

NATIONAL LABORATORY OF HEALTH, ENVIRONMENT AND FOOD

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Document No.: 191-120/20

# WASTE ASSESSMENT for the company JP VOKA SNAGA d.o.o.

Waste number

# 19 12 12

Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

LF-B1

Novo mesto, December 2020

- *Title:* Waste assessment on behalf of JP VOKA SNAGA d.o.o., for waste no. 19 12 12 LF B1
- **Contractor:** National Laboratory of Health, Environment and Food Environment and Health Centre Novo mesto Environment and Health Department Water, Soil and Waste Section Dalmatinova 2, 8000 Novo mesto, Slovenia
- **Contracting authority:** JP VOKA SNAGA d.o.o. Vodovodna cesta 90 SI-1000 Ljubljana

Date of contract: -

Purchase order no.: Contract

#### Declaration:

During the assessment of the waste, all the available data were used and considered, particularly those relating to the source of the waste (for the waste that resulted from a repeated and determinable production process, the deviations of the parameter values were also evaluated for the waste that resulted from normal changes in the waste creation process). In the process of waste investigation there were no available data from which it could be inferred that other substances had been mixed in with the waste and in doing so had affected the properties of the waste.

*Inspection and sampling:* Robert Novak, BSc in Biochemistry

Inspection and sampling date: 19.11.2020

Assessment: Robert Novak, BSc in Biochemistry

Date of the assessment: 23.12.2020

Head of Task Robert Novak, BSc in Biochemistry Head of Environment and Health Department **Dušan Harlander,** MD, MSc Epidemiology

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# 1. Introduction

On the basis of the order from JP VOKA SNAGA d.o.o., we carried out a confirmation of the waste number (from the point of view of hazard properties) with an analysis pursuant to the Regulation of wastes (Official Journal of the RS, No. 37/15, 69/15, 129/20). For the purposes of confirming the waste number, we performed the research on hazardous properties in the waste from HP 1 to HP 15.

# 2. Sampling method

The waste was sampled in accordance with SIST EN 14899:2006. A record of the sampling is contained in the Annex.

The waste was sampled in a waste warehouse during loading onto a truck. App. 120m<sup>3</sup> of treated waste was available for sampling, which was representatively sampled at 24 points with the help of a loader. The collected 24 increments of volume 2I were homogenized on site and quartered to a volume of 24I. The homogeneous sample was stored in PP bag and stored in refrigerator during transport to the laboratory.

# 3. Data on the waste holder, type and source of the waste

3.1 Waste holder:	JP VOKA SNAGA d.o.o.
Address:	Vodovodna 90
Post code:	SI-1000 Ljubljana
<b>Registration No.:</b>	5046688000

# 3.2 Waste number: 19 12 12

# Waste name: Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

## 3.3 Description of waste:

The waste is various colour with a week smell of waste. The waste is solid, heterogeneous, wet and with different size particles. Particles size distribution is:

Size range	Amount
x > 100 mm	6,4 %
50 < x < 100 mm	40,7 %
25 < x < 50 mm	35,3 %
12,5 < x < 25 mm	11,5 %
x < 12,5 mm	6,0 %

Dry matter content is 74,5 % the rest is moist. Waste composition is app.:

- textile = 10,8 %
- wood = 3,7 %
- plastic = 51,7 %
- paper = 33,8 %

All other results are in annex of this assesment.



#### 3.4 Address of the facility that represents the source or location of the waste:

Generator: JP VOKA SNAGA d.o.o. - RCERO Barje

Address: Barje Post code: SI-1000 Ljubljana

#### **3.5 Description of the waste:**

The combustible waste with EWC code number 19 12 12 is produced in the process of mechanical treatment of the mixed household waste (MHW) in RCERO Ljubljana MBO installation.

MHW is collected and treated in RCERO Ljubljana according to the pre-treatment and treatment of non-hazardous waste according to procedures D8 and D9. MHW is delivered by the waste collection trucks to the deep bunker with app. capacity 5.000 m<sup>3</sup>. Two bridge cranes with motor grab serve the two feeding hoppers for the mechanical pre-treatment lines. The feeding hoppers are heavy duty moving floors dosing the primary shredders. MHW is dosed to one universal primary shredder.

The shredded MHW is then passing a drum screen where is separated by the sieve in three sizes:

- fine fraction (approx. <90 mm)
- medium fraction (90 mm to 250mm)
- oversize fraction (>250mm)

The fine fraction with particle size < 90 mm is transportet throug a magnetic metal separator to a star shape sieve, where it is separated into a fraction < 40 mm and a fraction of 40 - 90 mm The 40 - 90 mm fraction is transported to warehouse without further processing. This fraction is internally called B1.

- 3.5.1. Quantity of waste analysed: 120  $\ensuremath{\text{m}}^3$
- 3.5.2 Sample code:

Field code: R90 Laboratory No. 2020/114961

## 4. Waste properties

#### 4.1 State of the waste and other special properties:

## 4.1.1 <u>State of the waste at 20°C</u>:

	liquid dense liquid/paste-like sludgy X solid	<ul> <li>homogeneous</li> <li>X non-homogeneous</li> <li>dispersion</li> <li>emulsion</li> </ul>	powder-likeXgrained/bulkyin a lumpwrapped	X dry X moist hygroscopic
4.1.2	Special properties:			
	poisonous harmful to health	harmful to the environment irritant	corrosive (acidic or al infectious	kaline)
4.2	Colour:	various		
4.3	Smell:	Strong X odour: waste	X faint	X none
4.4.	Reactivity:			
4.5	inert reacts with air reacts with water it reacts with acid/lye Water solubility:	highly flammable accelerates combustion X combustible incombustible highly soluble	chemically unstable biodegradable gas forming danger of explosion partially soluble	
		X slightly soluble	insoluble	
4.6	Safety precautions:			
4.6.1	Handling in temporary stora	age:		
	Technical-safety precaution Personal protective	y precautions: Store indoors. ctive Personal means of protection (clothing, gloves, footwear), Waste is combustible but is not spontaneously		
	equipment:			, tootwear), s not spontaneously
	Fire and explosion safety:flammable.Protection against water pollution:Prevent contact with water or remove the material in case of wastage.		r or remove the e.	
4.6.2	Protection against accidents	s and fires:		

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Measures in the event of
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Waste should be collected into the container using the appropriate

	wastage:	tools.		
	Appropriate extinguishing agent Extinguishing agents that must r Useful binder:	:: not be used:	All extinguishing ag	ents are suitable.
4.7	Physical properties:			
	Density or bulk density at room	temperature:	-	kg/m <sup>3</sup>
	Range of particle/piece size:		<90	mm
4.8	Description of the preliminary p the justification for the omissio processing:	processing of waste or n of preliminary waste	r e Waste treatment procedure described under Item 3.5	

4.9 **Restricted waste combinations:** 

The waste is not hazardous.

# 5. Grounds for the determination of a waste number

The waste is classified into groups according to the list of waste as defined in Article 4 of the Regulation on waste Official Journal RS No. 37/15, 69/15, 129/20.

Individual waste, given the nature of the occurrence be classified in the group and sub-group of waste with the waste list, as provided in Article 4 of the Regulation on waste Official Journal RS No. 37/15, 69/15, 129/20, so that the waste is assigned with number of waste. If the waste under Article 5 of the Regulation on waste Official Journal RS No. 37/15, 69/15, 129/20 be classified as hazardous or non-hazardous waste, it should be classified as hazardous waste unless the data on the composition of the waste and the concentration of hazardous substances or on the basis of its analysis shown to have none of the hazardous properties. Waste not showing dangerous properties as the composition does not contain any hazardous substances. The study of the hazardous properties is attached to this assessment.

According to the source and composition, the waste in question has been classified based on the classification list contained in the Regulation of wastes, Official Journal of the RS No. 37/15, 69/15, 129/20, into waste group:

- 19 Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
- 19 12 Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, palletising) not otherwise specified
- <u>19 12 12</u> Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

## 6. Annex

- 1. Report on the study of hazardous waste properties
- 2. Test reports 2020/114961
- 3. Sampling record dated 19.11.2020

## 7. List of literature used

1. Regulation of wastes (Official Journal of the RS, No. 37/15, 69/15, 129/20)



#### Annex to the waste assessment No.: 191-120/20

# Report on the study of hazardous waste properties

The report on the study of hazardous waste properties was carried out on the basis of:

- obtained documentation and
  - test results
    - o Documents lab. no.: 2020/114961

# HP 1 – Explosive

Contains a dangerous property HP 1 \_ Yes 🖂 No

Waste which is capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic waste, explosive organic peroxide waste and explosive self-reactive waste is included.

Table 1: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents for the classification of wastes as hazardous by HP 1:

Hazard Class and Category Code(s)	Hazard statement Code(s)	Determined in waste
Unst. Expl.	H 200	Yes
Expl. 1.1	H 201	🗌 Yes
Expl. 1.2	H 202	Yes
Expl. 1.3	H 203	Yes
Expl. 1.4	H 204	🗌 Yes
Self-react. A	H 240	Yes
Org. Perox. A	H 240	Yes
Self-react. B		🗌 Yes
Org. Perox. B	H 241	Yes

When a waste contains one or more substances classified by one of the hazard class and category codes and hazard statement codes shown in Table 1, the waste shall be assessed for HP 1, where appropriate and proportionate, according to test methods. If the presence of a substance, a mixture or an article indicates that the waste is explosive, it shall be classified as hazardous by HP 1.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 1. Waste does not contain hazardous propertie of HP 1.

#### HP 2 – Oxidising

#### **Contains a dangerous property HP 2** Yes No

Waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials.

Table 2: Hazard Class and Category Code(s) and Hazard statement Code(s) for the classification of wastes as hazardous by HP 2:

Hazard Class and Category Code(s)	Hazard statement Code(s)	Determined in waste
Ox. Gas 1	H 270	Yes
Ox. Liq. 1	Н 271	Yes

Date: 23.12.2020

No

Yes

Hazard Class and Category Code(s)	Hazard statement Code(s)	Determined in waste
Ox. Sol. 1		Yes
Ox. Liq. 2, Ox. Liq. 3	11 222	Yes
Ox. Sol. 2, Ox. Sol. 3	H 272	Yes

When a waste contains one or more substances classified by one of the hazard class and category codes and hazard statement codes shown in Table 2, the waste shall be assessed for HP 2, where appropriate and proportionate, according to test methods. If the presence of a substance indicates that the waste is oxidising, it shall be classified as hazardous by HP 2.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 2. Waste does not contain hazardous properties of HP 2.

#### HP 3 – Flammable

# Contains a dangerous property HP 3 🗌 Yes 🖂 No

| Yes

Yes

Yes

Yes

Yes

Yes

- flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C
- flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air
- flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction
- flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa
- water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities
- other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

Table 3: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents for the classification of wastes as hazardous by HP 3:

Hazard Class and Category Code(s)	Hazard statement Code(s)	Determined in waste
Flam. Gas 1	H220	Yes
Flam. Gas 2	H221	Yes
Aerosol 1	H222	Yes
Aerosol 2	H223	Yes
Flam. Liq. 1	H224	🗌 Yes
Flam. Liq. 2	H225	Yes
Flam. Liq. 3	H226	Yes
Flam. Sol. 1	H228	Yes
Flam. Sol. 2		Yes
Self-react. CD	H242	Yes
Self-react. EF		Yes
Org. Perox. CD		Yes
Org. Perox. EF		Yes
Pyr. Liq. 1	11350	Yes
Pir. Sol. 1	ΠΖΟΟ	Yes
Self-heat. 1	H251	Yes
Self-heat. 2	H252	Yes

Hazard Class and Category Code(s)	Hazard statement Code(s)	Determined in waste
Water-react. 1	H260	Yes
Water-react. 2	L261	Yes
Water-react. 3	Π201	Yes

When a waste contains one or more substances classified by one of the following hazard class and category codes and hazard statement codes shown in Table 3, the waste shall be assessed, where appropriate and proportionate, according to test methods. If the presence of a substance indicates that the waste is flammable, it shall be classified as hazardous by HP 3.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 3. Waste does not contain hazardous properties of HP 3.

## HP 4 – Irritant - skin irritation and eye damage Contains a dangerous property HP 4 🗌 Yes 🔀 No

Waste which on application can cause skin irritation or damage to the eye.

The cut-off value for consideration in an assessment for Skin corr. 1A (H314), Skin irrit.	
2 (H315), Eye dam. 1 (H318) and Eye irrit. 2 (H319) is 1 %.	Exceeding
If the sum of the concentrations of all substances classified as Skin corr. 1A (H314)	
exceeds or equals 1 %, the waste shall be classified as hazardous according to HP 4.	Exceeding
If the sum of the concentrations of all substances classified as H318 exceeds or equals	
10 %, the waste shall be classified as hazardous according to HP 4.	Exceeding
If the sum of the concentrations of all substances classified H315 and H319 exceeds or	
equals 20 %, the waste shall be classified as hazardous according to HP 4.	Exceeding

Note: Wastes containing substances classified as H314 (Skin corr.1A, 1B or 1C) in amounts greater than or equal to 5 % will be classified as hazardous by HP 8. HP 4 will not apply if the waste is classified as HP 8.

When a waste contains one or more substances in concentrations above the cut-off value, that are classified by one of the following hazard class and category codes and hazard statement codes and one or more of the following concentration limits is exceeded or equalled, the waste shall be classified as hazardous by HP 4.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard. Also no limit is exceeded. Waste does not contain hazardous properties of HP 4.

## HP 5 – Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

Contains a dangerous property HP 5 🗌 Yes 🖂 No

Waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

Hazard Class and Category Code(s)	Hazard statement Code(s)	Determined in waste
STOT SE 1	H370	Yes
STOT SE 2	H371	Yes
STOT SE 3	H335	🗌 Yes
SOTT RE 1	H372	Yes
STOT RE 2	H373	Yes
Asp. Tox. 1	H304	Yes

Table 4: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 5:

When a waste contains one or more substances classified by one or more of the following hazard class and category codes and hazard statement codes shown in Table 4, and one or more of the concentration limits in Table 4 is exceeded or equalled, the waste shall be classified as hazardous according to HP 5. When substances classified as STOT are present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 5.

When a waste contains one or more substances classified as Asp. Tox. 1 and the sum of those substances exceeds or equals the concentration limit, the waste shall be classified as hazardous by HP 5 only where the overall kinematic viscosity (at 40 °C) does not exceed 20.5 mm2/s (for fluids).

#### Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 4. Waste does not contain hazardous properties of HP 5.

## HP 6 – Acute toxicity

Contains a dangerous property HP 6 🗌 Yes 🖂 No

Waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

The following cut-off values shall apply for consideration in an assessment:

- For Acute Tox. 1, 2 or 3 (H300, H310, H330, H301, H311, H331): 0.1 %
- For Acute Tox. 4 (H302, H312, H332): 1 %

Table 5: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 6:

Hazard Class and	Hazard statement	Concentration limit	Dotorminod in wasto
Category Code(s)	Code(s)		Determined in waste
Acute Tox. 1 (Oral)	H300	0,1 %	Yes
Acute Tox. 2 (Oral)	H300	0,25 %	Yes
Acute Tox. 3 (Oral)	H301	5 %	Yes
Acute Tox. 4 (Oral)	H302	25 %	Yes
Acute Tox. 1 (Dermal)	H310	0,25 %	Yes
Acute Tox. 2 (Dermal)	H310	2,5 %	Yes
Acute Tox. 3 (Dermal)	H311	15 %	Yes
Acute Tox. 4 (Dermal)	H312	55 %	Yes
Acute Tox. 1 (Inhal.)	H330	0,1 %	Yes
Acute Tox. 2 (Inhal.)	H330	0,5 %	Yes
Acute Tox. 3 (Inhal.)	H331	3,5 %	Yes
Acute Tox. 4 (Inhal.)	H332	22,5 %	Yes

If the sum of the concentrations of all substances contained in a waste, classified with an acute toxic hazard class and category code and hazard statement code given in Table 5, exceeds or equals the threshold given in that table, the waste shall be classified as hazardous by HP 6. When more than one substance classified as acute toxic is present in a waste, the sum of the concentrations is required only for substances within the same hazard category.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 5. Waste does not contain hazardous properties of HP 6.

#### HP 7 – Carcinogenic

## **Contains a dangerous property HP 7** Yes No

Waste which induces cancer or increases its incidence.

Table 6: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 7:

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit	Determined in waste
Carc. 1A		01%	Yes
Carc. 1B	ПЭЭО	0,1 %	Yes
Carc. 2	H351	1,0 %	Yes

When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 6, the waste shall be classified as hazardous by HP 7. When more than one substance classified as carcinogenic is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 7.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 6 and also exceeding concentration limit. Waste does not contain hazardous properties of HP 7.

#### HP 8 – Corrosive

Contains a dangerous property HP 8 🗌 Yes 🖂 No

Waste which on application can cause skin corrosion.

When a waste contains one or more substances classified as Skin corr.1A, 1B or 1C (H314) and the sum of their concentrations exceeds or equals 5 %, the waste shall be classified as hazardous by HP 8.

The cut-off value for consideration in an assessment for Skin corr. 1A, 1B, 1C (H314) is 1.0 %.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard and also exceeding concentration limit. Waste does not contain hazardous properties of HP 8.

#### HP 9 – Infectious

# **Contains a dangerous property HP 9** Yes X No

Waste containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms.

Table 7: Parameters, analyzed for HP 9 determination:

Parameter	Unit	Limit value	Results
Thermo tolerant campylobacters	in 25 g	does not contain	-
Salmonella	in 25 g	does not contain	-
Shigellae	in 25 g	does not contain	-
Pathogenic Yersinia	in 25 g	does not contain	-

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that are listed in table 7. Waste does not contain hazardous properties of HP 9.

#### HP 10 – Toxic for reproduction

Contains a dangerous property HP 10 🗌 Yes 🖂 No

Waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.

Table 8: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the corresponding concentration limits for the classification of wastes as hazardous by HP 10:

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit	Determined in waste
Repr. 1A		0.2.9/	Yes
Repr. 1B	000	0,5 %	Yes
Repr. 2	H361	3,0 %	Yes

When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 8, the waste shall be classified hazardous according to HP 10. When more than one substance classified as toxic for reproduction is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 10.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 8 and also exceeding concentration limit. Waste does not contain hazardous properties of HP 10.

#### HP 11 – Mutagenic

Contains a dangerous property HP 11 🗌 Yes 🖂 No

Waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell.

Table 9: Hazard Class and Category Code(s) and Hazard statement Code(s) for waste constituents and the

corresponding concentration limits for the classification of wastes as hazardous by HP 11

Hazard Class and Category Code(s)	Hazard statement Code(s)	Concentration limit	Determined in waste
Muta. 1A	H240	0.1.9/	Yes
Muta. 1B	П340	0,1 %	Yes
Muta. 2	H341	1,0 %	Yes

When a waste contains a substance classified by one of the following hazard class and category codes and hazard statement codes and exceeds or equals one of the following concentration limits shown in Table 9, the waste shall be classified as hazardous according to HP 11. When more than one substance classified as mutagenic is present in a waste, an individual substance has to be present at or above the concentration limit for the waste to be classified as hazardous by HP 11.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table 9 and also exceeding concentration limit. Waste does not contain hazardous properties of HP 11.

#### HP 12 – Release of an acute toxic gas:

Contains a dangerous property HP 12 Yes X No

Waste which releases acute toxic gases (Acute Tox. 1, 2 or 3) in contact with water or an acid.

When a waste contains a substance assigned to one of the following supplemental hazards EUH029, EUH031 and EUH032, it shall be classified as hazardous by HP 12 according to test methods or guidelines.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class EUH029, EUH031 or EUH032. Waste does not contain hazardous properties of HP 12.

#### HP 13 –Sensitising

Contains a dangerous property HP 13 🗌 Yes 🖂 No

Waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.

When a waste contains a substance classified as sensitising and is assigned to one of the hazard statement codes H317 or H334 and one individual substance equals or exceeds the concentration limit of 10 %, the waste shall be classified as hazardous by HP 13.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class H317 or H334 and also exceeding concentration limit of 10% for one substance. Waste does not contain hazardous properties of HP 13.

#### HP 14 – Ecotoxic

Waste which presents or may present immediate or delayed risks for one or more sectors of the environment.

Waste which fulfils any of the following conditions shall be classified as hazardous by HP 14:

- Waste which contains a substance classified as ozone depleting assigned the hazard statement code H420 in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council (\*) and the concentration of such a substance equals or exceeds the concentration limit of 0,1 %.

[c(H420) ≥ 0,1 %]

- Waste which contains one or more substances classified as aquatic acute assigned the hazard statement code H400 in accordance with Regulation (EC) No 1272/2008 and the sum of the concentrations of those substances equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % shall apply to such substances.

[Σ c (H400) ≥ 25 %]

Waste which contains one or more substances classified as aquatic chronic 1, 2 or 3 assigned to the hazard statement code(s) H410, H411 or H412 in accordance with Regulation (EC) No 1272/2008, and the sum of the concentrations of all substances classified as aquatic chronic 1 (H410) multiplied by 100 added to the sum of the concentrations of all substances classified as aquatic chronic 2 (H411) multiplied by 10 added to the sum of the concentration of the concentrations of all substances classified as aquatic chronic 3 (H412) equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % applies to substances classified as H410 and a cut-off value of 1 % applies to substances classified as H411 or H412.

 $[100 \times \Sigmac (H410) + 10 \times \Sigmac (H411) + \Sigmac (H412) \ge 25 \%]$ 

Waste which contains one or more substances classified as aquatic chronic 1, 2, 3 or 4 assigned the hazard statement code(s) H410, H411, H412 or H413 in accordance with Regulation (EC) No 1272/2008, and the sum of the concentrations of all substances classified as aquatic chronic equals or exceeds the concentration limit of 25 %. A cut-off value of 0,1 % applies to substances classified as H410 and a cut-off value of 1 % applies to substances classified as H411, H412 or H413.

 $[\Sigma C H410 + \Sigma C H411 + \Sigma C H412 + \Sigma C H413 \ge 25 \%]$ 

Where:  $\Sigma$  = sum and c = concentrations of the substances.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class H4xx and also exceeding upper limits. Waste does not contain hazardous properties of HP 14.

# HP 15 – Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste Contains a dangerous property HP 15 🗌 Yes 🔀 No

Table 10: Hazard statements and supplemental hazards for waste constituents for the classification of wastes as

hazardous by HP 15:

Hazard Statement(s)/Supplemental Haz	ard(s)	Determined in waste
May mass explode in fire	H205	Yes
Explosive when dry	EUH001	Yes
May form explosive peroxides	EUH019	Yes
Risk of explosion if heated under confinement	EUH044	Yes

When a waste contains one or more substances assigned to one of the hazard statements or supplemental hazards shown in Table 10, the waste shall be classified as hazardous by HP 15, unless the waste is in such a form that it will not under any circumstance exhibit explosive or potentially explosive properties.

Findings:

According to the technologies of waste formation, inspection of incoming materials, composition of the waste and the analyses of the examined waste, we note that this waste does not contain any of the substances that could be classified by one of the marks of the hazard class and the codes for the hazard shown in Table. Waste does not contain hazardous properties of HP 15.

#### STATEMENT

Based on the research of hazardous properties carried out and in accordance with Regulation of wastes, Official Journal of the RS, No. 37/2015, 69/2015, 129/2020, we have established that the waste in question is classified as non-hazardous waste with the classification number 19 12 12. The waste does not contain hazardous properties.

#### Prepared by: **Robert Novak**, univ.dipl.biokem.

#### List of literature used:

- Regulation of wastes, Official Journal of the RS, No. 37/2015, 69/2015, 129/2020
- Council Directive (EU) No. 1357/2014, 18.12.2014
- Directive 2008/98/EC of the European Parliament and of the Council,
- Regulation(EC) No. 1272/2008 of the European Parliament and of the European Council,
- http://echa.europa.eu/





# Task report

# ODP - JP VOKA Snaga d.o.o. - Razpis odpadki 2020-2021

Evidence code:	2172-20/46000-20/1149	61				
Customer:	JAVNO PODJETJE VOE VODOVODNA CESTA 9 1000 Ljubljana	JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O. VODOVODNA CESTA 90 1000 Ljubljana				
Request:	PG-2172-20/48000-20/3	PG-2172-20/48000-20/30517 (VKS-34/20), z dne 02.06.2020				
Contractor:	Department for Environm Department for Chemica Novo mesto Department for Chemica Kranj	Department for Environment and Health Novo mesto Department for Chemical Analysis of Food, Water and Other Environmental Samples Novo mesto Department for Chemical Analysis of Food, Water and Other Environmental Samples Kranj				
Head of task:	Robert Novak, univ.dipl.t	biokem.				
Novo mesto,	23.12.2020					
Head of task:		Department for Environment and Health Novo mesto Head of branch:				
Robert Novak, univ.dipl.biokem.		Dušan Harlander, dr.med.,spec.epidemiolog				
Electronically signed Robert Novak, univ.dipl.biokem. at 23.12.2020 13:38:18		The time of the certified signature of deputy and information about the certificate are shown at the top of the first page of the document.				

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Document authenticity check on: http://www.nlzoh.si/istovetnost.

Department for Environment and Health Novo mesto Dalmatinova ulica 2, 8000 Novo mesto; T:07 39 34 161, F:07 39 34 179, E:robert.novak@nlzoh.si Nacionalni laboratorij za zdravje, okolje in hrano, Prvomajska ulica 1, 2000 Maribor ID za DDV: SI19651295; TRR: SI5601100-6000043285; BIC: BSLJSI2X, Banka Slovenije



# **Sample information**

Sample:	JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1 (Terenska oznaka: R90/2020)
Sample number:	20/114961
Purpose:	
Customer:	JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O., VODOVODNA CESTA 90, 1000 Ljubljana
Sample taken by:	Robert Novak, NLZOH OOZ Novo mesto
Time of sampling:	19.11.2020 12:30
Place of sampling:	JP VOKA SNAGA d.o.o., JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1
Sample received by:	Robert Novak
Place and time of receiving:	Novo mesto, 23.11.2020 06:53

#### Report annexes:

Testing report with evidence code 2172-20/46000-20/114961-T Report of chemical analyses with evidence code 1072-20/46000-20/114961-K





Evidence code:2172-20/46000-20/114961-T

# **Testing report**

Sample:	JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1 (Terenska ozn	JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1 (Terenska oznaka: R90/2020)				
Matrix:	Waste (eluates)	Waste (eluates)				
Sample number:	er: 20/114961	20/114961				
Title:	ODP - JP VOKA Snaga d.o.o Razpis odpadki 2020-2021					
Head of task:	Robert Novak, univ.dipl.biokem.					
Customer:	JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA I Ljubljana	JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O., VODOVODNA CESTA 90, 1000 Ljubljana				
Request:	PG-2172-20/48000-20/30517 (VKS-34/20), z dne 02.06.20	020				
Sampling plan:	: DN 125644, 23.11.2020					
Place of samplin	ling: JP VOKA SNAGA d.o.o., JP VOKA SNAGA d.o.o 19 12 1	12 - LF-B-1				
Methodology of sampling:	of SIST EN 14899:2006					
Sample status:	: The sample complies with criteria for the reception					
Sampling	Sample receiving	<b>g Issue date:</b> 23.12.2020				
Date and hour:	: 19.11.2020 12:30 Date and hour: 2	23.11.2020 06:53				
Taken by:	Robert Novak, NLZOH OOZ Novo mesto Received by:	Robert Novak				

Head of branch: Dušan Harlander, dr.med.,spec.epidemiolog

Electronically signed by deputy mag. Majda Ivanušič, univ.dipl.kem. at 23.12.2020 14:43:10

Results refer only to the tested sample. The test report shall not be reproduced except in full without written approval of the department. It should not be used for advertising purposes. The sample was kept in accordance to the requirements until testing. All additional information on testing is available at the department.





Evidence code: 1072-20/46000-20/114961-K

# Report of chemical analyses

Sample:	JP VOKA SNAGA d.o.o 19 12 12 -	JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1 (Terenska oznaka: R90/2020)			
Matrix:	Waste (eluates)	Waste (eluates)			
Sample number	: 20/114961				
Title:	ODP - JP VOKA Snaga d.o.o Razp	is odpadki 2020-2021			
Head of task:	Robert Novak, univ.dipl.biokem.				
Customer:	JAVNO PODJETJE VODOVOD KAN Ljubljana	JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O., VODOVODNA CESTA 90, 1000 Ljubljana			
Request:	PG-2172-20/48000-20/30517 (VKS-	PG-2172-20/48000-20/30517 (VKS-34/20), z dne 02.06.2020			
Place of samplin	ng: JP VOKA SNAGA d.o.o., JP VOKA S	NAGA d.o.o 19 12 12 - LF-B-	1		
Sample status:	The sample complies with criteria for	the reception			
Sampling		Sample receiving	Issue date:	23.12.2020	
Date and hour:	19.11.2020 12:30	Date and hour: 23.11.202	0 06:53		
Taken by:	Robert Novak, NLZOH OOZ Novo mesto	Received by: Robert No	vak		

# Analytic results

Analytic results				# Results marked with # refer to not accredited activity	
Parameter	Result Note	Unit	Expressed as/on	Method Place of execution	Start/End
Waste analysis					
Antimony	53	mg/kg s.s.	Sb	ISO 17294-2, modified, NM	07.12.20 07.12.20
Arsenic	<1.0	mg/kg s.s.	As	ISO 17294-2, modified, NM	23.11.20 07.12.20
Copper	66	mg/kg s.s.	Cu	ISO 17294-2, modified, NM	07.12.20 07.12.20
Barium	75	mg/kg s.s.	Ва	ISO 17294-2, modified, NM	07.12.20 07.12.20
Beryllium	<0.23	mg/kg s.s.	Be	ISO 17294-2, modified, NM	07.12.20 07.12.20
Boron	<120	mg/kg s.s.	В	ISO 17294-2, modified, NM	09.12.20 09.12.20
Zinc	100	mg/kg s.s.	Zn	ISO 17294-2, modified, NM	07.12.20 07.12.20
Cadmium	<0.3	mg/kg s.s.	Cd	ISO 17294-2, modified, NM	07.12.20 07.12.20
Cobalt	3.7	mg/kg s.s.	Со	ISO 17294-2, modified, NM	07.12.20 07.12.20
Chromium	64	mg/kg s.s.	Cr	ISO 17294-2, modified, NM	07.12.20 07.12.20
Manganese	110	mg/kg s.s.	Mn	ISO 17294-2, modified, NM	07.12.20 07.12.20
Molybdenum	1.5	mg/kg s.s.	Мо	ISO 17294-2, modified, NM	07.12.20 07.12.20
Nickel	6.8	mg/kg s.s.	Ni	ISO 17294-2, modified, NM	07.12.20 07.12.20
Selenium	0.27	mg/kg s.s.	Se	ISO 17294-2, modified, NM	07.12.20 07.12.20



# NATIONAL LABORATORY OF HEALTH, ENVIRONMENT AND FOOD

CENTRE FOR CHEMICAL ANALYSIS OF FOOD, WATER AND OTHER ENVIRONMENTAL SAMPLES



#### Evidence code: 1072-20/46000-20/114961-K

# **Analytic results**

Analytic results				# Results marked with # refer to not	accredited activity
Parameter	Result Note	Unit	Expressed as/on	Method Place of execution	Start/End
Lead	23	mg/kg s.s.	Pb	ISO 17294-2, modified, NM	07.12.20 07.12.20
Thallium	<0.16	mg/kg s.s.	TI	ISO 17294-2, modified, NM	07.12.20 07.12.20
Tellurium	<0.16	mg/kg s.s.	Те	ISO 17294-2, modified, NM	07.12.20 07.12.20
Vanadium	6.8	mg/kg s.s.	V	ISO 17294-2, modified, NM	07.12.20 07.12.20
Mercury	<0.15	mg/kg s.s.	Hg	SIST EN ISO 12846, modification in point 5, without chapter 7, NM	04.12.20 04.12.20
Naphthalene	0.20	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Acenaphthylene	<0.02	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Acenaphtene	<0.1	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Fluorene	<0.09	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Phenanthrene	0.40	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Anthracene	<0.05	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Fluoranthene	0.40	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Pyrene	0.26	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 30.11.20
Benzo(b)fluoranthene	<0.15	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Benzo(a)anthracene	0.11	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Benzo(k)fluoranthene	<0.15	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Chrysene	0.12	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Benzo(a)pyrene	0.10	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Benzo(ghi)perylene	0.11	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Dibenzo(a,h)anthracene	<0.09	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Indeno(1,2,3-cd)pyrene	<0.15	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
Polycyclic aromatic hydrocarbons (sum)	1.6	mg/kg s.s.		ISO 18287:2006, NM	24.11.20 27.11.20
PCB-28 (2,4,4'- trichlorobiphenyl)	0.005	mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
PCB-52 (2,2',5,5'-tetrachlorobiphenyl)	0.011	mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
PCB-101 (2,2',4,5,5'-pentachlorobiphenyl)	<0.003	mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20



# NATIONAL LABORATORY OF HEALTH, ENVIRONMENT AND FOOD

CENTRE FOR CHEMICAL ANALYSIS OF FOOD, WATER AND OTHER ENVIRONMENTAL SAMPLES



#### Evidence code: 1072-20/46000-20/114961-K

# Analytic results

# Results	marked	with #	refer t	to not	accredited	activity
TICoulto	mancu	VVILLI TT			acciculteu	acuvity

Parameter	Result Note		Unit	Expressed as/on	Method Place of execution	Start/End
PCB-138: (2,2',3,4,4',5'-hexachlorobiphenyl)	<0.001		mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
PCB-118	<0.001	#	mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
PCB-153 (2,2',4,4',5,5'-hexachlorobiphenyl)	<0.002		mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
PCB-180 (2,2',3,4,4',5,5'-heptachlorobiphenyl)	<0.001		mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
PCB - sum	0.016	#	mg/kg s.s.		SIST EN 15308 : 2017, NM	18.12.20 22.12.20
Hydrocarbon oil index	1800		mg/kg s.s.		SIST EN 14039:2004, modificiran v točkah 8.3, 10.3, NM	01.12.20 01.12.20
Phenol index	3.8	#	mg/kg s.s.		ND-IV-NLZOH-OKA-NM-M79 0/1, izdaja 1, NM	08.12.20 08.12.20
Adsorbable organic halogens - AOX	<100	#	mg/kg s.s.		oSIST prEN 16166:2011, NM	07.12.20 07.12.20
Total Cyanide	<3.4		mg/kg s.s.	CN	SIST EN ISO 17380:2013, NM	23.11.20 24.11.20
Ash	13.1	#	%DW		SIST-TS CEN/TS 15403:2007, NM	25.11.20 26.11.20
Gross calorific value	22302		kJ/kg s.s.		SIST-TS CEN/TS 16023:2014, KR	27.11.20 02.12.20
Net calorific value	20986		kJ/kg s.s.		SIST-TS CEN/TS 16023:2014, KR	27.11.20 02.12.20
Nitrogen	5303		mg/kg s.s.		SIST EN 15408:2011, KR	27.11.20 02.12.20
Chlorine	0.17		%DW		SIST EN 15408:2011, KR	27.11.20 02.12.20
Sulfur	0.058		%DW		SIST EN 15408:2011, KR	27.11.20 02.12.20
Fluorine	<0.01		%DW		SIST EN 15408:2011, KR	27.11.20 30.11.20
Bromine	<0.01	#	%DW		SIST EN 15408:2011, KR	27 11 20 30 11 20
Hydrogen	6.03		%DW		SIST EN 15407:2011 modificirana, KR	02.12.20 02.12.20
Dry matter	74.5		%		SIST EN 15934:2012 - metoda A. NM	23.11.20 23.11.20
Moisture	25.5		%		SIST EN 15934:2012 - metoda A. NM	23.11.20 23.11.20
Sample preparation					,	
Dray matter from 40 °C to 105 °C	97.6				SIST EN 15934:2012 - metoda A, NM	25.11.20 25.11.20

Locations of analyses:

NM - OKA Novo mesto, Dalmatinova ulica 3, Novo mesto

KR - OKA Kranj, Gosposvetska ulica 12, Kranj

Measurement uncertainty data are available on the request of the client.





#### Evidence code: 1072-20/46000-20/114961-K

Electronically confirmed by: mag. Andreja Dremelj, univ.dipl.kem. OKA Kranj Head of branch: Maja Križan, univ.dipl**.**kemik

Electronically signed Maja Križan, univ.dipl.kemik at 23.12.2020 12:41:04

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# ZAPISNIK O VZORČENJU ODPADKOV (v skladu s: SIST EN 14899)

	Številka vzorca: 20/114961
Zapisnik o vzorčenju se navez	uje na načrt vzorčenja odpadkov oznaka:
Organizacijska enota vzorčeva	Ica: OOZ Novo mesto
OSNOVNI PODATKI	
Številka naloge:	46000
Oznaka vzorca:	JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1 (Terenska oznaka: R90/2020)
Številka vzorca:	20/114961
Datum vzorčenja:	19.11.2020 čas: 12:30
Vzorčevalec, podpis:	& Novah for Gi Sprigen
Prisotne osebe, podpis:	Jan Poglugui
SPLOŠNE INFORMACI	JE
Naročnik:	JAVNO PODJETJE VODOVOD KANALIZACIJA SNAGA D.O.O.
Številka naročila:	
Povzročitelj	
- odpadka:	
Lokacija vzorčenja:	JP VOKA SNAGA d.o.o 19 12 12 - LF-B-1
Podlokacija vzorčenja:	
PODATKI O ODPADKU	
Številka odpadka:	19 12 12
Vrsta odpadka:	LAB7
Opis vzorca:	Barva:       Monogeno       Vonj po:       Apachu         Velikost zrn:       Image: Description of the second s
Dodaten opis:	teleran adplet karlivi delen po sechie 1 cletost. proladeje plæsta.
– Območje velikosti zrn oz. kosov	· 690~~
Gostota oz. nasipna teža:	
Količina odpadka za vzorčenja:	~ 120~3
Geometrijska podobnost odpad	ka: $\Box$ stožec (V=1/3. $\pi$ r <sup>2</sup> .v) $\Box$ valj (V= $\pi$ r <sup>2</sup> .v) $\Box$ pol valja (V= $\pi$ r <sup>2</sup> .v/2) $\Box$ kvader (V=a.b.c)
	drugo:





# ZAPISNIK O VZORČENJU ODPADKOV (v skladu s: SIST EN 14899)

Številka vzorca: 20/114961



## METODOLOGIJA VZORČENJA:,

Dostopnost:	fe doshow
Opis tehnike odvzema:	borins ned nate agangen toronega isola
	s jorocjo rahledan
Vzorčevalna oprema:	Plastica republic 20
Število inkrementov:	2.4
Količina posameznega inkrementa:	26





# ZAPISNIK O VZORČENJU ODPADKOV (v skladu s: SIST EN 14899)

Številka vzorca: 20/114961

VREMENSKI POGOJI		
Temperatura zraka:	(1 °C Merilnik ID: 24763	
Vreme:	🗆 sončno 💆 oblačno 🗆 deževno 🗆 sneg	
Ostalo:		
Zahteve po terenskih meritvah:	1	
Način priprave pod-vzorca:		

# EMBALAŽA, KONZERVIRANJE, SKLADIŠČENJE, TRANSPORT

Embalaža:	PP Vieco
Konzerviranje:	Af 11cpm
Shranjevanje:	10-
Transport:	- / -
	$T_{zač.} = 1/3 \text{ °C}$ $T_{min/pex} = 1/3 \text{ °C}$ $T_{konč.} = 7/7 \text{ °C}$ ID opreme: $60063$
ODSTOPANJE C	DD NAČRTA VZORČENJA: 🗆 Da 🥢 Ne
Opis odstopanja:	