field and online methods) that are validated and documented in accordance with the SIST EN ISO/IEC 17025 standard or with another

equivalent internationally recognised standard based on a set measurement uncertainty and limit of quantification.

Table 9: Measurement methods and measuring equipment for the taking and chemical analysis of soil samples.

No.	Parameter	Measurement method	Equipment used	MU[1]	LOD[2]	LOQ[3]	Unit	AM[4] / VM[5]
	***SAMPLING**	SIST ISO 10381-1 ISO 10381-4 SIST ISO 10381-5 Probing, combined samples	Grooved probe, trowel, knife, PE container	-	-	-	-	-
	BASIC PEDOLOGICAL PARAMETERS				-			
1	Dry matter (d.m.)	SIST ISO 11465:1996, SISI ISO 11465:1996 / Cor. 1:2005	Laboratory dryer	0.13%		98.7	%	YES / YES
2	**pH extraction with $CaCl_2$	SIST ISO 10390	pH meter	4.8%	-	-	-	YES / YES
3	**Percentage of organic matter	SIST ISO 14235:1998 – mod. (factor of organic matter/organic C = 1.724) %	UV-VIS; calculation	15%	0.001	0.003	%	NO / YES
4	**Total nitrogen	ISO 11261: 1995	Digestion unit using the Kjeldahl method, distillation unit	5%	0.02	0.06	g/kg d.m.	YES / YES
5	**Plant-available phosphorus	ÖNORM L 1087 mod.	AAS	5%	0.17	0.5	mg P_2O_5/100 g	NO / YES
6	**Plant-available potassium	ÖNORM L 1087 mod.	AAS	5%	0.17	0.5	mg K_2O/100 g	NO / YES
7	**Graininess of soil (texture)							
	- Clay (< 2 µm)	ISO 11277:2009 mod.	Mechanical analysis	1% (abs) in the region <10%; 2% (abs) in the region >10%;	1	3	%	NO / YES
	- Fine silt ((2–20) µm)	ISO 11277:2009 mod.	Shaker, sieve, glass cylinder, evaporating dishes, desiccator	1% (abs) in the region <10%; 2% (abs) in the region >10%;	1	3	%	NO / YES
	- Coarse silt ((20–50) µm)	ISO 11277:2009 mod.	Shaker, sieve, glass cylinder, evaporating dishes, desiccator	1% (abs) in the region <10%; 2% (abs) in the region >10%;	1	3	%	NO / YES
	- Fine sand ((50–200) µm)	ISO 11277:2009 mod.	Shaker, sieve, glass cylinder, evaporating dishes, desiccator	1% (abs) in the region <10%; 2% (abs) in the region >10%;	1	3	%	NO / YES
	- Coarse sand ((200–2000) µm)	ISO 11277:2009 mod.	Shaker, sieve, glass cylinder, evaporating dishes, desiccator	1% (abs) in the region <10%; 2% (abs) in the region >10%;	1	3	%	NO / YES
	- Texture class	USDA Texture Classification (Soil survey lab. meth. man., 1992)	Calculation	-	-	-	-	NO / YES
8	*** Cation exchange capacity (CEC)							
	- Exchangeable Ca	NF X31-108 mod.	AAS	5%	0.05	0.15	mmol+/100 g	NO / YES
	- Exchangeable Mg	NF X31-108 mod.	AAS	5%	0.006	0.02	mmol+/100 g	NO / YES

- Exchangeable K	NF X31-108 mod.	AAS	5%	0.05	0.15	mmol+/100 g	NO / YES
- Exchangeable Na	NF X31-108 mod.	AAS	10%	0.013	0.04	mmol+/100 g	NO / YES
- Total exchangeable acidity	Mehlich method (mod. Pecch) Soil survey lab. meth. man., 1992	AAS	10%	0.06	0.2	mmol+/100 g	NO / YES
- Sum of base cations (S)	Soil survey lab. meth. man., 1992	Calculation	10%	0.12	0.4	mmol+/100 g	NO / YES
- Cation exchange capacity (T)	Soil survey lab. meth. man., 1992	Calculation	10%	0.21	0.7	mmol+/100 g	NO / YES

No.	Parameter	Measurement method	Equipment used	MU[1]	LOD[2]	LOQ[3]	Unit	AM[4] / VM[5]
	- Base cations share (V)	Soil survey lab. meth. man., 1992	Calculation	30%	-	-	%	NO / YES
9	**Bulk density	CSN EN 13040	Electronic scales	15%	-	100	g/dm^3	YES / YES
10	**Electrical conductivity	ISO 11265:1994	Multimeter	5%	0.003	0.01	mS/m	NO / YES
PARAMETERS of the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04)								
11	**Cadmium	CSN EN ISO 17294-2	ICP-MS	20%	-	0.05	mg/kg d.m.	YES / YES
12	Copper	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	38.4%	-	10	mg/kg d.m.	NO / YES
13	Nickel	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	31.6%	0.02	1	mg/kg d.m.	NO / YES
14	Lead	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	16.6%	-	1	mg/kg d.m.	NO / YES
15	Zinc	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	26.9%	-	10	mg/kg d.m.	NO / YES
16	Chrome	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	17.2%	-	1	mg/kg d.m.	NO / YES
17	**Mercury	CSN EN ISO 17852, ISO 16772	Spectrofluorometer	21%	-	50	µg/kg d.m.	YES / YES
18	Cobalt	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	7.2%	0.02	1	mg/kg d.m.	NO / YES
19	Molybdenum	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	37.2%	-	1	mg/kg d.m.	NO / YES
20	Arsenic	SIST EN ISO 17294-2, SIST ISO 11466	ICP-MS	7.4%	0.13	1	mg/kg d.m.	NO / YES
21	Total fluorides	ISO 10359-1	Ion selective electrode	20%	-	20	mg/kg d.m.	NO / YES
22	**Volatile aromatic hydrocarbons (BTX)[7]	US EPA 8260, US EPA 5021A, US EPA 5021, US EPA 8015, MADEP 2004, Rev. 1.1, ISO 15009	GC-FID-MS	40%	([A])	([B])	mg/kg d.m.	YES / YES
23	**Polycyclic aromatic hydrocarbons (PAH)[8]	US EPA 8270, CSN EN 15527, ISO 18287	GC-MS	30%	0.0033	0.010	mg/kg d.m.	YES / YES

24	**PCB[9]	US EPA 8082, ISO 10382, CSN EN 15308	GC-MS	40%	-	0.003	mg/kg d.m.	YES / YES
25	**DDT/DDD/DDE[10]	US EPA 8081, ISO 10382	GC-MS	40%	0.0033	0.010	mg/kg d.m.	YES / YES
26	**Drins[11]	US EPA 8081, ISO 10382	GC-MS	40%	0.0033	0.010	mg/kg d.m.	YES / YES
27	**HCH compounds[12]	US EPA 8081, ISO 10382	GC-MS	40%	0.0033	0.010	mg/kg d.m.	YES / YES
28	**Atrazine	US EPA 8081, ISO 10382	GC-MS	40%	0.0033	0.010	mg/kg d.m.	YES / YES
29	**Simazine	US EPA 8081, ISO 10382	GC-MS	40%	0.0033	0.010	mg/kg d.m.	YES / YES
30	**Total hydrocarbons (mineral oils) C_{10}-C_{40}	CSN EN ISO 14039, CSN EN ISO 16703, ISO 16558-2, US EPA 8015, US EPA 3550, TBRCC Method 1006	GC-FID	30%	3.3	10	mg/kg d.m.	YES / YES

*Sampling conducted by subcontractor.
**Analysis conducted by subcontractor.
[1] MU – Measurement uncertainty.
[2] LOD – Limit of detection.
[3] LOQ – Limit of quantification.
[4] AM – Accredited method.
[5] Validated method.
[6] Defined as bulk weight.
[7] Sum of concentrations of benzene, toluene, ethylbenzene, meta- and para-xylene and ortho-xylene. When calculating the sum of the concentrations, for substances for which the measured concentration is below the limit of quantification, the calculation takes a concentration value equal to zero.
[8] Sum of the concentrations of naphthalene, phenanthrene, anthracene, fluoranthene, benzo(a)anthracene, chrysene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene. When calculating the sum of the concentrations, for substances for which the measured concentration is below the limit of quantification, the calculation takes a concentration value equal to zero.
[9] Total concentration of PCB 28, 52, 101, 118, 138, 153 and 180.
[10] Total of DDT, DDD and DDE concentrations.
[11] Total concentration is the sum of aldrin, dieldrin and endrin.
[12] Total concentration is the sum of α-HCH, β-HCH, γ-HCH and δ-HCH.
[A] LOD value for benzene, ethylbenzene and meta- and para-xylene is 0.0067 mg/kg d.m., for toluene 0.033 mg/kg d.m. and for ortho-xylene 0.0033 mg/kg d.m.
[B] LOQ value for benzene, ethylbenzene and meta- and para-xylene is 0.020 mg/kg d.m., for toluene 0.100 mg/kg d.m. and for ortho-xylene 0.010 mg/kg d.m.

Tables 10, 11, 12 and 13 collect the results of the pedological and chemical analyses of soil samples taken as part of the task of describing soil status at the site of the planned SFDS construction.

Table 10: *Results of the pedological and chemical analyses of soil samples taken as part of the recording of soil status at the site of the planned SFDS construction at the TLANEK-1 sampling point.*

Sample label		**TLANEK-1 0-5**	**TLANEK-1 5-20**
Sample no.		**2020/81190**	**2020/81191**
Soil layer		(0–5) cm	(5–20) cm
Sampling date		22 June 2020	22 June 2020
Parameter	**Unit**		
BASIC PEDOLOGICAL PARAMETERS			
Dry matter (d.m.)	%	82.40	84.90
*pH extraction with $CaCl_2$	–	7.6	7.8
*Percentage of organic matter	%	3.1	2.1
*Total nitrogen	g/kg d.m.	1.7	1.1
*Plant-available phosphorus	mg P_2O_5 / 100 g	3.0	2.7
*Plant-available potassium	mg K_2O / 100 g	15	7.3
*Graininess of the soil (texture)			
- Clay (< 2 µm)	%	13.0	12.2
- Fine silt ((2–20) µm)	%	21.8	22.3
- Coarse silt ((20–50) µm)	%	17.2	18.2
- Fine sand ((50–200) µm)	%	35.4	31.0
- Coarse sand ((200–2000) µm)	%	12.6	16.3
- Texture class	–	L	L
*Cation exchange capacity (CEC)			
- Measurable Ca	mmol+/100 g	32.50	32.35
- Measurable Mg	mmol+/100 g	1.48	1.36
- Measurable K	mmol+/100 g	0.28	0.17
- Measurable Na	mmol+/100 g	0.03	0.03
- Total exchangeable acidity	mmol+/100 g	1.00	0.25
- Sum of base cations (S)	mmol+/100 g	34.29	33.91
- Cation exchange capacity (T)	mmol+/100 g	35.29	34.16
- Base cations share (V)	%	97.2	99.3
*Bulk density	g/dm^3	890	990
*Electrical conductivity	mS/m	10.9	9.5
*Cadmium	mg/kg d.m.	0.220	0.248
Copper	mg/kg d.m.	21.7	19.5
Nickel	mg/kg d.m.	25.1	23.5
Lead	mg/kg d.m.	32.8	36.3
Zinc	mg/kg d.m.	92.9	83.6
Chrome	mg/kg d.m.	39.4	36.1
*Mercury	mg/kg d.m.	0.103	0.277
Cobalt	mg/kg d.m.	18.9	16.3
Molybdenum	mg/kg d.m.	1.9	<1.0
Arsenic	mg/kg d.m.	8.0	7.6
Total fluorides	mg/kg d.m.	292	307
*Volatile aromatic hydrocarbons (BTX)	mg/kg d.m.	<0.090	<0.090
*Polycyclic aromatic hydrocarbons (PAH)	mg/kg d.m.	<0.160	<0.160
*PCB	mg/kg d.m.	<0.0210	<0.0210
*DDT/DDD/DDE	mg/kg d.m.	<0.060	<0.060
*Drins	mg/kg d.m.	<0.010	<0.010
*HCH compounds	mg/kg d.m.	<0.010	<0.010
*Atrazine	mg/kg d.m.	<0.0100	<0.0100
*Simazine	mg/kg d.m.	<0.0100	<0.0100
*Total hydrocarbons (mineral oils) C_{10}-C_{40}	mg/kg d.m.	17.1	12.3

* Measurements performed by the subcontractor.
n.i. = not identified.
L – Loam

Table 11: *Results of the pedological and chemical analyses of soil samples taken as part of the recording of soil status at the site of the planned SFDS construction at the TLANEK-2 sampling point.*

Sample label		**TLANEK-2 0-5**	**TLANEK-2 5-20**
Sample no.		**2020/81192**	**2020/81193**
Soil layer		(0–5) cm	(5–20) cm
Sampling date		22 June 2020	22 June 2020
Parameter	**Unit**		
BASIC PEDOLOGICAL PARAMETERS			
Dry matter (d.m.)	%	83.00	84.50
*pH extraction with $CaCl_2$	–	7.6	7.6
*Percentage of organic matter	%	3.8	2.2
*Total nitrogen	g/kg d.m.	2.3	1.5
*Plant-available phosphorus	mg P_2O_5 / 100 g	3.6	2.4
*Plant-available potassium	mg K_2O / 100 g	18	8.2
*Graininess of the soil (texture)			
- Clay (< 2 µm)	%	14.1	14.4
- Fine silt ((2–20) µm)	%	29.2	30.8
- Coarse silt ((20–50) µm)	%	19.8	21.3
- Fine sand ((50–200) µm)	%	25.0	26.4
- Coarse sand ((200–2000) µm)	%	11.9	7.2
- Texture class	–	L	SL
*Cation exchange capacity (CEC)			
- Measurable Ca	mmol+/100 g	34.18	34.68
- Measurable Mg	mmol+/100 g	1.76	1.51
- Measurable K	mmol+/100 g	0.37	0.18
- Measurable Na	mmol+/100 g	0.03	0.04
- Total exchangeable acidity	mmol+/100 g	0.75	0.50
- Sum of base cations (S)	mmol+/100 g	36.34	36.41
- Cation exchange capacity (T)	mmol+/100 g	37.09	36.91
- Base cations share (V)	%	98.0	98.6
*Bulk density	g/dm³	880	990
*Electrical conductivity	Ms/m	13.9	11.0
*Cadmium	mg/kg d.m.	0.202	0.183
Copper	mg/kg d.m.	24.8	24.1
Nickel	mg/kg d.m.	26.3	28.7
Lead	mg/kg d.m.	30.5	31.3
Zinc	mg/kg d.m.	86.8	81.3
Chrome	mg/kg d.m.	42.4	46.3
*Mercury	mg/kg d.m.	0.094	0.108
Cobalt	mg/kg d.m.	12.9	17.9
Molybdenum	mg/kg d.m.	1.1	<1.0
Arsenic	mg/kg d.m.	8.5	9.4
Total fluorides	mg/kg d.m.	271	354
*Volatile aromatic hydrocarbons (BTX)	mg/kg d.m.	<0.090	<0.090
*Polycyclic aromatic hydrocarbons (PAH)	mg/kg d.m.	0.181	0.161
*PCB	mg/kg d.m.	<0.0210	<0.0210
*DDT/DDD/DDE	mg/kg d.m.	<0.060	<0.060
*Drins	mg/kg d.m.	<0.010	<0.010
*HCH compounds	mg/kg d.m.	<0.010	<0.010
*Atrazine	mg/kg d.m.	<0.0100	<0.0100
*Simazine	mg/kg d.m.	<0.0100	<0.0100
*Total hydrocarbons (mineral oils) C_{10}-C_{40}	mg/kg d.m.	13.4	<10

*Measurements performed by the subcontractor.
n.i. = not identified.
L – Loam, SL – Silty loam

Table 12: *Results of the pedological and chemical analyses of soil samples taken as part of the recording of soil status at the site of the planned SFDS construction at the TLANEK-3 sampling point.*

Sample label		**TLANEK-3 0-5**	**TLANEK-3 5-20**
Sample no.		**2020/81195**	**2020/81196**
Soil layer		(0–5) cm	(5–20) cm
Sampling date		22 June 2020	22 June 2020
Parameter	**Unit**		
BASIC PEDOLOGICAL PARAMETERS			
Dry matter (d.m.)	%	84.00	85.50
*Ph extraction with $CaCl_2$	–	7.7	7.7
*Percentage of organic matter	%	3.2	2.9
*Total nitrogen	g/kg d.m.	1.5	1.2
*Plant-available phosphorus	mg P_2O_5 / 100 g	2.6	2.2
*Plant-available potassium	mg K_2O / 100 g	11	6.8
*Graininess of the soil (texture)			
- Clay (< 2 µm)	%	10.6	9.8
- Fine silt ((2–20) µm)	%	17.5	17.7
- Coarse silt ((20–50) µm)	%	16.3	14.4
- Fine sand ((50–200) µm)	%	41.1	33.4
- Coarse sand ((200–2000) µm)	%	14.6	24.7
- Texture class	–	SDL	SDL
*Cation exchange capacity (CEC)			
- Measurable Ca	mmol+/100 g	33.69	32.56
- Measurable Mg	mmol+/100 g	1.38	1.26
- Measurable K	mmol+/100 g	0.21	0.15
- Measurable Na	mmol+/100 g	0.03	0.04
- Total exchangeable acidity	mmol+/100 g	0.50	0.05
- Sum of base cations (S)	mmol+/100 g	35.31	34.01
- Cation exchange capacity (T)	mmol+/100 g	35.81	34.06
- Base cations share (V)	%	98.6	99.9
*Bulk density	g/dm^3	900	1,000
*Electrical conductivity	mS/m	10.0	9.5
*Cadmium	mg/kg d.m.	0.253	0.245
Copper	mg/kg d.m.	22.5	19.6
Nickel	mg/kg d.m.	22.5	19.1
Lead	mg/kg d.m.	38.9	33.2
Zinc	mg/kg d.m.	94.5	85.2
Chrome	mg/kg d.m.	41.4	31.9
*Mercury	mg/kg d.m.	0.128	0.589
Cobalt	mg/kg d.m.	12.5	17.0
Molybdenum	mg/kg d.m.	<1.0	<1.0
Arsenic	mg/kg d.m.	7.6	6.6
Total fluorides	mg/kg d.m.	378	215
*Volatile aromatic hydrocarbons (BTX)	mg/kg d.m.	<0.090	<0.090
*Polycyclic aromatic hydrocarbons (PAH)	mg/kg d.m.	<0.160	<0.160
*PCB	mg/kg d.m.	<0.0210	<0.0210
*DDT/DDD/DDE	mg/kg d.m.	<0.060	<0.060
*Drins	mg/kg d.m.	<0.010	<0.010
*HCH compounds	mg/kg d.m.	<0.010	<0.010
*Atrazine	mg/kg d.m.	<0.0100	<0.0100
*Simazine	mg/kg d.m.	<0.0100	<0.0100
*Total hydrocarbons (mineral oils) C_{10}-C_{40}	mg/kg d.m.	23.4	36.9

*Measurements performed by the subcontractor.
n.i. = not identified.
SDL – Sandy loam

Table 13 *Results of the pedological and chemical analyses of soil samples taken as part of the recording of soil status at the site of the planned SFDS construction at the TLANEK-4 sampling point.*

Sample label		**TLANEK-4 0-5**	**TLANEK-4 5-20**
Sample no.		**2020/81197**	**2020/81198**
Soil layer		(0–5) cm	(5–20) cm
Sampling date		22 June 2020	22 June 2020
Parameter	**Unit**		
BASIC PEDOLOGICAL PARAMETERS			
Dry matter (d.m.)	%	82.30	86.00
*pH extraction with $CaCl_2$	–	7.6	7.7
Percentage of organic matter	%	4.4	2.7
*Total nitrogen	g/kg d.m.	2.4	1.3
*Plant-available phosphorus	mg P_2O_5 / 100 g	2.6	1.5
*Plant-available potassium	mg K_2O / 100 g	18	7.3
*Graininess of the soil (texture)			
- Clay (< 2 µm)	%	14.5	16.0
- Fine silt ((2–20) µm)	%	22.2	21.0
- Coarse silt ((20–50) µm)	%	12.7	13.7
- Fine sand ((50–200) µm)	%	21.7	20.8
- Coarse sand ((200–2000) µm)	%	28.9	28.5
- Texture class	–	L	L
*Cation exchange capacity (CEC)			
- Measurable Ca	mmol+/100 g	34.27	34.07
- Measurable Mg	mmol+/100 g	1.74	1.52
- Measurable K	mmol+/100 g	0.36	0.18
- Measurable Na	mmol+/100 g	0.04	0.03
- Total exchangeable acidity	mmol+/100 g	1.00	0.50
- Sum of base cations (S)	mmol+/100 g	36.41	35.80
- Cation exchange capacity (T)	mmol+/100 g	37.41	36.30
- Base cations share (V)	%	97.3	98.6
*Bulk density	g/dm^3	910	1,030
*Electrical conductivity	mS/m	15.0	11.2
*Cadmium	mg/kg d.m.	0.204	0.178
Copper	mg/kg d.m.	34.8	25.7
Nickel	mg/kg d.m.	22.6	22.2
Lead	mg/kg d.m.	31.0	31.5
Zinc	mg/kg d.m.	88.9	83.2
Chrome	mg/kg d.m.	42.6	41.2
*Mercury	mg/kg d.m.	0.180	0.113
Cobalt	mg/kg d.m.	20.9	16.5
Molybdenum	mg/kg d.m.	<1.0	<1.0
Arsenic	mg/kg d.m.	6.0	6.8
Total fluorides	mg/kg d.m.	260	191
*Volatile aromatic hydrocarbons (BTX)	mg/kg d.m.	<0.090	<0.090
*Polycyclic aromatic hydrocarbons (PAH)	mg/kg d.m.	<0.160	0.224
*PCB	mg/kg d.m.	<0.0210	<0.0210
*DDT/DDD/DDE	mg/kg d.m.	<0.060	<0.060
*Drins	mg/kg d.m.	<0.010	<0.010
*HCH compounds	mg/kg d.m.	<0.010	<0.010
*Atrazine	mg/kg d.m.	<0.0100	<0.0100
*Simazine	mg/kg d.m.	<0.0100	<0.0100
*Total hydrocarbons (mineral oils) C_{10}-C_{40}	mg/kg d.m.	30.3	22.1

*Measurements performed by the subcontractor.
n.i. = not identified.
L – Loam

4.6 Status of soil sampling points at the site

We calculated the zero state of an individual parameter using the following mathematical formula, which includes the heterogeneity of the sampling point and the measurement uncertainty of the analytical method:

$$y_{j,k} = \overline{x_{j,k}} \pm \left(SD + \frac{U_j \cdot x_{j,k}}{100}\right) \quad (1)$$

where:

$$\overline{x_{j,k}} = \frac{x_{A,j,k} + x_{B,j,k} + x_{C,j,k} + x_{D,j,k}}{4} \quad (2)$$

$$SD = \frac{\sqrt{\frac{\left(x_{A,j,k} - \overline{x_{j,k}}\right)^2 + \left(x_{B,j,k} - \overline{x_{j,k}}\right)^2 + \left(x_{C,j,k} - \overline{x_{j,k}}\right)^2 + \left(x_{D,j,k} - \overline{x_{j,k}}\right)^2}{3}}{\overline{x_{j,k}}} \quad (3)$$

Meaning of symbols:

$y_{j,k}$ Zero state of parameter j in soil layer k;

$\bar{\bar{x}}_{j,k}$ Average value of parameter j in the zero state in soil layer k;

$SD_{j,k}$ Standard deviation for parameter j in soil layer k;

$x_{A,j,k}$ Measured value of the parameter j in the zero state in segment A of the sampling point in soil layer k;

$x_{B,j,k}$ Measured value of parameter j in the zero state in segment B of the sampling point in soil layer k;

$x_{C,j,k}$ Measured value of the parameter j in the zero state in segment C of the sampling point in soil layer k;

$x_{D,j,k}$ Measured value of the parameter j in the zero state in segment D of the sampling point in soil layer k;

U_j Measurement uncertainty of the analytical method for parameter j;

LOQ_j Limit of quantification for parameter j;

k soil layer – surface layer: depth (0–5) cm, sub-surface layer: depth (5–20) cm.

Where the measured value of the parameter in the zero state in an individual segment of the sampling point was below the limit of quantification, we assumed, when calculating the zero state of the parameter using equation (1), that the measured value of the parameter was equal to half the limit of quantification of the parameter.

The zero state of parameters in the surface (depth: (0–5) cm) and sub-surface (depth: (5–20) cm) soil layers at the site of the planned SFDS construction is given in Table 14 below. The soil status is shown as the average value of an individual parameter with the given variability. The organic parameters (volatile aromatic hydrocarbons (BTX), PCB, DDT/DDD/DDE, drins, HCH compounds, atrazine and simazine) are below the limit of quantification (LOQ) in all samples, with the exception of PAH, which were slightly above the LOQ in three of the eight samples. The variability of the parameters in the soil at the site under investigation is low and does not display large deviations.

Table 14: *Zero state of the parameters in the surface and sub-surface soil layer samples taken as part of the recording of soil status at the site of the planned SFDS construction.*

Soil layer		**(0–5) cm**	**(5–20) cm**
Sampling date		22 June 2020	22 June 2020
Parameter	**Unit**		
BASIC PEDOLOGICAL PARAMETERS			
Dry matter (d.m.)	%	82.90 ± 0.9	85.2 ± 0.8
*pH extraction with $CaCl_2$	–	7.6 ± 0.4	7.7 ± 0.5
*Percentage of organic matter	%	3.6 ± 1.1	2.5 ± 0.8
*Total nitrogen	g/kg d.m.	2.0 ± 0.5	1.3 ± 0.2
*Plant-available phosphorus	mg P_2O_5 / 100 g	3.0 ± 0.6	2.2 ± 0.6
*Plant-available potassium	mg K_2O / 100 g	15.5 ± 4.1	7.4 ± 1.0
*Graininess of the soil (texture)			
- Clay (< 2 µm)	%	13.1 ± 3.8	13.1 ± 4.7
- Fine silt ((2–20) µm)	%	22.7 ± 6.8	23.0 ± 7.6
- Coarse silt ((20–50) µm)	%	16.5 ± 3.9	16.9 ± 4.5
- Fine sand ((50–200) µm)	%	30.8 ± 11.0	27.9 ± 7.6
- Coarse sand ((200–2000) µm)	%	17.0 ± 10.0	19.2 ± 11.5
- Texture class	–	-	-
*Cation exchange capacity (CEC)			
- Measurable Ca	mmol+/100 g	33.66 ± 2.50	33.42 ± 2.81
- Measurable Mg	mmol+/100 g	1.59 ± 0.27	1.41 ± 0.20
- Measurable K	mmol+/100 g	0.31 ± 0.09	0.17 ± 0.02
- Measurable Na	mmol+/100 g	0.03 ± 0.008	0.04 ± 0.009
- Total exchangeable acidity	mmol+/100 g	0.81 ± 0.32	0.33 ± 0.25
- Sum of base cations (S)	mmol+/100 g	35.59 ± 4.56	35.03 ± 4.77
- Cation exchange capacity (T)	mmol+/100 g	36.40 ± 4.65	35.36 ± 5.00
- Base cations share (V)	%	97.8 ± 30.0	99.1 ± 30.4
*Bulk density	g/dm^3	895 ± 147	1,003 ± 169
*Electrical conductivity	mS/m	12.5 ± 3.0	10.3 ± 1.4
*Cadmium	mg/kg d.m.	0.220 ± 0.1	0.214 ± 0.1
Copper	mg/kg d.m.	26.0 ± 16	22.2 ± 11.7
Nickel	mg/kg d.m.	24.1 ± 9.5	23.4 ± 11.4
Lead	mg/kg d.m.	33.3 ± 9.4	33.1 ± 7.8
Zinc	mg/kg d.m.	90.8 ± 28.0	83.3 ± 24.0
Chrome	mg/kg d.m.	41.5 ± 8.6	38.9 ± 12.9
*Mercury	mg/kg d.m.	0.13 ± 0.06	0.288 ± 0.27
Cobalt	mg/kg d.m.	16.3 ± 5.4	16.9 ± 1.9
Molybdenum	mg/kg d.m.	1.3 ± 0.9	<1.0 ± 0.0
Arsenic	mg/kg d.m.	7.5 ± 1.6	7.6 ± 1.8
Total fluorides	mg/kg d.m.	300 ± 114	267 ± 130
*Volatile aromatic hydrocarbons (BTX)	mg/kg d.m.	<0.030 ± 0.0	<0.030 ± 0.0
*Polycyclic aromatic hydrocarbons (PAH)	mg/kg d.m.	0.057 ± 0.1	0.176 ± 0.1
*PCB	mg/kg d.m.	<0.210 ± 0.0	<0.210 ± 0.0
*DDT/DDD/DDE	mg/kg d.m.	<0.060 ± 0.0	<0.060 ± 0.0
*Drins	mg/kg d.m.	<0.010 ± 0.0	<0.010 ± 0.0
*HCH compounds	mg/kg d.m.	<0.010 ± 0.0	<0.010 ± 0.0
*Atrazine	mg/kg d.m.	<0.0100 ± 0.0	<0.0100 ± 0.0
*Simazine	mg/kg d.m.	<0.0100 ± 0.0	<0.0100 ± 0.0
*Total hydrocarbons (mineral oils) C_{10}-C_{40}	mg/kg d.m.	21.1 ± 13.7	20.2 ± 18.3

*Measurements performed by the subcontractor.

4.7 Evaluation of soil pollution status

We evaluated the soil pollution status on the basis of a comparison between the measured values of individual parameters as part of measurements of the chemical status of soil at the sampling points with labels and the corresponding limit, alert and critical values as determined in the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04 [ZVO-1]) and the results of measurements **at the nearest national monitoring sampling point** (ROTS no. 13657, Spodnji Stari Grad, municipality of Krško).

In accordance with the **Decree on the criteria for determining the level of environmental pollution resulting from the contamination of soil with dangerous substances** (Official Gazette of RS, No. 7/19), we will classify the area into the **first** or **second level** of environmental pollution according to the limit, alert and critical values of dangerous substances under the Decree referred to in the previous sentence.

In accordance with the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04 [ZVO-1]):

- the **limit value** is the density of a particular dangerous substance in the soil that entails a load on the soil that guarantees the living conditions for plants and animals, and at which there is no deterioration in the quality of the groundwater or in soil fertility. At this value, the effects and impact on human health and on the environment are still acceptable;
- the **alert threshold** is the density of a particular dangerous substance in the soil that entails the likelihood of harmful effects or impact on human health or on the environment for certain types of soil use;
- the **critical value** is the density of a particular dangerous substance in the soil at which the contaminated soil is not suitable for the cultivation of plants intended for human or animal consumption or for the retention or filtration of water, because of the harmful effects or impact on human health or on the environment.

Table 15 shows that all the parameters investigated in accordance with the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04 [ZVO-1]) are below the limit value, which means that the density of an individual dangerous substance in soil is such that it does not reduce the quality of groundwater and soil. The environmental impact is acceptable. Similarly, the results of the parameters do not deviate significantly from the results of the measurements at the nearest national monitoring sampling point.

In accordance with the Decree on the criteria for determining the level of environmental pollution resulting from the contamination of soil with dangerous substances (Official Gazette of RS, No. 7/19), the area of soil under investigation belongs to the second level of environmental pollution because none of the values are equal to or exceed the alert value for dangerous substances.

Table 15: Presentation of the soil pollution status at the site of the planned SFDS construction in zero state – comparison of values of individual parameters with the corresponding limit, alert and critical values as determined in the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04 [ZVO-1]) and the results of measurements at the nearest national monitoring sampling point (ROTS) – sampling point no. 13657, Spodnji Stari Grad (Krško), the location of which is defined using the Gauss-Krüger coordinates GKX = 541000 and GKY = 88000.

Parameter	Unit	Soil status – sampling 22 June 2020		Limit value[1]	Alert threshold[1]	Critical value[1]	ROTS 13657	
		(0–5) cm	(5–20) cm				(0–5) cm	(5–20) cm
*Cadmium	mg/kg d.m.	0.220 ± 0.1	0.214 ± 0.1	1	2	12	<0.5	<0.5
Copper	mg/kg d.m.	26.0 ± 16	22.2 ± 11.7	60	100	300	30.5	54
Nickel	mg/kg d.m.	24.1 ± 9.5	23.4 ± 11.4	50	70	210	25.9	24.5
Lead	mg/kg d.m.	33.3 ± 9.4	33.1 ± 7.8	85	100	530	43.5	41.5
Zinc	mg/kg d.m.	90.8 ± 28.0	83.3 ± 24.0	200	300	720	110	107
Chrome	mg/kg d.m.	41.5 ± 8.6	38.9 ± 12.9	100	150	380	43.1	43.8
*Mercury	mg/kg d.m.	0.13 ± 0.06	0.288 ± 0.27	0.8	2	10	0.2	/
Cobalt	mg/kg d.m.	16.3 ± 5.4	16.9 ± 1.9	20	50	240	10.6	9.8
Molybdenum	mg/kg d.m.	1.3 ± 0.9	<1.0 ± 0.0	10	40	200	/	/
Arsenic	mg/kg d.m.	7.5 ± 1.6	7.6 ± 1.8	20	30	55	10.2	/
Total fluorides	mg/kg d.m.	300 ± 114	267 ± 130	450	825	1,200	/	/
*Volatile aromatic hydrocarbons (BTX)	mg/kg d.m.			/	/	/	/	/
Benzene				0.05	0.5	1	/	/
Ethylbenzene		<0.030 ± 0.0	<0.030 ± 0.0	0.05	25	50	/	/
Toluene				0.05	65	130	/	/
xylene				0.05	12.5	25	/	/
*Polycyclic aromatic hydrocarbons (PAH)	mg/kg d.m.	0.057 ± 0.1	0.176 ± 0.1	1	20	40	/	/
*PCB	mg/kg d.m.	<0.210 ± 0.0	<0.210 ± 0.0	0.2	0.6	1	/	/
*DDT/DDD/DDE	mg/kg d.m.	<0.060 ± 0.0	<0.060 ± 0.0	0.1	2	4	<0.005	/
*Drins	mg/kg d.m.	<0.010 ± 0.0	<0.010 ± 0.0	0.1	2	4	<0.005	/
*HCH compounds	mg/kg d.m.	<0.010 ± 0.0	<0.010 ± 0.0	0.1	2	4	<0.002	/
*Atrazine	mg/kg d.m.	<0.0100 ± 0.0	<0.0100 ± 0.0	0.01	3	6	0.017	/
*Simazine	mg/kg d.m.	<0.0100 ± 0.0	<0.0100 ± 0.0	0.01	3	6	0.026	/
*Total hydrocarbons (mineral oils) C10-C40	mg/kg d.m.	21.1 ± 13.7	20.2 ± 18.3	50	2,500	5,000	/	/

*Measurements performed by the subcontractor.

1 Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96, 41/04 [ZVO-1])

5 CONCLUDING ASSESSMENT

The soil in parcel no. 1197/44, cadastral municipality 1321 Leskovec, where Nuklearna elektrarna Krško d.o.o. plans to build an SFDS facility with an area of 3,312 m^2, was examined in accordance with the Rules on the operational monitoring of soil status (Official Gazette of RS, Nos. 66/17 and 4/18), including a detailed description and pollution testing. Following an evaluation of dangerous substance content pursuant to the Decree on limit values, alert thresholds and critical immission values of dangerous substances in soil (Official Gazette of RS, Nos. 68/96 and 41/04 [ZVO-1]), we find that the values of the relevant parameters do not exceed **limit immission values**, which means a level of soil pollution that **does not represent a deterioration** of the quality of groundwater and soil. In the case of the values obtained, the effects or impact on human health or the environment are **still acceptable**.

6 ANNEXES

Test report no. 2020/81190 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81191 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81192 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81193 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81195 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81196 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81197 (date of report: 24 July 2020, Talum Inštitut)
Test report no. 2020/81198 (date of report: 24 July 2020, Talum Inštitut)

Test report no. 02727/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02728/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02729/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02730/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02731/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02732/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02733/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)
Test report no. 02734/2020 (date of report: 24 July 2020, Agricultural Institute of Slovenia)

Certificate of Analysis no. PR2063532 (date of report: 7 July 2020, ALSGlobal, ALS Czech Republic, s.r.o)

Izraz v slovenščini	Term in English
Ameriška tekst. klasifikacija	USDA Texture Classification
Analitska številka:	Analysis number
Analiza za Nuklearno elektrarno Krško d.o.o.	Analysis for Nuklearna elektrarna Krško d.o.o.
ANORGANSKI PARAMETRI	INORGANIC PARAMETERS
Arzen	Arsenic
Baker	Copper
Ca izmenljivi	Exchangeable Ca
Cink	Zinc
Datum izvajanja preskusa:	Testing date
datum odvzema	Sampling date
Datum prejema vzorca:	Sample receipt date
datum prevzema	Receipt date
Delež bazičnih kationov (V)	Base cations share (V)
Direktor:	Director:
enota	Unit
F-celotni	F - total
Fini melj (2 - 20 µm)	Fine silt (2 - 20 µm)
Fini pesek (50 - 200 µm)	Fine sand (50 - 200 µm)
Fluoridi - celotni	Fluorides - total
Glina (< 2 µm)	Clay
Grobi melj (20 - 50 µm)	Coarse silt
Grobi pesek (200 - 2000 µm)	Coarse sand
grupa vzorca	Sample group
I: ilovica	L: loam
Interna metoda	Internal method
Izdaja: 3	Edition: 3
Izračun	Calculation
izražen kot	Expressed as
izvor	Source
K izmenljivi	Exchangeable K
K_2O (dostopni)	K_2O (available)
Kationska izm. kapaciteta (T)	Cation exchange capacity (T)
kraj izvedbe	Test location
Kobalt	Cobalt
Krom	Chrome
mag.	MSc.
matriks	Matrix
merilna negotovost	Measurement uncertainty
mesto odvzema	Sample location
Mg izmenljivi	Exchangeable Mg
Molibden	Molibden
Na izmenljivi	Exchangeable Na
na naslovu izvajalca	At the address of the contractor
naloga	Task
naročnik	Client
Nikelj	Nickel
območje	Area
od 7.7.2020 do 24.7.2020	From 7.7.2020 to 24.7.2020
Odgovorni analitik	Responsible Analyst
odvzemnik	Sampled by
Opomba: Sestavni del »Poročila o preskusu« je »Priloga k poročilu o preskusu«.	Note: "The Appendix to the Test Report" is an integral part of the "Test Report".
Opombe k parametru:	Parameter notes:

Izraz v slovenščini	Term in English
Opombe k vzorcu:	Sample notes:
Organska snov	Organic matter
Organski ogljik (C_{org})	Organic carbon (C_{org})
OSTALI PARAMETRI	OTHER PARAMETERS
Oznaka:	Label:
oznaka vzorca	Sample label
P_2O_5 (dostopni)	P_2O_5 (available)
parameter	Parameter
pH v $CaCl_2$	pH in $CaCl_2$
Po DIN EN 10234-3.1; Rezultati se nanašajo izključno na preiskan(e) vzorec(e). Rezultati se nanašajo na vzorčen vzorec. Razmnoževanje poročila, razen v celoti, ni dovoljeno.	According to DIN EN 10234-3.1; The results refer exclusively to the sample (s) examined. The results refer to the sample. Reproduction of the report, except in full, is not permitted.
Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.	Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k=2, representing approx. 95% confidence level.
PODATKI O VZORCU	SAMPLE DATA
POROČILO O PRESKUSU	TEST REPORT
Priloga k poročilu o preskusu	Appendix to the Test Report
Priloga: Poročila podizvajalca	Appendix: Subcontractor reports
Priprava vzorca	Sample preparation
Referenca	Reference
rezultat	Result
REZULTATI ANALIZE	ANALYSIS RESULTS
REZULTATI ANALIZE - nadaljevanje:	ANALYSIS RESULTS - continued
Rezultati označeni z # se nanašajo na neakreditirano dejavnost	Results marked with # refer to a non-accredited activity
serija	Series
Skupna izmenljiva kislost	Total exchangeable acidity
Skupni dušik (N)	Total Nitrogen (N)
Specifična električna prev.	Soil electrical conductivity
SPLOŠNI PODATKI	GENERAL DATA
standard	Standard
stanje vzorca	Sample status
Stran 1 od 2	Page 1 of 2
Suha snov pri 105 °C	Dry matter at 105 °C
Svinec	Lead
št.	No.
št. naročila	Order No.
št. poročila	Report No.
številka vzorca	Sample No.
univ. dipl. inž. kem. tehnol.	B.Sc. Chemical Technology
univ. dipl. kem.	B.Sc. Chemistry
Ustrezna	Suitable
Teksturni razred	Texture class
verzija 12	Version 12
Vodja laboratorija:	Head of the Laboratory
Vsota bazičnih kationov (S)	Sum of base cations (S)
Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na	Soil samples were prepared in accordance with the SIST ISO 11464: 2006 standard, the fraction of particles larger than 2 mm was removed. The results of the analysis relate exclusively to the

Izraz v slovenščini	Term in English
preskušane vzorce. Podani so v zračno suhem vzorcu, razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno, razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.	samples tested. They are given for an air-dry sample, except where the unit is marked as s.s., which means in dry matter. Reproduction of this document is not permitted except in its entirety as a facsimile. The test report is given in a simplified form. Any additional information on testing is available in the laboratory.
Vzorec:	Sample:
Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).	The sample was digested in a closed container using microwaves (ISO 12914 Standard).
Vzorec, posušen na 105 °C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo skladnosti s standardom SIST ISO 10359-1.	The sample, dried at 105 ° C, was mixed with 500 ml of water, digested according to SIST ISO 10359-2 and analysed for compliance with SIST ISO 10359-1.
vzorec ustreza pogojem za sprejem	The sample meets the conditions for admission
začetek	Beginning
zaključek	Conclusion
Zemlja	Soil

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Talum Inštitut, d.o.o.
Tovarniška cesta 10
2325 Kidričevo

ilac-MRA

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LP-045

Rezultati označeni z # se nanašajo na **neakreditirano** dejavnost

št. poročila: 2020/81190/166650

Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-1 0-5 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81190
stanje vzorca: vzorec ustreza pogojem za sprejem

območje: Krško
mesto odvzema: TLANEK-1
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	82.40	±1.78		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	1.9	±37.2	#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	8.0	±0.6	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	21.7	±8.3	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	92.9	±25.0	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	39.4	±6.8	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	25.1	±7.9	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	32.8	±5.4	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	18.9	±1.4	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	292	±58	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, kl ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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Priloga k Poročilu o preskusu

Opombe k vzorcu:

Priloga: Poročila podizvajalca KIS
Priloga: Poročila podizvajalca ALS

Opombe k parametru:

	standard
F-celotni	SIST ISO 10359-1:1996

Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.

Mo, Ni, Co, Cu, Cr, Zn, As, Pb	SIST EN ISO 17294-2:2017

Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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št. poročila: 2020/81191/166650 Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-1 5-20 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81191
stanje vzorca: vzorec ustreza pogojem za sprejem

območje: Krško
mesto odvzema: TLANEK-1
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	84.90	±1.83		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	<1.0		#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	7.6	±0.6	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	19.5	±7.5	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	83.6	±22.5	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	36.1	±6.2	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	23.5	±7.4	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	36.3	±6.0	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	16.3	±1.2	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	307	±61	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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Priloga k Poročilu o preskusu

Opombe k parametru:

	standard
F-celotni	SIST ISO 10359-1:1996

Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.

Mo, Ni, Co, Cu, Cr, Zn, As, Pb	SIST EN ISO 17294-2:2017

Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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K I D R I Č E V O

TALUM INŠTITUT

Talum Inštitut, d.o.o.
Tovarniška cesta 10
2325 Kidričevo

SLOVENSKA AKREDITACIJA
SIST EN ISO/IEC 17025
LP-045
Rezultati označeni z # se nanašajo na **neakreditirano** dejavnost

št. poročila: 2020/81192/166650

Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-2 0-5 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81192
stanje vzorca: vzorec ustreza pogojem za sprejem

območje: Krško
mesto odvzema: TLANEK-2
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	83.00	±1.79		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	1.1	±37.2	#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	8.5	±0.6	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	24.8	±9.5	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	86.8	±23.3	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	42.4	±7.3	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	26.3	±8.3	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	30.5	±5.1	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	12.9	±0.9	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	271	±54	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

TALUM • INŠTITUT d.o.o.
KIDRIČEVO

Priloga k Poročilu o preskusu

Opombe k parametru:

standard

F-celotni SIST ISO 10359-1:1996

Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.

Mo, Ni, Co, Cu, Cr, Zn, As, Pb SIST EN ISO 17294-2:2017

Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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Rezultati označeni z # se nanašajo na **neakreditirano** dejavnost

št. poročila: 2020/81193/166650 Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-2 5-20 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81193
stanje vzorca: vzorec ustreza pogojem za sprejem
območje: Krško
mesto odvzema: TLANEK-2
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	84.50	±1.83		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	<1.0		#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	9.4	±0.7	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	24.1	±9.3	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	81.3	±21.9	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	46.3	±8.0	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	28.7	±9.1	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	31.3	±5.2	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	17.9	±1.3	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	354	±71	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

TALUM • INŠTITUT d.o.o.
KIDRIČEVO

Priloga k Poročilu o preskusu

Opombe k parametru:

standard

F-celotni SIST ISO 10359-1:1996

Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.

Mo, Ni, Co, Cu, Cr, Zn, As, Pb SIST EN ISO 17294-2:2017

Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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št. poročila: 2020/81195/166650 Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-3 0-5 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81195
stanje vzorca: vzorec ustreza pogojem za sprejem
območje: Krško
mesto odvzema: TLANEK-3
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	84.00	±1.81		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	<1.0		#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	7.6	±0.6	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	22.5	±8.6	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	94.5	±25.4	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	41.4	±7.1	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	22.5	±7.1	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	38.9	±6.5	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	12.5	±0.9	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	378	±76	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

TALUM • INŠTITUT d.o.o.
KIDRIČEVO

Priloga k Poročilu o preskusu

Opombe k parametru:	standard
F-celotni	SIST ISO 10359-1:1996

Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.

Mo, Ni, Co, Cu, Cr, Zn, As, Pb	SIST EN ISO 17294-2:2017

Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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KIDRIČEVO

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2325 Kidričevo

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Rezultati označeni z # se nanašajo na **neakreditirano** dejavnost

št. poročila: 2020/81196/166650

Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-3 5-20 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81196
stanje vzorca: vzorec ustreza pogojem za sprejem
območje: Krško
mesto odvzema: TLANEK-3
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	85.50	±1.85		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	<1.0		#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	6.6	±0.5	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	19.6	±7.5	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	85.2	±22.9	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	31.9	±5.5	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	19.1	±6.0	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	33.2	±5.5	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	17.0	±1.2	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	215	±43	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

TALUM • INŠTITUT d.o.o.
KIDRIČEVO

Priloga k Poročilu o preskusu

Opombe k parametru:

standard

F-celotni SIST ISO 10359-1:1996

Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.

Mo, Ni, Co, Cu, Cr, Zn, As, Pb SIST EN ISO 17294-2:2017

Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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št. poročila: 2020/81197/166650

Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-4 0-5 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81197
stanje vzorca: vzorec ustreza pogojem za sprejem

območje: Krško
mesto odvzema: TLANEK-4
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na nasłovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	82.30	±1.78		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	<1.0		#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	6.0	±0.4	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	34.8	±13.4	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	88.9	±23.9	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	42.6	±7.3	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	22.6	±7.1	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	31.0	±5.1	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	20.9	±1.5	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	260	±52	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

TALUM • INŠTITUT d.o.o.
K I D R I Č E V O

Priloga k Poročilu o preskusu

Opombe k parametru:	standard
F-celotni	SIST ISO 10359-1:1996
Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.	
Mo, Ni, Co, Cu, Cr, Zn, As, Pb	SIST EN ISO 17294-2:2017
Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).	

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

Direktor:

dr. Marko Homšak

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K I D R I Č E V O

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Talum Inštitut, d.o.o.
Tovarniška cesta 10
2325 Kidričevo

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Rezultati označeni z # se nanašajo na **neakreditirano** dejavnost

Št. poročila: 2020/81198/166650

Kidričevo, 24.7.2020

POROČILO O PRESKUSU

SPLOŠNI PODATKI

naloga: Analiza za Nuklearno elektrarno Krško d.o.o.
naročnik: NUKLEARNA ELEKTRARNA KRŠKO d.o.o.
Vrbina 12, 8270 Krško
št. naročila: 510001187 3200873

PODATKI O VZORCU

matriks: TLA
oznaka vzorca: TLANEK-4 5-20 cm
grupa vzorca: -
serija: -
izvor: -
številka vzorca: 2020/81198
stanje vzorca: vzorec ustreza pogojem za sprejem

območje: Krško
mesto odvzema: TLANEK-4
odvzemnik: Napast Viktor
datum odvzema: 23.06.2020
datum prevzema: 24.06.2020
kraj izvedbe: na naslovu izvajalca

REZULTATI ANALIZ

parameter	enota	izražen kot	standard	rezultat	merilna negotovost	#	začetek zaključek
ANORGANSKI PARAMETRI							
Suha snov pri 105 °C	%		SIST ISO 11465:1996/Cor 1:2005	86.00	±1.86		29.6.2020 30.6.2020
Molibden	mg/kg s.s.	Mo	SIST EN ISO 17294-2:2017	<1.0		#	2.7.2020 6.7.2020
Arzen	mg/kg s.s.	As	SIST EN ISO 17294-2:2017	6.8	±0.5	#	2.7.2020 6.7.2020
Baker	mg/kg s.s.	Cu	SIST EN ISO 17294-2:2017	25.7	±9.9	#	2.7.2020 6.7.2020
Cink	mg/kg s.s.	Zn	SIST EN ISO 17294-2:2017	83.2	±22.4	#	2.7.2020 6.7.2020
Krom	mg/kg s.s.	Cr	SIST EN ISO 17294-2:2017	41.2	±7.1	#	2.7.2020 6.7.2020
Nikelj	mg/kg s.s.	Ni	SIST EN ISO 17294-2:2017	22.2	±7.0	#	2.7.2020 6.7.2020
Svinec	mg/kg s.s.	Pb	SIST EN ISO 17294-2:2017	31.5	±5.2	#	2.7.2020 6.7.2020
Kobalt	mg/kg s.s.	Co	SIST EN ISO 17294-2:2017	16.5	±1.2	#	2.7.2020 6.7.2020
Fluoridi - celotni	mg/kg s.s.		SIST ISO 10359-1:1996	191	±38	#	2.7.2020 6.7.2020
OSTALI PARAMETRI							
Priprava vzorca			SIST ISO 11464: 2006	Ustrezna		#	26.6.2020 29.6.2020

Podana negotovost je razširjena merilna negotovost, izračunana s faktorjem pokritja k, k=2, ki ustreza približno 95% stopnji zaupanja.

Opomba: Sestavni del "Poročila o preskusu" je "Priloga k Poročilu o preskusu".

Vodja laboratorija: Direktor:

Majda Rola, univ. dipl. inž. kem. tehnol. dr. Marko Homšak

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K I D R I Č E V O

Priloga k Poročilu o preskusu

Opombe k parametru:	standard
F-celotni	SIST ISO 10359-1:1996
Vzorec, posušen na 105°C, smo zmešali s 500 ml vode, izvedli razklop v skladu s standardom SIST ISO 10359-2 ter analizo v skladu s standardom SIST ISO 10359-1.	
Mo, Ni, Co, Cu, Cr, Zn, As, Pb	SIST EN ISO 17294-2:2017
Vzorec je bil razklopljen v zaprti posodi z uporabo mikrovalov (standard ISO 12914).	

Vodja laboratorija:

Majda Rola, univ. dipl. inž. kem. tehnol.

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KIDRIČEVO

Direktor:

dr. Marko Homšak

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02727/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81190**
Analitska številka: **20-02727**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,6	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	3,0 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	15 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	1,7	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	18,0 #	SIST ISO 14235:1999 mod.
Organska snov	%	3,1 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	13,0 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	21,8 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	17,2 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	35,4 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	12,6 #	ISO 11277:2009 mod.
Teksturni razred		I #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	10,9 #	ISO 11265:1994

I: ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02727/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	32,50 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,48 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,28 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,03 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	1,00 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	34,29 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	35,29 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	97,2 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

REPUBLIKA SLOVENIJA KMETIJSKI INŠTITUT SLOVENIJE LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02728/2020

Vzorec:	**Zemlja; Številka vzorca: 2020/81191**
Analitska številka:	**20-02728**
Datum prejema vzorca:	**2.7.2020**
Datum izvajanja preskusa:	**od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,8	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	2,7 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	7,3 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	1,1	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	12,2 #	SIST ISO 14235:1999 mod.
Organska snov	%	2,1 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	12,2 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	22,3 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	18,2 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	31,0 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	16,3 #	ISO 11277:2009 mod.
Teksturni razred		I #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	9,5 #	ISO 11265:1994

I: ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02728/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	32,35 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,36 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,17 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,03 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	0,25 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	33,91 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	34,16 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	99,3 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

REPUBLIKA SLOVENIJA KMETIJSKI INŠTITUT SLOVENIJE LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02729/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81192**
Analitska številka: **20-02729**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,6	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	3,6 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	18 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	2,3	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	22,3 #	SIST ISO 14235:1999 mod.
Organska snov	%	3,8 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	14,1 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	29,2 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	19,8 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	25,0 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	11,9 #	ISO 11277:2009 mod.
Teksturni razred		I #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	13,9 #	ISO 11265:1994

I: ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02729/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	34,18 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,76 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,37 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,03 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	0,75 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	36,34 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	37,09 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	98,0 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02730/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81193**
Analitska številka: **20-02730**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,6	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	2,4 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	8,2 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	1,5	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	13,1 #	SIST ISO 14235:1999 mod.
Organska snov	%	2,2 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	14,4 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	30,8 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	21,3 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	26,4 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	7,2 #	ISO 11277:2009 mod.
Teksturni razred		MI #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	11,0 #	ISO 11265:1994

MI: meljasta ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02730/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	34,68 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,51 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,18 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,04 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	0,50 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	36,41 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	36,91 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	98,6 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

REPUBLIKA SLOVENIJA KMETIJSKI INŠTITUT SLOVENIJE LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02731/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81195**
Analitska številka: **20-02731**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,7	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	2,6 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	11 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	1,5	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	18,7 #	SIST ISO 14235:1999 mod.
Organska snov	%	3,2 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	10,6 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	17,5 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	16,3 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	41,1 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	14,6 #	ISO 11277:2009 mod.
Teksturni razred		PI #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	10,0 #	ISO 11265:1994

PI: peščena ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02731/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	33,69 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,38 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,21 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,03 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	0,50 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	35,31 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	35,81 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	98,6 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

REPUBLIKA SLOVENIJA KMETIJSKI INŠTITUT LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02732/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81196**
Analitska številka: **20-02732**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,7	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	2,2 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	6,8 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	1,2	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	17,1 #	SIST ISO 14235:1999 mod.
Organska snov	%	2,9 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	9,8 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	17,7 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	14,4 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	33,4 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	24,7 #	ISO 11277:2009 mod.
Teksturni razred		PI #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	9,5 #	ISO 11265:1994

PI: peščena ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02732/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	32,56 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,26 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,15 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,04 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	0,05 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	34,01 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	34,06 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	99,9 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

REPUBLIKA SLOVENIJA KMETIJSKI INŠTITUT SLOVENIJE LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02733/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81197**
Analitska številka: **20-02733**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,6	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	2,6 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	18 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	2,4	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	26,0 #	SIST ISO 14235:1999 mod.
Organska snov	%	4,4 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	14,5 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	22,2 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	12,7 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	21,7 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	28,9 #	ISO 11277:2009 mod.
Teksturni razred		I #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	15,0 #	ISO 11265:1994

I: ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02733/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	34,27 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,74 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,36 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,04 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	1,00 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	36,41 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	37,41 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	97,3 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

KMETIJSKI INŠTITUT SLOVENIJE LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

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TALUM INŠTITUT D.O.O.
TOVARNIŠKA CESTA 10
2325 KIDRIČEVO

Ljubljana, 24.7.2020

POROČILO O PRESKUSU št.: 02734/2020

Vzorec: **Zemlja; Številka vzorca: 2020/81198**
Analitska številka: **20-02734**
Datum prejema vzorca: **2.7.2020**
Datum izvajanja preskusa: **od 7.7.2020 do 24.7.2020**

REZULTATI ANALIZE:

Parameter	Enota	Rezultat	Referenca
pH v $CaCl_2$	-	7,7	ISO 10390:2005
P_2O_5 (dostopni)	mg/100g	1,5 #	ÖNORM L 1087 – mod.
K_2O (dostopni)	mg/100g	7,3 #	ÖNORM L 1087 – mod.
Skupni dušik (N)	g/kg s.s.	1,3	ISO 11261:1995 mod.
Organski ogljik (C_{org})	g/kg s.s.	16,1 #	SIST ISO 14235:1999 mod.
Organska snov	%	2,7 #	SIST ISO 14235:1999 mod.
Glina (< 2 µm)	%	16,0 #	ISO 11277:2009 mod.
Fini melj (2 - 20 µm)	%	21,0 #	ISO 11277:2009 mod.
Grobi melj (20 - 50 µm)	%	13,7 #	ISO 11277:2009 mod.
Fini pesek (50 - 200 µm)	%	20,8 #	ISO 11277:2009 mod.
Grobi pesek (200 - 2000 µm)	%	28,5 #	ISO 11277:2009 mod.
Teksturni razred		I #	Ameriška tekst. klasifikacija
Specifična električna prev.	mS/m	11,2 #	ISO 11265:1994

I: ilovica

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

POROČILO O PRESKUSU št.: 02734/2020

REZULTATI ANALIZE-nadaljevanje:

Parameter	Enota	Rezultat	Referenca
Ca izmenljivi	mmol+/100g	34,07 #	NF X31-108:2002
Mg izmenljivi	mmol+/100g	1,52 #	NF X31-108:2002
K izmenljivi	mmol+/100g	0,18 #	NF X31-108:2002
Na izmenljivi	mmol+/100g	0,03 #	NF X31-108:2002
Skupna izmenljiva kislost	mmol+/100g	0,50 #	Interna metoda (Mehlich-Peech)
Vsota bazičnih kationov (S)	mmol+/100g	35,80 #	Izračun (Soil Survey Lab.Manual,1992)
Kationska izm. kapaciteta (T)	mmol+/100g	36,30 #	Izračun (Soil Survey Lab.Manual,1992)
Delež bazičnih kationov (V)	%	98,6 #	Izračun (Soil Survey Lab.Manual,1992)

Odgovorni analitik:

mag. Vida Žnidaršič Pongrac, univ.dipl.kem.

REPUBLIKA SLOVENIJA KMETIJSKI INŠTITUT SLOVENIJE LJUBLJANA 15

Vzorci tal so bili pripravljeni v skladu s standardom SIST ISO 11464:2006, frakcija delcev večjih od 2 mm je bila odstranjena. Rezultati analize se nanašajo izključno na preskušane vzorce. Podani so v zračno suhem vzorcu razen, kjer je pri enoti oznaka s.s., ki pomeni v suhi snovi. Razmnoževanje tega dokumenta ni dovoljeno razen v celoti kot faksimile. Poročilo o preskusu je podano v poenostavljeni obliki. Vse dodatne informacije o preskušanju so na voljo v laboratoriju.

CERTIFICATE OF ANALYSIS

Work Order	: **PR2063532**	Issue Date	: 07-Jul-2020
Customer	: TALUM d.d. Kidricevo		
Client	: **TALUM INŠTITUT d.o.o.**	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: Marko Homšak	Contact	: Client Service
Address	: Tovarniška cesta 10 2325 Kidričevo Slovenia	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: ----	E-mail	: customer.support@alsglobal.com
Telephone	: ----	Telephone	: +420 226 226 228
Project	: Soil 29.6.2020	Page	: 1 of 10
Order number	: 2020/340	Date Samples Received	: 30-Jun-2020
		Quote number	: PR2018TALDD-SI0001 (CZ-204-18-0284)
Site	: ----	Date of test	: 01-Jul-2020 - 07-Jul-2020
Sampled by	: client Talum Institut d.o.o.	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples. If the section "Sampled by" of the Certificate of analysis states: "Sampled by Customer" then the results relate to the sample as received.

Responsible for accuracy

Testing Laboratory No. 1163
Accredited by CAI according to
CSN EN ISO/IEC 17025:2018

Signatories		*Position*
Zdeněk Jirák		Environmental Business Unit Manager

L 1163

Analytical Results

Sub-Matrix: SOIL

Parameter	Method	LOR	Unit	Client sample ID: 2020/81190	MU	Client sample ID: 2020/81191	MU	Client sample ID: 2020/81192	MU
				Laboratory sample ID: PR2063532-001		Laboratory sample ID: PR2063532-002		Laboratory sample ID: PR2063532-003	
				Client sampling date / time: 24-Jun-2020		24-Jun-2020		24-Jun-2020	
Physical Parameters									
Laboratory compacted bulk density	S-LCBD-GR	100	g/L	890	± 15.0%	990	± 15.0%	880	± 15.0%
Dry matter @ 105°C	S-DRY-GRCI	0.10	%	84.1	± 6.0%	84.3	± 6.0%	84.8	± 6.0%
Extractable Metals / Major Cations									
Cadmium	S-METMSHB1	0.050	mg/kg DW	0.220	± 20.0%	0.248	± 20.0%	0.202	± 20.0%
Mercury	S-HG-AFSHB	0.010	mg/kg DW	0.103	± 20.0%	0.277	± 20.0%	0.094	± 20.0%
Total Petroleum Hydrocarbons									
C10 - C21 Fraction	S-TPHFID11	5	mg/kg DW	<5	---	<5	---	<5	---
C21 - C40 Fraction	S-TPHFID11	5	mg/kg DW	14.5	---	10.0	---	11.5	---
C10 - C40 Fraction	S-TPHFID11	10	mg/kg DW	17.1	---	12.3	---	13.4	---
BTEX									
Benzene	S-VOCGMS01	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Toluene	S-VOCGMS01	0.030	mg/kg DW	<0.030	---	<0.030	---	<0.030	---
Ethylbenzene	S-VOCGMS01	0.020	mg/kg DW	<0.020	---	<0.020	---	<0.020	---
meta- & para-Xylene	S-VOCGMS01	0.020	mg/kg DW	<0.020	---	<0.020	---	<0.020	---
ortho-Xylene	S-VOCGMS01	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Sum of BTEX	S-VOCGMS01	0.090	mg/kg DW	<0.090	---	<0.090	---	<0.090	---
Sum of xylenes	S-VOCGMS01	0.030	mg/kg DW	<0.030	---	<0.030	---	<0.030	---
Polycyclic Aromatics Hydrocarbons (PAHs)									
Naphthalene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Acenaphthylene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Acenaphthene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Fluorene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Phenanthrene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	0.010	± 30.0%
Anthracene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Fluoranthene	S-PAHGMS05	0.010	mg/kg DW	0.015	± 30.0%	0.021	± 30.0%	0.081	± 30.0%
Pyrene	S-PAHGMS05	0.010	mg/kg DW	0.010	± 30.0%	0.013	± 30.0%	0.062	± 30.0%
Benz(a)anthracene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Chrysene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	0.012	± 30.0%
Benzo(b)fluoranthene	S-PAHGMS05	0.010	mg/kg DW	0.014	± 30.0%	0.010	± 30.0%	0.016	± 30.0%
Benzo(k)fluoranthene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Benzo(a)pyrene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Indeno(1.2.3.cd)pyrene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Dibenz(a.h)anthracene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Benzo(g.h.i)perylene	S-PAHGMS05	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Sum of 16 PAH	S-PAHGMS05	0.160	mg/kg DW	<0.160	---	<0.160	---	0.181	---
PCBs									
PCB 28	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
PCB 52	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
PCB 101	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
PCB 118	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
PCB 138	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
PCB 153	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
PCB 180	S-PCBGMS05	0.0030	mg/kg DW	<0.0030	---	<0.0030	---	<0.0030	---
Sum of 6 PCBs	S-PCBGMS05	0.0180	mg/kg DW	<0.0180	---	<0.0180	---	<0.0180	---
Sum of 7 PCBs	S-PCBGMS05	0.0210	mg/kg DW	<0.0210	---	<0.0210	---	<0.0210	---
Organochlorine Pesticides									
Chlordane-cis	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Chlordane-trans	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Endosulfan sulfate	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Mirex	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Nonachlor-cis	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Nonachlor-trans	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Oxychlordane	S-OCPECD04	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Hexachloroethane	S-OCPECD01	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---
Hexachlorobutadiene	S-OCPECD01	0.010	mg/kg DW	<0.010	---	<0.010	---	<0.010	---

Sub-Matrix: SOIL	Client sample ID	2020/81190		2020/81191		2020/81192	
	Laboratory sample ID	PR2063532-001		PR2063532-002		PR2063532-003	
	Client sampling date / time	24-Jun-2020		24-Jun-2020		24-Jun-2020	

Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
Organochlorine Pesticides - Continued									
1.2.3.5- & 1.2.4.5-Tetrachlorobenzene	S-OCPECD01	0.020	mg/kg DW	<0.020	----	<0.020	----	<0.020	----
1.2.3.4-Tetrachlorobenzene	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Pentachlorobenzene	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Trifluralin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Hexachlorocyclohexane Alpha	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Hexachlorobenzene (HCB)	S-OCPECD01	0.0050	mg/kg DW	<0.0050	----	<0.0050	----	<0.0050	----
Hexachlorocyclohexane Beta	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Hexachlorocyclohexane Gamma	S-OCPECD01	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Hexachlorocyclohexane Delta	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Hexachlorocyclohexane Epsilon	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Alachlor	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Heptachlor	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Aldrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Telodrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Isodrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Heptachloroepoxide-cis	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Heptachloroepoxide-trans	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
2.4-DDE	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
alpha-Endosulfan	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
4.4`-DDE	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Dieldrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
2.4-DDD	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Endrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
beta-Endosulfan	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
4.4`-DDD	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
2.4-DDT	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
4.4`-DDT	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Methoxychlor	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	<0.010	----
Sum of 3 tetrachlorobenzenes	S-OCPECD01	0.030	mg/kg DW	<0.030	----	<0.030	----	<0.030	----
Sum of 4 hexachlorcyclohexanes	S-OCPECD01	0.0400	mg/kg DW	<0.0400	----	<0.0400	----	<0.0400	----
Sum of 4 isomers DDT	S-OCPECD01	0.040	mg/kg DW	<0.040	----	<0.040	----	<0.040	----
Sum of 6 isomers DDT	S-OCPECD01	0.060	mg/kg DW	<0.060	----	<0.060	----	<0.060	----
Pesticides									
Acetochlor	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Alachlor	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Ametryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Atrazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Atrazine-2-hydroxy	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Atrazine-desethyl	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Atrazine-desisopropyl	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Carbofuran	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Chlorfenvinphos	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Chlorotoluron	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Chlorpyrifos	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Cyanazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Desmetryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Dimethoate	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Diuron	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Fonofos	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Hexazinone	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Isoproturon	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Malathion	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Metamitron	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Metazachlor	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Methidathion	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Metolachlor (isomers)	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----
Metribuzin	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	<0.0100	----

Sub-Matrix: SOIL				Client sample ID	2020/81190		2020/81191		2020/81192	
				Laboratory sample ID	PR2063532-001		PR2063532-002		PR2063532-003	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		24-Jun-2020	
Parameter	Method	LOR	Unit		Result	MU	Result	MU	Result	MU
Pesticides - Continued										
Pendimethalin	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Phorate	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Phosalone	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Phosphamidon	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Prometon	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Prometryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Propazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Sebuthylazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Simazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Simetryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbuthylazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbuthylazine-desethyl	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbuthylazine-hydroxy	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbutryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
PBBs										
PBB 153	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Sample Preparation										
Amount	S-PEXT42	0.1	g		20.01	----	19.97	----	20.00	----

Sub-Matrix: SOIL				Client sample ID	2020/81193		2020/81195		2020/81196	
				Laboratory sample ID	PR2063532-004		PR2063532-005		PR2063532-006	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		24-Jun-2020	
Parameter	Method	LOR	Unit		Result	MU	Result	MU	Result	MU
Physical Parameters										
Laboratory compacted bulk density	S-LCBD-GR	100	g/L		990	± 15.0%	900	± 15.0%	1000	± 15.0%
Dry matter @ 105°C	S-DRY-GRCI	0.10	%		84.9	± 6.0%	84.7	± 6.0%	86.4	± 6.0%
Extractable Metals / Major Cations										
Cadmium	S-METMSHB1	0.050	mg/kg DW		0.183	± 20.0%	0.253	± 20.0%	0.245	± 20.0%
Mercury	S-HG-AFSHB	0.010	mg/kg DW		0.108	± 20.0%	0.128	± 20.0%	0.589	± 20.0%
Total Petroleum Hydrocarbons										
C10 - C21 Fraction	S-TPHFID11	5	mg/kg DW		<5	----	7.4	----	8.1	----
C21 - C40 Fraction	S-TPHFID11	5	mg/kg DW		8.0	----	15.9	----	28.8	----
C10 - C40 Fraction	S-TPHFID11	10	mg/kg DW		<10	----	23.4	----	36.9	----
BTEX										
Benzene	S-VOCGMS01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Toluene	S-VOCGMS01	0.030	mg/kg DW		<0.030	----	<0.030	----	<0.030	----
Ethylbenzene	S-VOCGMS01	0.020	mg/kg DW		<0.020	----	<0.020	----	<0.020	----
meta- & para-Xylene	S-VOCGMS01	0.020	mg/kg DW		<0.020	----	<0.020	----	<0.020	----
ortho-Xylene	S-VOCGMS01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Sum of BTEX	S-VOCGMS01	0.090	mg/kg DW		<0.090	----	<0.090	----	<0.090	----
Sum of xylenes	S-VOCGMS01	0.030	mg/kg DW		<0.030	----	<0.030	----	<0.030	----
Polycyclic Aromatics Hydrocarbons (PAHs)										
Naphthalene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Acenaphthylene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Acenaphthene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Fluorene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Phenanthrene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	0.011	± 30.0%	<0.010	----
Anthracene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Fluoranthene	S-PAHGMS05	0.010	mg/kg DW		0.024	± 30.0%	0.026	± 30.0%	0.011	± 30.0%
Pyrene	S-PAHGMS05	0.010	mg/kg DW		0.017	± 30.0%	0.018	± 30.0%	<0.010	----
Benz(a)anthracene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Chrysene	S-PAHGMS05	0.010	mg/kg DW		0.011	± 30.0%	0.015	± 30.0%	<0.010	----
Benzo(b)fluoranthene	S-PAHGMS05	0.010	mg/kg DW		0.033	± 30.0%	0.022	± 30.0%	<0.010	----
Benzo(k)fluoranthene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Benzo(a)pyrene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	0.011	± 30.0%	<0.010	----
Indeno(1.2.3.cd)pyrene	S-PAHGMS05	0.010	mg/kg DW		0.030	± 30.0%	<0.010	----	<0.010	----

Sub-Matrix: SOIL				Client sample ID	2020/81193		2020/81195		2020/81196	
				Laboratory sample ID	PR2063532-004		PR2063532-005		PR2063532-006	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		24-Jun-2020	
Parameter	Method	LOR	Unit		Result	MU	Result	MU	Result	MU
Polycyclic Aromatics Hydrocarbons (PAHs) - Continued										
Dibenz(a.h)anthracene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Benzo(g.h.i)perylene	S-PAHGMS05	0.010	mg/kg DW		**0.046**	± 30.0%	<0.010	----	<0.010	----
Sum of 16 PAH	S-PAHGMS05	0.160	mg/kg DW		**0.161**	----	<0.160	----	<0.160	----
PCBs										
PCB 28	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
PCB 52	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
PCB 101	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
PCB 118	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
PCB 138	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
PCB 153	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
PCB 180	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	<0.0030	----
Sum of 6 PCBs	S-PCBGMS05	0.0180	mg/kg DW		<0.0180	----	<0.0180	----	<0.0180	----
Sum of 7 PCBs	S-PCBGMS05	0.0210	mg/kg DW		<0.0210	----	<0.0210	----	<0.0210	----
Organochlorine Pesticides										
Chlordane-cis	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Chlordane-trans	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Endosulfan sulfate	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Mirex	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Nonachlor-cis	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Nonachlor-trans	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Oxychlordane	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Hexachloroethane	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Hexachlorobutadiene	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
1.2.3.5- & 1.2.4.5-Tetrachlorobenzene	S-OCPECD01	0.020	mg/kg DW		<0.020	----	<0.020	----	<0.020	----
1.2.3.4-Tetrachlorobenzene	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Pentachlorobenzene	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Trifluralin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Hexachlorocyclohexane Alpha	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Hexachlorobenzene (HCB)	S-OCPECD01	0.0050	mg/kg DW		<0.0050	----	<0.0050	----	<0.0050	----
Hexachlorocyclohexane Beta	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Hexachlorocyclohexane Gamma	S-OCPECD01	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Hexachlorocyclohexane Delta	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Hexachlorocyclohexane Epsilon	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Alachlor	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Heptachlor	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Aldrin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Telodrin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Isodrin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Heptachloroepoxide-cis	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Heptachloroepoxide-trans	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
2.4-DDE	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
alpha-Endosulfan	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
4.4`-DDE	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Dieldrin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
2.4-DDD	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Endrin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
beta-Endosulfan	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
4.4`-DDD	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
2.4-DDT	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
4.4`-DDT	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Methoxychlor	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Sum of 3 tetrachlorobenzenes	S-OCPECD01	0.030	mg/kg DW		<0.030	----	<0.030	----	<0.030	----
Sum of 4 hexachlorcyclohexanes	S-OCPECD01	0.0400	mg/kg DW		<0.0400	----	<0.0400	----	<0.0400	----
Sum of 4 isomers DDT	S-OCPECD01	0.040	mg/kg DW		<0.040	----	<0.040	----	<0.040	----
Sum of 6 isomers DDT	S-OCPECD01	0.060	mg/kg DW		<0.060	----	<0.060	----	<0.060	----
Pesticides										
Acetochlor	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----

Sub-Matrix: SOIL				Client sample ID	2020/81193		2020/81195		2020/81196	
				Laboratory sample ID	PR2063532-004		PR2063532-005		PR2063532-006	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		24-Jun-2020	
Parameter	Method	LOR	Unit		Result	MU	Result	MU	Result	MU
Pesticides - Continued										
Alachlor	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Ametryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Atrazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Atrazine-2-hydroxy	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Atrazine-desethyl	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Atrazine-desisopropyl	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Carbofuran	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Chlorfenvinphos	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Chlorotoluron	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Chlorpyrifos	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Cyanazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Desmetryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Dimethoate	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Diuron	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Fonofos	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Hexazinone	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Isoproturon	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Malathion	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Metamitron	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Metazachlor	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Methidathion	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Metolachlor (isomers)	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Metribuzin	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Pendimethalin	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Phorate	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Phosalone	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Phosphamidon	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Prometon	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Prometryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Propazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Sebuthylazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Simazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Simetryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbuthylazine	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbuthylazine-desethyl	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbuthylazine-hydroxy	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
Terbutryn	S-PESLMSB1	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	<0.0100	----
PBBs										
PBB 153	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	<0.010	----
Sample Preparation										
Amount	S-PEXT42	0.1	g		20.27	----	20.10	----	19.85	----

Sub-Matrix: SOIL				Client sample ID	2020/81197		2020/81198		----	
				Laboratory sample ID	PR2063532-007		PR2063532-008		----	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		----	
Parameter	Method	LOR	Unit		Result	MU	Result	MU	Result	MU
Physical Parameters										
Laboratory compacted bulk density	S-LCBD-GR	100	g/L		910	± 15.0%	1030	± 15.0%	----	----
Dry matter @ 105°C	S-DRY-GRCI	0.10	%		82.2	± 6.0%	75.8	± 6.0%	----	----
Extractable Metals / Major Cations										
Cadmium	S-METMSHB1	0.050	mg/kg DW		0.204	± 20.0%	0.178	± 20.0%	----	----
Mercury	S-HG-AFSHB	0.010	mg/kg DW		0.180	± 20.0%	0.113	± 20.0%	----	----
Total Petroleum Hydrocarbons										
C10 - C21 Fraction	S-TPHFID11	5	mg/kg DW		<5	----	<5	----	----	----
C21 - C40 Fraction	S-TPHFID11	5	mg/kg DW		26.1	----	17.1	----	----	----

Sub-Matrix: SOIL				Client sample ID	2020/81197		2020/81198		----	
				Laboratory sample ID	PR2063532-007		PR2063532-008		----	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		----	
Parameter	Method	LOR	Unit		Result	MU	Result	MU	Result	MU
Total Petroleum Hydrocarbons - Continued										
C10 - C40 Fraction	S-TPHFID11	10	mg/kg DW		30.3	----	22.1	----	----	----
BTEX										
Benzene	S-VOCGMS01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Toluene	S-VOCGMS01	0.030	mg/kg DW		<0.030	----	<0.030	----	----	----
Ethylbenzene	S-VOCGMS01	0.020	mg/kg DW		<0.020	----	<0.020	----	----	----
meta- & para-Xylene	S-VOCGMS01	0.020	mg/kg DW		<0.020	----	<0.020	----	----	----
ortho-Xylene	S-VOCGMS01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Sum of BTEX	S-VOCGMS01	0.090	mg/kg DW		<0.090	----	<0.090	----	----	----
Sum of xylenes	S-VOCGMS01	0.030	mg/kg DW		<0.030	----	<0.030	----	----	----
Polycyclic Aromatics Hydrocarbons (PAHs)										
Naphthalene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Acenaphthylene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Acenaphthene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Fluorene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Phenanthrene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Anthracene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Fluoranthene	S-PAHGMS05	0.010	mg/kg DW		0.029	± 30.0%	0.042	± 30.0%	----	----
Pyrene	S-PAHGMS05	0.010	mg/kg DW		0.022	± 30.0%	0.037	± 30.0%	----	----
Benz(a)anthracene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	0.023	± 30.0%	----	----
Chrysene	S-PAHGMS05	0.010	mg/kg DW		0.021	± 30.0%	0.031	± 30.0%	----	----
Benzo(b)fluoranthene	S-PAHGMS05	0.010	mg/kg DW		0.024	± 30.0%	0.037	± 30.0%	----	----
Benzo(k)fluoranthene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	0.011	± 30.0%	----	----
Benzo(a)pyrene	S-PAHGMS05	0.010	mg/kg DW		0.010	± 30.0%	0.020	± 30.0%	----	----
Indeno(1.2.3.cd)pyrene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	0.011	± 30.0%	----	----
Dibenz(a.h)anthracene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Benzo(g.h.i)perylene	S-PAHGMS05	0.010	mg/kg DW		<0.010	----	0.012	± 30.0%	----	----
Sum of 16 PAH	S-PAHGMS05	0.160	mg/kg DW		<0.160	----	0.224	----	----	----
PCBs										
PCB 28	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
PCB 52	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
PCB 101	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
PCB 118	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
PCB 138	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
PCB 153	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
PCB 180	S-PCBGMS05	0.0030	mg/kg DW		<0.0030	----	<0.0030	----	----	----
Sum of 6 PCBs	S-PCBGMS05	0.0180	mg/kg DW		<0.0180	----	<0.0180	----	----	----
Sum of 7 PCBs	S-PCBGMS05	0.0210	mg/kg DW		<0.0210	----	<0.0210	----	----	----
Organochlorine Pesticides										
Chlordane-cis	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Chlordane-trans	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Endosulfan sulfate	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Mirex	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Nonachlor-cis	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Nonachlor-trans	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Oxychlordane	S-OCPECD04	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Hexachloroethane	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Hexachlorobutadiene	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
1.2.3.5- & 1.2.4.5-Tetrachlorobenzene	S-OCPECD01	0.020	mg/kg DW		<0.020	----	<0.020	----	----	----
1.2.3.4-Tetrachlorobenzene	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Pentachlorobenzene	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Trifluralin	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Hexachlorocyclohexane Alpha	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Hexachlorobenzene (HCB)	S-OCPECD01	0.0050	mg/kg DW		<0.0050	----	<0.0050	----	----	----
Hexachlorocyclohexane Beta	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Hexachlorocyclohexane Gamma	S-OCPECD01	0.0100	mg/kg DW		<0.0100	----	<0.0100	----	----	----
Hexachlorocyclohexane Delta	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----
Hexachlorocyclohexane Epsilon	S-OCPECD01	0.010	mg/kg DW		<0.010	----	<0.010	----	----	----

Sub-Matrix: **SOIL**

				Client sample ID	2020/81197		2020/81198		----	
				Laboratory sample ID	PR2063532-007		PR2063532-008		----	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		----	
Parameter	*Method*	*LOR*	*Unit*	**Result**	**MU**	**Result**	**MU**	**Result**	**MU**
Organochlorine Pesticides - Continued									
Alachlor	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Heptachlor	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Aldrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Telodrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Isodrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Heptachloroepoxide-cis	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Heptachloroepoxide-trans	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
2.4-DDE	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
alpha-Endosulfan	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
4.4`-DDE	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Dieldrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
2.4-DDD	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Endrin	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
beta-Endosulfan	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
4.4`-DDD	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
2.4-DDT	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
4.4`-DDT	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Methoxychlor	S-OCPECD01	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Sum of 3 tetrachlorobenzenes	S-OCPECD01	0.030	mg/kg DW	<0.030	----	<0.030	----	----	----
Sum of 4 hexachlorcyclohexanes	S-OCPECD01	0.0400	mg/kg DW	<0.0400	----	<0.0400	----	----	----
Sum of 4 isomers DDT	S-OCPECD01	0.040	mg/kg DW	<0.040	----	<0.040	----	----	----
Sum of 6 isomers DDT	S-OCPECD01	0.060	mg/kg DW	<0.060	----	<0.060	----	----	----
Pesticides									
Acetochlor	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Alachlor	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Ametryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Atrazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Atrazine-2-hydroxy	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Atrazine-desethyl	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Atrazine-desisopropyl	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Carbofuran	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Chlorfenvinphos	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Chlorotoluron	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Chlorpyrifos	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Cyanazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Desmetryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Dimethoate	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Diuron	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Fonofos	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Hexazinone	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Isoproturon	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Malathion	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Metamitron	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Metazachlor	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Methidathion	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Metolachlor (isomers)	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Metribuzin	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Pendimethalin	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Phorate	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Phosalone	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Phosphamidon	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Prometon	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Prometryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Propazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Sebuthylazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Simazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Simetryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Terbuthylazine	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----

Sub-Matrix: SOIL				Client sample ID	2020/81197		2020/81198		----	
				Laboratory sample ID	PR2063532-007		PR2063532-008		----	
				Client sampling date / time	24-Jun-2020		24-Jun-2020		----	
Parameter	*Method*	*LOR*	*Unit*	**Result**	**MU**	**Result**	**MU**	**Result**	**MU**
Pesticides - Continued									
Terbuthylazine-desethyl	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Terbuthylazine-hydroxy	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
Terbutryn	S-PESLMSB1	0.0100	mg/kg DW	<0.0100	----	<0.0100	----	----	----
PBBs									
PBB 153	S-OCPECD04	0.010	mg/kg DW	<0.010	----	<0.010	----	----	----
Sample Preparation									
Amount	S-PEXT42	0.1	g	**20.05**	----	**20.28**	----	----	----

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.

Key: LOR = Limit of reporting; MU = Measurement Uncertainty. The MU does not include sampling uncertainty.

The end of result part of the certificate of analysis

Brief Method Summaries

Analytical Methods	*Method Descriptions*
Location of test performance: Bendlova 1687/7 Ceska Lipa Czech Republic 470 01	
S-LCBD-GR	CZ_SOP_D06_07_125 (CSN EN 13040) Determination of laboratory compacted bulk density (LCBD)
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
S-DRY-GRCI	CZ_SOP_D06_01_045 (CSN ISO 11465, CSN EN 12880, CSN EN 14346), CZ_SOP_D06_07_046 (CSN ISO 11465, CSN EN 12880, CSN EN 14346, CSN 46 5735) Determination of dry matter by gravimetry and determination of moisture by calculation from measured values.
S-HG-AFSHB	CZ_SOP_D06_02_096 (CSN EN ISO 17852, PSA Application Note 025, ISO 16772, samples prepared as per CZ_SOP_D06_02_J02 (CSN EN 13657, ISO 11466) chap. 10.3 to 10.16, 10.17.5, 10.17.6, 10.17.9 to 10.17.14) - Determination of Mercury by Fluorescence Spectrometry. Sample was homogenized and mineralized by aqua regia prior to analysis.
S-METMSHB1	CZ_SOP_D06_02_002 (US EPA 200.8, CSN EN ISO 17294-2, US EPA 6020A, samples prepared as per CZ_SOP_D06_02_J02 (CSN EN 13657, ISO 11466) chap. 10.3 to 10.16, 10.17.5, 10.17.6, 10.17.9 to 10.17.14) - Determination of elements by mass spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values. Sample was homogenized and mineralized by aqua regia prior to analysis.
S-OCPECD01	CZ_SOP_D06_03_169 (US EPA 8081, ISO 10382, samples prepared as per CZ_SOP_D06_03_P01 chap. 9.2, CZ_SOP_D06_03_P02 chap. 9.2) Determination of organochlorine pesticides and other halogen compounds by gas chromatography method with ECD detection and calculation of organochlorine pesticides and other halogen compounds sums from measured values
S-OCPECD04	CZ_SOP_D06_03_169 (US EPA 8081, ISO 10382, samples prepared as per CZ_SOP_D06_03_P01 chap. 9.2, CZ_SOP_D06_03_P02 chap. 9.2) Determination of organochlorine pesticides and other halogen compounds by gas chromatography method with ECD detection and calculation of organochlorine pesticides and other halogen compounds sums from measured values
S-PAHGMS05	CZ_SOP_D06_03_161 (US EPA 8270D, US EPA 8082A, CSN EN 15527, ISO 18287, ISO 10382, CSN EN 15308, samples preparation as per CZ_SOP_D06_03_P01, chap. 9.2, 9.3, 9.4.2, US EPA 3546). Determination of semi volatile organic compounds by gas chromatography method with MS or MS/MS detection and calculation of semi volatile organic compounds sums from measured values
S-PCBGMS05	CZ_SOP_D06_03_161 (US EPA 8270D, US EPA 8082A, CSN EN 15527, ISO 18287, ISO 10382, CSN EN 15308, samples preparation as per CZ_SOP_D06_03_P01, chap. 9.2, 9.3, 9.4.2, US EPA 3546). Determination of semi volatile organic compounds by gas chromatography method with MS or MS/MS detection and calculation of semi volatile organic compounds sums from measured values
S-PESLMSB1	CZ_SOP_D06_03_183.B (CSN EN 15637, US EPA 1694) Determination of pesticides, pesticide metabolites, drug residues and other pollutants by liquid chromatography method with MS/MS detection and calculation of pesticides, pesticides metabolites, drug residues and other pollutants sums from measured values
S-TPHFID11	CZ_SOP_D06_03_150 (CSN EN 14039, CSN EN ISO 16703, CSN P CEN ISO 16558-2, US EPA 8015, US EPA 3550, TNRCC Method 1006) Determination of extractable compounds in the range of hydrocarbons C10 - C40, their fractions calculated from the measured values by gas chromatography method with FID detection
S-VOCGMS01	CZ_SOP_D06_03_155 except chap. 10.4 (US EPA 8260, US EPA 5021A, US EPA 5021, US EPA 8015, CSN EN ISO 22155, CSN EN ISO 15009, CSN EN ISO 16558-1, MADEP 2004, rev. 1.1) Determination of volatile organic compounds by gas chromatography method with FID and MS detection and calculation of volatile organic compounds sums from measured values

Analytical Methods	*Method Descriptions*
Preparation Methods	*Method Descriptions*
Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00	
* S-PPHOM2	Drying and sieving of sample on the grain size < 2 mm

A `*' symbol preceding any method indicates laboratory or subcontractor non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information. If the report contains subcontracted analysis, those are made in a subcontracted laboratory outside the laboratories ALS Czech Republic, s.r.o.
The calculation methods of summation parameters are available on request in the client service.