



**REPORT ON ENVIRONMENTAL IMPACT
OF JAVYS, A. S., OPERATION FOR THE YEAR 2019**

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01

INTRODUCTION

The Environment Report for the Year 2019 provides comprehensive information on the air protection, water and waste management systems, on the management of chemicals in connection with the prevention of serious industrial accidents, on environmental impact assessment (EIA) processes and on activities related to environmental protection performed within JAVYS, a. s.

By maintaining the JAVYS, a. s., certified environmental management system in accordance with standard ISO 14001:2015 Environmental Management Systems, the goal and mission are demonstrated to perform all activities with regard to environmental protection.

During the performance of all the activities, emphasis is placed on compliance with legal requirements identified from legal regulations of the SR and EU in individual areas of environmental protection, as well as on the obligation to comply with limits and conditions included in decisions made by state authorities and supervisory bodies for the protection of individual environment components.

The environmental protection is included in the Safety process within the framework of the integrated management system.

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AIR PROTECTION

In the field of air protection, JAVYS, a. s., complies with the basic legal regulation, i.e. the Act of the National Council of the Slovak Republic No. 137/2010, Coll., on Air, as amended, and with all related acts, executive ordinances and regulations of the Government of the Slovak Republic.

The operation method of air pollution sources is governed by applicable decisions by the national authorities and supervisory bodies in relation to the air protection issued for JAVYS, a. s., starting from the source permission, the specification of the emission monitoring system, as far as the determination of the limits of pollutants discharged into the air.

Sources of Air Pollution and Volumes of Discharged Emissions

JAVYS, a. s., was the operator of multiple stationary air pollution sources in the following categories – large, medium, small sources.

The operating method of the air pollution sources, starting with the permission to operate a source, through the determination of the emission monitoring system to the specification of limits for pollutants discharged in to the air, is determined by valid decisions of state and supervisory bodies in the air protection area issued for JAVYS, a. s.

Start-up and Reserve Boiler Plant(SuRBP)*	large source (by 15 July 2019)
Reserve Boiler Plant (RBP)*	medium source (since 16 July 2019)
LOOS boiler (K4) in the SuRBP premises*	separate medium source (by 15 July 2019) a part of medium source RBP (since 16 July 2019)
Diesel generator in the V1 pumping station premises	medium source
Diesel generator next to the A1 outdoor switchyard	medium source
Diesel generator in the V1 sub-station (2 pieces)	medium source
Diesel generator at the ISFS	small source
Production of fibre concrete mixture in the V1 FCC production plant	small source

* JAVYS, a. s., re-evaluated the further usage of the Start-up and Reserve Boiler Plant and, subsequently, made a decision to reconstruct it to the Reserve Boiler Plant including a potential to be used exclusively for JAVYS, a. s., purposes.

For the given reason, the operation capacity of the Start-up and Reserve Boiler Plant was reduced from the original level of 79.8 MW to 29,471 MW, because K1 and K2 boilers were shut down and are out of operation. K3 boiler remains in operation in the original mode and K4 LOOS boiler was attached to the Reserve Boiler Plant – a medium air pollution source. Due to the attachment of K4 boiler to K3 boiler, the use of K3 and K4 boilers was modified so that it will be possible to use them for the same purposes in the future – to supply JAVYS, a. s., technologies with steam, to heat JAVYS, a. s., premises and to supply steam to heat the bituminization line. Based on these facts, JAVYS, a. s., duties were modified from existing large air pollution source operator duties to operator duties resulting from the operation of the existing medium stationary air pollution source, following the changes implemented.

In order to implement that modification of the large air pollution source, the Slovak Environmental Inspectorate issued Decision No. 425-6430/2019/Čás/370660107/ZR – the Cancellation of the Integrated Pollution Inspection Permission (IPOP) for the Start-up and Reserve Boiler Plant.

The District Office in Trnava, as the relevant state and supervisory body, issued to JAVYS, a. s., Decision No. OU-TT-OSZP3-2016ú0172246/ŠSOO/Kra - the Approval to Implement the Trial Operation of the Existing Medium Air Pollution Source following the Completed Modifications, i. e., to implement the trial operation of the Reserve Boiler Plant, that entered into force on 16 July 2019.

The decision is valid till 30 June 2020. During the year 2020, the District Office in Trnava will be requested to issue a decision to implement permanent operation of the Reserve Boiler Plant medium source. The pollution source modification was also connected with a change in the permission to approve the calculation of amounts of pollutants discharged into the air that was issued under No. OU-TT-OSZP3-2019/0172245/ŠSOO/Kra.

Amounts of Emissions Discharged from All Air Pollution Sources during the Period from 2017 to 2019 (kg)



Amounts of Fuel Consumed, Numbers of Operation Hours and Amounts of Emissions Discharged from Individual Sources in the Year 2019

Pollution source	Fuel	Number of operations hours	Amounts of pollutants (kg)				
	Natural gas (thous. Nm ³)	hours/year	SP	SO ₂	NO _x	CO	C _{org}
SuRBP (1. 1. - 15. 7. 2019)	0.390	0.466	0.030	0.004	0.652	0.010	0.028
LOOS boiler (1. 1. - 15. 7. 2019)	11.450	78.77	0.870	0.104	16.969	6.853	1.142
RBP (16. 7. - 31. 12. 2019)	5.179	6.147	0.394	0.047	8.659	3.121	0.369
	Diesel fuel (t)	hours/year	SP	SO ₂	NO _x	CO	C _{org}
DG Caterpillar Olympian	0.288	14.0	0.409	0.006	1.441	0.230	0.020
DG Martin Power MP 1700	2.016	10.5	2.863	0.040	10.080	1.613	0.222
DG1 Martin Power MP 400	0.074	2.0	0.105	0.0015	0.369	0.059	0.008
DG2 Martin Power MP 400	0.074	2.0	0.105	0.0015	0.369	0.059	0.008
DG Caterpillar 3306	1.235	18.8	1.704	0.024	6.000	0.960	0.136
FCM production	-	-	31.80	-	-	-	-
Total of pollutants from all APS (kg)			38.28	0.228	44.539	12.905	1.933

All the mentioned diesel generators are not permanently in operation, they serve as emergency sources of electrical power supply.

In the year 2019, 375 fibre concrete containers were produced in the FCC production plant, i.e. 1,612.5 t of fibre concrete mixture, representing the air pollution by solid pollutants in the amount of 0.0318 t/year.

In order to notify to the National Pollution Register, JAVYS, a. s., sent to the Slovak Environmental Inspectorate and to the Slovak Hydrometeorological Institute a notice of the operation of the Start-up and Reserve Boiler Plant in the year 2020 - data on emissions

to air and water and on the operational waste management system for the aliquot part of the year 2019, namely by 15 July 2019, due to a change in the categorization from the large air pollution source – the Start-up and Reserve Boiler Plant – to the medium air pollution source – Reserve Boiler Plant. Due to the change in the source categorization and based on the cancellation of IPOP for the large air pollution source, the source operation conditions and legal requirements resulting therefrom changed as well. As the SuRBP was excluded from the list of plants with the integrated permission, the requirement to send data to the National Pollution Register does not apply to JAVYS, a. s., after 15 July 2019 any more.

Amounts of emissions discharged from the BRWTC Incineration Plant for the year 2019

Pollutant (kg)	2016	2017	2018	2019
HCl	1.460	0.870	0.450	0.009
HF	2.700	4.260	6.660	0.001
Hg+Tl+Cd	0.265	0.248	0.233	0.217
As+Ni+Cr+Co	1.232	1.301	1.332	1.238
Pb+Cu+Mn	1.056	0.929	0.832	0.773
SO ₂	86.670	38.000	91.960	60.5
NO _x	642.570	681.710	666.280	676.3
CO	80.770	71.030	86.400	114.3
SP	1.610	1.620	1.590	3.6
C _{org}	11.990	8.670	6.260	8.5
Operation hours/year	6,857	7,017	6,697	7,046

The BRWTC incineration plant operation does not fall under the Act on Air, it is not categorized as a source of air pollution. The state supervision over the incineration plant is provided by the Nuclear Regulatory Authority of the Slovak Republic.

Equipment Containing Fluorinated Greenhouse Gases

JAVYS, a. s., is the operator of equipment containing fluorinated greenhouse gases (F gases), within the meaning of Act No. 286/2009, Coll., on Fluorinated Greenhouse Gases and the Regulation of the European Parliament and the Council (EC) No. 517/2014, on Fluorinated Greenhouse Gases. JAVYS, a. s., reports data on those equipment on the yearly basis to environment departments of relevant district offices.

Equipment Containing Fluorinated Greenhouse Gases with Volume of 5 and More Equivalent Tonnes of CO₂ on the Jaslovské Bohunice Site

Building	Equipment/number of pieces	Filling	F Gas Volume (equivalent t CO ₂)
A1 Outdoor Switchyards	compact substation 110 kV/2 pcs	SF ₆	2 x 2,120.4
A1 Outdoor Switchyards	measuring current transformer/6 pcs	SF ₆	6 x 91.2
A1 Outdoor Switchyards	measuring voltage transformer/6 pcs	SF ₆	6 x 100.32
V1 Outdoor Switchyards	switchboard 6 kV/4 pcs	SF ₆	4 x 118.79
V1 Outdoor Switchyards	switchboard 6 kV/1 pc	SF ₆	163.02
V1 Outdoor Switchyards	switchboard 6 kV/1 pc	SF ₆	105.79
V1 Outdoor Switchyards	Circuit breaker ALSTOM AEA 01/1 pc	SF ₆	189.24
V1 Outdoor Switchyards	EAE 10 enc. VHV switchyard - HYPACT/2 pcs	SF ₆	2 x 818.52
V1 Outdoor Switchyards	AEA 02 circuit breaker Siemens/4 pcs	SF ₆	4 x 173.28
V1 Outdoor Switchyards	switchboard 6 kV/26 pcs	SF ₆	26 x 25.76
V1 Outdoor Switchyards	switchboard 6 kV/7 pcs	SF ₆	7 x 58.14
V1 Outdoor Switchyards	switchboard 6 kV/1 pc	SF ₆	53.81

V1 Outdoor Switchyard	switchboard 6 kV/5 pcs	SF ₆	5 x 31.69
V1 Outdoor Switchyard	switchboard 6 kV/1 pc	SF ₆	41.04
V1 Outdoor Switchyard	switchboard 6 kV/2 pcs	SF ₆	2 x 27.36
V1 Outdoor Switchyard	switchboard 6 kV/1 pc	SF ₆	36.48
V1 Outdoor Switchyard	switchboard 6 kV/2 pcs	SF ₆	2 x 29.64
V1 Outdoor Switchyard	switchboard 22 kV/1 pc	SF ₆	23.26
V1 Outdoor Switchyard	switchboard 22 kV/1 pc	SF ₆	30.55
V1 Outdoor Switchyard	circuit breaker Siemens AEA/5 pcs	SF ₆	5 x 57
V1 Pumping Station	switchboard r6-16.05/2 pcs	SF ₆	2 x 13.68
V1 Pumping Station	switchboard r6-16.05/2 pcs	SF ₆	2 x 25.08
V1 Pumping Station	switchboard r6-16.05/5 pcs	SF ₆	5 x 20.52
V1 Pumping Station	switchboard r6-16.05/2 pcs	SF ₆	2 x 27.36
V1 Pumping Station	switchboard r6-16.05/2 pcs	SF ₆	2 x 15.96
A1 Reactor Building	stable extinguisher LPG-190-00/1 pc	R 227ea	320.71
A1 Reactor Building	stable extinguisher LPG-190-00/1 pc	R 227ea	337.46
A1 Reactor Building	stable extinguisher LPG-190-00/1 pc	R 227ea	303
A1 Administrative building	stable extinguisher KD 200/1 pc	R 227ea	144.9
A1 Administrative building	stable extinguisher KD 200/1 pc	R 227ea	74.06
A1 Administrative building	stable extinguisher KD 200/1 pc	R 227ea	17.71
A1 Administrative building	stable extinguisher KD 200/1 pc	R 227ea	18.35
A1 Administrative building	stable extinguisher KD 200/1 pc	R 227ea	157.78
Building of Protections	stable extinguisher KD 200/1 pc	R 227ea	141.36
A1 Intermedia-te Turbine Hall	air conditioning unit MITSUBISHI/1 pc	R 410A	7.31
A1 Turbine Hall	air conditioning unit PANASONIC/1 pc	R 410A	5.51
Pumping Plant	air conditioning unit DAIKIN/2 1 pc	R 410A	2 x 7.73
A1 Administrative building	air conditioning unit MITSUBISHI/2 pcs	R 410A	2 x 48.02
A1 Administrative building	air conditioning unit MITSUBISHI/1 pc	R 410A	54.29
A1 Administrative building	air conditioning unit MITSUBISHI/1 pc	R 410A	45.94
A1 Administrative building	air conditioning unit MITSUBISHI/1 pc	R 410A	48.02
A1 Administrative building	air conditioning unit PANASONIC/1 pc	R 410A	7.1
A1 Administrative building	air conditioning unit PANASONIC/1 pc	R 410A	7.1
A1 Administrative building	air conditioning unit LG/1 pc	R 410A	15.76
VUJE Administrative building	air conditioning unit TOSHIBA/1 pc	R 410A	37.58
V1 SuRBP	air conditioning unit TOSHIBA/1 pc	R 410A	5.01
V1 Exchanger Plant	air conditioning unit MITSUBISHI/1 pc	R 410A	12.11
A1 Administrative building	Split jednotka LG/4 pc	R 410A	4 x 15.76
A1 Administrative building	air conditioning unit LG/2 pcs	R 410A	2 x 6.06
A1 Administrative building	air conditioning unit TOSHIBA/1 pc	R 410A	5.85
V1 Archives	cooling unit LENNOX/1 pc	R 410A	56.38
Security Building	air conditioning unit TOSHIBA/5 pcs	R 410A	5 x 5.01
JAVYS, a. s., Cargo Lodge	air conditioning unit TOSHIBA/1 pc	R 410A	5.01
Lodge at ISFS	air conditioning unit TOSHIBA/1 pc	R 410A	5.01
IRWS	air conditioning unit MITSUBISHI/1 pc	R 410A	6.26
Solid RAW Storage	air conditioning unit DAIKIN/ 2 pcs	R 410A	2 x 43.43
BRWTC	air conditioning unit CARRIER/2 pcs	R 407C	2 x 51.45
BRWTC	Kompresor unit YORK/2 pcs	R 134a	2 x 233.09

Equipment Containing Fluorinated Greenhouse Gases with Volume of 5 or More Equivalent Tonnes of CO₂ on the Bratislava Site

Building	Equipment/pieces	Filling	F Gas Volume (equivalent t CO ₂)
Head Office	air conditioning unit TOSHIBA/1 pc	R 410A	22.97
Head Office	cooling unit DAIKIN/1 pc	R 410A	20.04
Head Office	air conditioning unit LG M30AH UEO/1 pc	R 410A	5.22
Head Office	air conditioning unit LG M30AH/1 pc	R 410A	5.22
Head Office	cooling unit YORK/1 pc	R 407C	39.03
Head Office	VRV system DAIKIN/2 pcs	R 407C	2 x 19.87
Head Office	VRV system DAIKIN/1 pc	R 407C	20.93
Head Office	VRV system DAIKIN/1 pc	R 407C	11.18
Head Office	VRV system DAIKIN/1 pc	R 407C	11.35

Equipment containing fluorinated greenhouse gases with volume of 5 and more equivalent tonnes of CO₂ on the Mochovce site (institutional radioactive waste - IRAW and captured radioactive materials – CRAM)

Building	Equipment/number of pieces	Filling	F Gas Volume (equivalent t CO ₂)
FP LRW	automatic extinguishing system type SAH FE-36/2 pcs	R 236fa	2 x 490.5
FP LRW	air condition unit MITSUBISHI type/ 1 pc	R 407C	10.64
IRAW and CRAM Facility	air condition unit MITSUBISHI type/1 pc	R 410A	49.07

Greenhouse Gas Emissions

Within the meaning of Act No. 414/2012 Coll., on Emission Allowances Trading, JAVYS a. s., is a mandatory trading scheme participant. In the year 2019, 45 t of greenhouse gases (CO₂) were discharged into the atmosphere from the operation.

In comparison with the year 2018, the amount of emissions increased slightly and remains on average yearly levels, as air pollution sources were only operated in the emergency mode (no steady operation occurred) in the year 2019.

The activity level report for parts of operation and the report on greenhouse gas emissions from the operation for the year 2019 were developed. Both the reports were verified within the meaning of the law by an accredited verifier (ASTRAIA Certification, s. r. o.). The emission report along with the verification report were sent to the District Office in Trnava and to the Ministry of Environment of the Slovak Republic, within the meaning of Act No. 414/2012, Coll.

In connection with the change in categorization from the large air pollution source to the medium air pollution source (from SuRBP to RBP), it was necessary to request additionally the District Office in Trnava to issue a new permission to discharge greenhouse gases and to approve the Monitoring Plan during the year 2019; the permission was issued under No. OU-TT-OSZP3-2019/037031-002.

Inspections and Controls in the Air Protection Area

The Slovak Environmental Inspectorate, the Bratislava Environmental Inspectorate, the permanent infrastructure Nitra, the Integrated Authorization and Control Department, performed a local examination on 24 January 2019 connected with a verbal hearing due to a request submitted to cancel the Integrated Pollution Inspection Permission (IPOP) for the large air pollution source – the Start-up and Reserve Boiler Plant. The examination was focused on the verification of conditions related to the decrease in the equipment capacity below the relevant threshold value specified in Annex 1 to Act on IPOP and in cooperation with provisions of §15 thereof. Concerned state and supervisory bodies were among the participants of the hearing, i. e., the Regional Office of the Public Health Authority in Trnava, Jaslovské Bohunice municipality – the Building Office, the District Office in Trnava – the Environmental Care Department, the state administration in the waste management area, the state administration in the water management area. The shortened form of the Operator's request, positions, comments and objections raised by the participants in the hearing and by the concerned bodies and Inspectorate raised during the proceedings to cancel the integrated permission were discussed during the verbal hearing.

The result of the whole process was that the IPOP was cancelled for the large air pollution source – the Start-up and Reserve Boiler Plant – due to a decrease in the source capacity below the threshold value of 50 MW.

Discharges of Radioactive Substances into the Atmosphere

Fractions of percentage of the permitted guiding limits for gaseous discharges are only discharged into the surrounding environment from JAVYS, a. s., nuclear facilities. The objective of the guiding limits for discharges is to ensure that the effective dose per capita caused by the discharges of radioactive substances into the atmosphere and hydrosphere from the JAVYS, a. s., Jaslovské Bohunice nuclear facilities does not exceed 32 µSv/year and the same from the FP LRW nuclear facility does not exceed 10 µSv/year. The guiding limits for radioactive discharges into the atmosphere are specified in the Technical Specifications (TS) of nuclear facilities (RW PTT, A1 NPP, ISFS, V1 NPP, FP LRW), they were set up by decisions of the Public Health Authority of the Slovak Republic and they are approved by the Nuclear Regulatory Authority of the Slovak Republic.

Gaseous discharges of radioactive aerosols (β, γ) for the year 2019

Nuclear Facility	Activity in discharges (Bq)	Annual guiding limit (Bq)	% of guiding limit
Aerosols VS 46A (MPB)	4.125 x 10 ⁶ Bq	6.58 x 10 ⁸ Bq	0.63
Aerosols VS 46B (BL and OB)	7.5 x 10 ⁴ Bq	1.41 x 10 ⁸ Bq	0.05
Aerosols VK 808 (BRWT and OB)	1.22 x 10 ⁵ Bq	1.41 x 10 ⁸ Bq	0.09
Aerosols VK 840 (ISFS)*	9.9 x 10 ⁴ Bq	3.00 x 10 ⁸ Bq	0.03
Aerosols V1 NPP	7.345 x 10 ⁶ Bq	8.00 x 10 ¹⁰ Bq	0.09
Aerosols from FP LRW	1.28 x 10 ⁴ Bq	8.00 x 10 ⁷ Bq	0.016

*A common limit of 3 x 10⁸ Bq is specified for ISFS for all radionuclides, not only for (β, γ).

The air mass from the FP LRW facility is discharged into the SE-EMO stack (it is not discharged immediately into the environment). The air mass re-filtration and subsequent discharge into the environment is performed in SE-EMO facilities along with the SE-EMO air mass.

No radioactive substances were discharged into the atmosphere from the NRWR premises, with regard to the nature of the repository.

In the year 2019, the discharges from JAVYS, a. s., nuclear facilities into the atmosphere were well below the authorized guiding limits specified by the Public Health Authority of the Slovak Republic.

03

WATER MANAGEMENT SYSTEM

As for the field of water protection, JAVYS, a. s., complies with the basic legal regulation – the Act of the National Council of the Slovak Republic No. 364/2004, Col., the “Water Act”, as well as with all directly and indirectly related acts and executive ordinances and regulations.

The values of permitted amounts of discharged waste waters, the concentration and balance limits of pollutants in the waste waters, places and methods of the waste water discharges, etc., are determined by applicable decisions of state authorities and supervisory bodies in the field of water protection issued for JAVYS, a. s.

Drinking Water

Drinking water is supplied to the Jaslovské Bohunice site from the TAVOS, a. s., distribution line, based on a valid drinking water supply contract concluded between TAVOS, a. s., and JAVYS, a. s.

The Mochovce site (NRWR and FP LRW) is connected to the SE-EMO drinking water distribution line, the drinking water supply to the administrative building in Bratislava (22, Tomášikova Street) is provided from the public water main of Bratislavská vodárenská spoločnosť, a. s.

Amounts of Drinking Water Consumed during the Period from 2016 to 2019

Site	Consumption (m ³)			
	2016	2017	2018	2019
Jaslovské Bohunice site	46,509	40,218	51,157	45,408
NRWR	642	826	1,160	434
FP LRW	257	295	306	298
FCC Production Plant Trnava	785	177	-*	-*
Administrative building in Bratislava	1,219	1,060	1,519	1,150
Total	49,412	42,576	54,142	47,290

* Since 2nd half year of 2017, the operation has been on the Jaslovské Bohunice site

In the year 2019, the total drinking water consumption decreased by 6,852 m³, compared to the previous year, which represents a decrease by 12.7 %. The decrease in the drinking water consumption was registered in all the sites, while the greatest decrease occurred on the NRWR site in Mochovce.

Analyses of Drinking Water Samples

The quality of drinking water was controlled in JAVYS, a. s., within the meaning of Ordinance of the Ministry of Health of the Slovak Republic No. 247/2017, Coll., Laying down Details of Drinking Water Quality, Drinking Water Quality Control, Monitoring Program and Risk Management in relation to the Drinking Water supply, and within the meaning of Decree of the Ministry of Health of the Slovak Republic No. 100/2018, Coll., on Reduction of Population Exposure from Drinking Water, Natural Mineral Water and Spring Water.

In the year 2019, 8 minimum and 2 full-scope drinking water analyses were performed in JAVYS, a. s., based on a valid contract. A test record was issued for each analysis, in all cases the tested sample complied with the limit values specified by Ordinance of the Ministry of Health of the Slovak Republic No. 247/2017, Coll., for the evaluated sample indicators, and, in case of the full-scope tests, also with the indication values specified by Ordinance of the Ministry of Health of the Slovak Republic No. 100/2018, Coll., for the evaluated radiological indicators.

Cooling Water

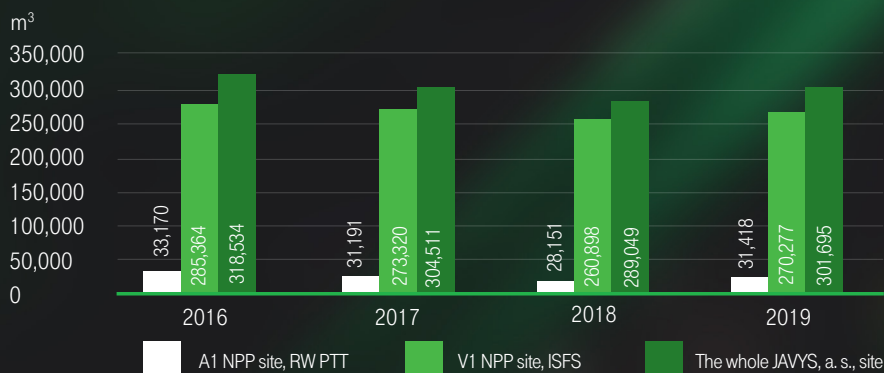
Jaslovské Bohunice Site

Surface water taken from the Sĺňava water reservoir is used as cooling water on the Jaslovské Bohunice site. SE-EBO is its supplier.

Surface (raw) water from the Váh river is used for the cooling of the safety and emergency systems at V1 NPP, for the cooling of facilities providing the processing and storage of radioactive waste and spent nuclear fuel storage (ISFS).

The following diagram shows amounts of consumed cooling water expressing a relatively balance trend, with regard to both the technology and methods of decommissioning of individual operational systems and buildings situated on the A1 NPP and V1 NPP sites.

Amounts of Consumed Cooling Water during the Period from 2016 to 2019



Mochovce FP LRW Site

The FP LRW (the bituminization lines and the thickening evaporator) technological facilities are connected to the supply of the non-essential service water system from the SE-EMO distribution system, i.e. to the circulation cooling water system. The cooling water consumption from January to December 2019 amounted to 2,975 m³.

Wastewater

Jaslovské Bohunice Site

Several kinds of sewage systems are in operation on the JAVYS, a. s., site in Jaslovské Bohunice.

- Rainwater sewage system – it empties into the Dudváh river recipient via the open channel Manivier.
- Sanitary sewage system – it empties into the sanitary water treatment facility – BIOCLAR and, subsequently, into the Váh river via the pipe drainage collector SOCOMAN.
- Industrial sewage system – water contaminated by oil substances are led into the central gravitational oil separator; after the purification the water is led to V2 SE-EBO for the treatment of additional cooling water by clarification.
- Special sewage system – it is emptied into collection tanks of special active water treatment facilities on the relevant site and, subsequently, following the purification and inspection, the wastewater is discharged under control.

Other wastewater from technological facilities providing the processing and treatment of RAW, including low-level water, is drained by the final sewage collector SOCOMAN into the Váh river recipient.

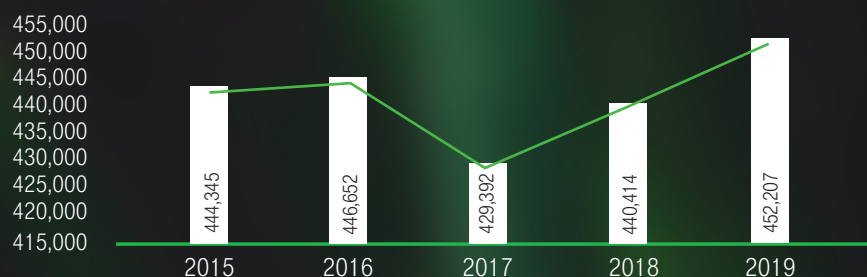
Balance of Discharged Wastewater

Wastewater from the Jaslovské Bohunice site is discharged via the pipe drainage collector SOCOMAN and the open canal Manivier within the meaning of applicable decision No. OU-TT-OSŽP2-2013/00026/GI issued by the District Office in Trnava on 24 October 2013. This permission is valid till 31 October 2023.

Within the meaning of the applicable decision, JAVYS, a. s., is not obliged to measure quantity and quality of rainfall water discharged from JAVYS, a. s., into the Dudváh river recipient.

There was no case of exceeding the limit values of indicators for pollutants in wastewater discharged into the Váh river recipient during the monitored period.

Amounts of Wastewater Discharged into the Váh River Recipient during the Period from 2015 to 2019 (m³)



Average Chemical Pollution Concentration Discharged into the Váh River Recipient

Chemical pollution indicators	Average concentration of discharged pollution (for the year 2019)	Maximum permitted concentration (decision No. OU-TT-OSŽP2-2013/00026/GI)
	mg/l	mg/l
Acidity, alkalinity – pH	7.888	9.00
Biochem. oxygen consumption – BOC ₅	1.582	8.00
Chem. oxygen consumpt. – CHOC _{Cr}	10.167	30.00
Insoluble substances – IS	15.000	20.00
Soluble substances – SS	356.472	1,000.00
Ammonia – N-NH ₄ ⁺	1.035	4.00
Nitrates – NO ₃ ⁻	18.756	50.00
Sulphates – SO ₄ ²⁻	24.122	150.00
Chlorides – Cl	16.564	100.00
Extracted non-polar substan. – ENS	0.021	0.35
Total phosphates – P _{total}	0.424	2.00
Iron – Fe	0.244	2.00
Detergents – PAL	0.082	0.50

Mochovce NRWR Site

A rainwater sewage system is installed on the NRWR site that is emptied into the creek Telinsky potok via rainwater tanks.

The Chief Public Health Officer of the Slovak Republic issued a permission to JAVYS, a. s., included in his decision No. 00ZPŽ/6573/2011 specifying also the guiding values of activities in discharged water from the surface drainage from the Mochovce NRWR. Decision No. 2015/040759 – the permission to discharge water from the surface drainage into the surface flow of the creek Telinsky potok, was issued by the District Office in Nitra, the Environment Care Department.

In the year 2019, 2,270 m³ of water were discharged from the NRWR surface drainage into the creek Telinsky potok. Sanitary water amounting to 300 m³ was accumulated in a waterproof cesspool on the NRWR site and removed to the wastewater treatment plant for purification.

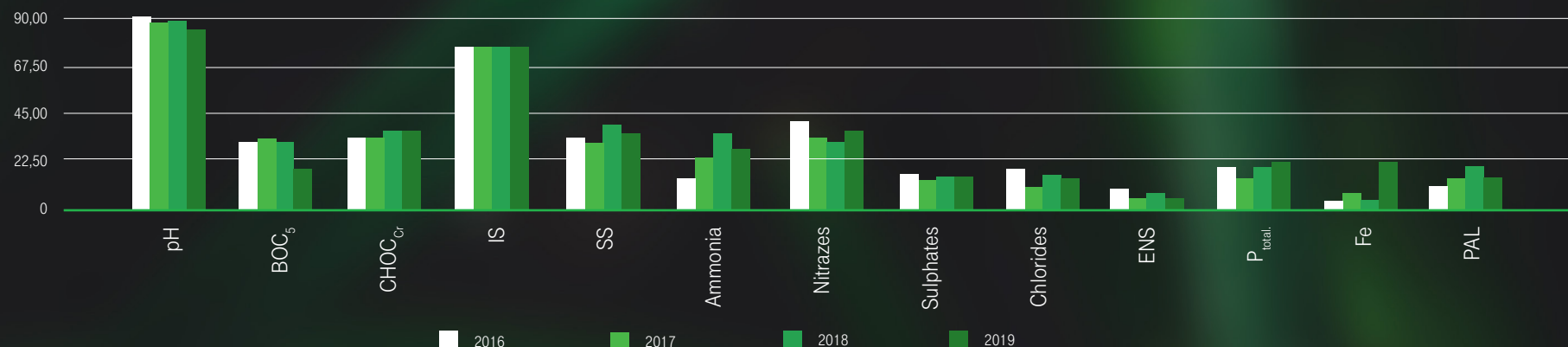
Mochovce FP LRW Site

Sanitary water from the FP LRW is drained into the SE-EMO sewage system, it is taken from there into the wastewater treatment plant and, following the purification, it is discharged into the environment along with SE-EMO waters.

Amounts of rainwater are calculated from the total FP LRW roof surface and the average annual rainfall (1.7 mm/day). The rainwater is also drained into the SE-EMO rainwater sewage system along with rainfall waters from other SE-EMO buildings. The rainwater is captured in retention tanks and, after being measured, it is discharged into the environment.

The sanitary water and rainwater drainage is provided by Slovenské elektrárne, a. s.

Use of Limits for Individual Pollutants in Discharged Wastewaters during the Period from 2016 to 2019 (%)



Discharges of Radioactive Substances into the Hydrosphere

Fractures of percentage of the permitted limits for liquid discharges are only discharged from the JAVYS, a. s., nuclear facilities into the surrounding environment after multiple control measurements. The objective of the limit values for discharges is to ensure that the effective dose per capita caused by the discharges of radioactive substances from the JAVYS, a. s., Jaslovské Bohunice nuclear facility into the atmosphere and hydrosphere does not exceed 32 $\mu\text{Sv}/\text{year}$, the same from the FP LRW nuclear facility does not exceed 10 $\mu\text{Sv}/\text{year}$ and the same from the NRWR nuclear facilities does not exceed 20 $\mu\text{Sv}/\text{year}$.

Guiding limits for radioactive discharges into the surface water are established for each JAVYS, a. s., nuclear facilities (RW PTT, A1 NPP, ISFS, V1 NPP, NRWR, FP LRW). These limits were set up by decisions of the Public Health Authority of the Slovak Republic and they are approved by the Nuclear Regulatory Authority of the Slovak Republic.

The control of discharged activities contained in wastewater is carried out by means of measuring volumetric activities of tritium, corrosive and fission products, and of water amounts stored in collection tanks of RW PTT, A1 NPP, ISFS and V1 NPP, while water discharges are also checked by means of continuous monitoring in measurement locations. Low-level waters also include the water discharged due to the standard operation of the groundwater remediation pumping system from well N-3 (SO 106) for which the permission was issued by the District Office in Trnava within the meaning of Act No. 364/2004, Coll., on Waters.

Low-level Water Discharges from the Jaslovské Bohunice Site (including the Water Coming from the Remediation Pumping from the RW PTT and A1 NPP Sites) into the Váh River Recipient

2019	Activities of radionuclides in wastewaters of the Váh river recipient							
	V1 NPP, ISFS Site				A1 NPP, RW PTT Site			
Volume of discharged water (m ³)	6,459				192,349			
	CFP (MBq)	Tritium (GBq)	% of the guiding limit CFP*	% of the guiding limit ³ H*	CFP (MBq)	Tritium (GBq)	% of the guiding limit CFP**	% of the guiding limit ³ H**
Total	16.141	11.239	0.124	0.562	15.433	92.823	0.129	0.928

* guiding limit for CFP: 13,000 MBq; guiding limit for tritium: 2,000 GBq

** guiding limit for CFP: 12,000 MBq; guiding limit for tritium: 10,000 GBq

The Dudvák River Recipient - Low-level Water Discharges

No low-level water was discharged into the river Dudvák recipient in 2019.

Active Discharges into the Hydrosphere from NRWR and FP LRW

Surface drainage water is only discharged from NRWR. Limits of indicators for the discharged water were not exceeded during the monitored period. The measured values (³H, ⁶⁰Co, ¹³⁷Cs, ⁹⁰Sr, ²³⁹⁺²⁴⁰Pu) moved around the levels of the detection limits. The volume of 2,270 m³ of water containing the total activity of 6.247×10^6 Bq was discharged into the hydrosphere, i.e. into the creek Telinský potok.

The following table shows the percentage assessment of total activities for individual radionuclides in the volume of 2,270 m³ discharged from the surface drainage in relation to the Technical Specifications. Volumetric activity limits for radionuclides in the discharged water specified in the decision of the Chief Public Health Officer were not exceeded for any of the indicators during the monitored period.

Data on Quality of Rainfall Wastewater Discharged from NRWR

Radionuclide	Activity of Discharges (Bq)	Annual Guiding limit (Bq)	% of Guiding Limit
³ H	5.68×10^6	1.88×10^{10}	0.030
¹³⁷ Cs	6.60×10^4	2.28×10^7	0.286
⁶⁰ Co	6.40×10^4	2.24×10^7	0.174
⁹⁰ Sr	4.25×10^5	2.44×10^8	0.289
²³⁹⁺²⁴⁰ Pu	1.20×10^4	5.56×10^5	2.143

Two kinds of secondary active liquid waste are produced in the FP LRW facility. These active media (wastewater, waste vapours - bride condensate) are not discharged into the environment (active discharges). They are accumulated in tanks and pumped from there into the SE-EMO system for further processing, or they are returned to the FP LRW operation, respectively, and treated as LRW. No liquid wastes were pumped through to SE-EMO in the year 2019, they were treated by the FP LRW.

Groundwater Monitoring and Protection

Jaslovské Bohunice Site

The monitoring and protection of groundwater and soil water on the Jaslovské Bohunice site and in its surroundings has been carried out since 1997 in accordance with the approved monitoring program. The radiation situation in the groundwater under RW PTT and A1 NPP sites, monitored in the long term and regularly, is currently stabilized. The continuous remediation pumping system has been in operation on the site since 2000.

Activities are carried out under the A1 NPP decommissioning project based on which primary soil contamination sources were gradually removed and, subsequently, the same was implemented for groundwater contamination sources. The remediation pumping system operation was performed in accordance with Decisions of the Ministry of Environment of the Slovak Republic No. R-AR 05/2013 of 2 May 2013 and No. R-AR 3292/2019 (of 29 April 2019) on the approval of the final report including the risk analysis for the contaminated territory.

Based on the requirement to prepare report updates every 6 years submitted by the Ministry of Environment of the Slovak Republic, the “Partial Final Report with the Risk Analysis Update for the Contaminated Territory for the Year 2017” was sent to the Ministry of Environment of the Slovak Republic, the Geology and Natural Resources Section, on 18 June 2018. The Report approval proceedings before the Commission for the Review and Approval of Final Reports with the Risk Analysis for the Contaminated Territories were held on 29 November 2018. The Report was finished within the meaning of comments given by opposers and of the Minutes of 50th session of the Commission for the Review and Approval of Final Reports with the Risk Analysis for the Contaminated Territories No. 66062/2018 and sent to the Ministry of Environment of the Slovak Republic on 30 January 2019 where it was approved by Decision No. R-AR 3292/2019 on the Approval of the Final Report with the Risk Analysis for the Contaminated Territory.

Evaluation of the Standard Operation of the Groundwater Remediation Pumping System from Well N-3 in the Year 2019

Remediation pumping 2019	CFP activity draw away MBq	Use of guiding limit for CFP* %	Tritium activity drawn away GBq	Use of guiding limit for ³ H* %	Water volume drawn away (m ³)
Total	1.61	0.013	64.24	0.642	188,448

* Use of Guiding Limit“ values are determined by the decision as follows:
– the guiding limit for CFP = 1.2×10^4 MBq
– the guiding limit for ³H = 1.0×10^4 GBq

In addition to the monitoring inside the company site, the monitoring of the surroundings is performed as well. Based on the groundwater monitoring results in the surroundings of the Jaslovské Bohunice site, it is possible to observe significant improvements in the radiation situation (the decrease in the level of tritium volumetric activities as low as an insignificant level achieving the natural background level) in the surroundings of Malženice and Žlkovce municipalities.

Mochovce NRWR Site

There is a total of 56 monitoring wells (groundwater) on the NRWR site and in its near surroundings, from which samples were taken according to the applicable schedule for the year 2019 and, subsequently, their chemical and radiochemical analyses were performed.

In addition to the groundwater monitoring, drainage water is also monitored at the NRWR facility where, in the year 2019, volumetric activities of individual radionuclides were below the limit specified by the Chief Health Officer of the Slovak Republic in Decision No. 00ZPŽ/6573/2011.

Drainage waters were discharged via rainwater tanks, both their amounts and analyses are included in sections dedicated to discharged waters.

Results of Chemical and Radiochemical Analyses of Waters in the Year 2019

Measured Quantity	Activity level (Bq/l)
³ H	< 5
Total beta activity	< 1
¹³⁷ Cs	< 1.25
⁶⁰ Co	< 0.87
⁹⁰ Sr	< 0.13
²³⁹ Pu	< 0.01

Results of radiochemical measurements are on the background level and during the operation no negative impacts on the environment occurred on the NRWR site and in its surroundings.

Extraordinary Events in the Water Management System Area

In the year 2019, no event was identified in the water management system area, according to definitions specified by Act No. 364/2004, Coll., on Waters.

04

WASTE MANAGEMENT SYSTEM (NON-ACTIVE WASTE)

In the year 2019, JAVYS, a. s., complied with the basic legal regulation in the waste management system field (non-active waste) – the Act of the National Council of the Slovak Republic No. 79/2015, Coll., on Wastes, as amended, and with all related acts and executive ordinances, as amended.

The waste management is provided within the company by means of collection, sorting and accumulation in premises reserved for those purposes – the Waste Collection Yard. Wastes that can potentially endanger any of the environment components, or that must meet hygienic or safety requirements, respectively, are stored temporarily in appropriate technologically secured premises in order to avoid their negative impacts or threats to life and health of people, property and the environment.

The composition of produced wastes results directly and indirectly from activities related to the business of JAVYS, a. s.

For the purposes of collecting hazardous wastes within the waste producer premises prior to their further management, JAVYS, a. s., was granted the consent by the District Office in Trnava No. OU-TT-OSZP3-2016/018193/ŠSOH/Du, in force till 17 June 2021. In the year 2019, wastes were produced in JAVYS, a. s., in categories of Other Waste (O) and Hazardous Waste (H) according to the Catalogue of Wastes - the Ordinance of the Ministry of Environment of SR No. 365/2015 Coll., on Municipal and Biodegradable Wastes.

Balance of Wastes Produced off BIDSF Projects

The disposal and recovery of wastes produced during activities that are not implemented by means of BIDSF projects come within the scope of JAVYS, a. s., competence. In case of contractor activities, the disposal and recovery of such wastes are ensured, based on a contract with the relevant contractor.

Amounts and Kinds of Other Wastes Produced in JAVYS, a.s., off BIDSF Projects on the Jaslovské Bohunice Site in the Year 2019

Catalogue number	Waste kind	Name of other waste	Amount(t)	Recovered (t)	Disposed (t)
150101	O	Paper and paperboard packaging	19.180	✓	
150102	O	Plastic packaging - PET bottles	1.620	✓	
160214	O	Discarded equipment other than those indicated under 160209 – 160213	5.080	✓	
170201	O	Wood	5.500	✓	
160605	O	Other batteries and accumulators	0.200	✓	
170904	O	Mixed wastes from constructions and demolitions	7.780		✓
170604	O	Insulation materials other than those indicated under 170601-03	34.380		✓
190809	O	Fat and oil blends from oil separators from water containing edible oils and fats	9.000	✓	
Total amount (t)			82.74	40.58	42.16
Total amount (%)			100 %	49.05 %	50.95 %

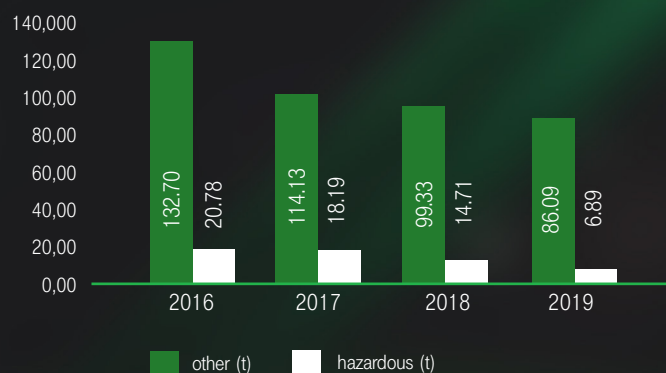
Amounts and Kinds of Hazardous Waste Produced in JAVYS, a.s., off BIDSF Projects on the Jaslovské Bohunice Site in the Year 2019

Catalogue number	Waste kind	Name of hazardous waste	Amount (t)	Recovered (t)	Disposed (t)
090104	H	Fixing agent solutions	0.520		✓
130208	H	Other motor, transmission lubrication oils	1.100	✓	
060204	H	Sodium hydroxide and potassium hydroxide	0.720		✓
191206	H	Wood containing hazardous substances	0.420	✓	
180108	H	Cytotoxic and cytostatic medicines	0.040		✓
080409	H	Discarded glues and sealing mat. cont.organic solvents or other hazard. substances	0.680		✓
150110	H	Packaging containing especially hazard. subst. contaminated by hazard. substances	0.380	✓	
150202	H	Absorbents, filtering mat. incl. oil filters, cleaning cloths contam. by hazard.substances	0.080	✓	
160213	H	Discarded equip. cont. danger. parts other than those ind. under 160209 - 160212	0.380	✓	
160506	H	Laboratory chemicals consisting of hazard. subst., containing hazardous substances	0.160		✓
160507	H	Discarded inorganic chemicals cons. of hazard. subst., containing hazard. subst.	0.140		✓
160601	H	Lead-acid batteries	0.300	✓	
160602	H	Nickel-cadmium batteries	0.428	✓	
080317	H	Waste toner for printers containing hazardous substances	0.040		✓
080111	H	Discarded paints and lacquers, cont. organic solvents or other hazardous substances	0.520		✓
200121	H	Fluorescent lamps and other waste containing mercury	0.804	✓	
170503	H	Earth and stone aggregates, containing hazardous substances	0.160	✓	
Total amount (t)			6.872	4.052	2.820
Total amount (%)			100 %	58.96 %	41.04 %

Amounts and Kinds of Other and Hazardous Wastes Produced in JAVYS, a.s., off BIDSF Projects on the Mochovce NRWR Site in the Year 2019

Catalogue number	Waste kind	Name of other waste	Amount (t)	Recovered (t)	Disposed (t)
200301	O	Mixed municipal waste	3.320		✓
Total amount (t)			3.320	0	3.320
Total amount (%)			100 %	0 %	100 %
Catalogue number	Waste kind	Name of other waste	Amount (t)	Recovered (t)	Disposed (t)
080111	H	Waste paints and lacquers cont. organic solvents or other hazard. substances	0.012		✓
150202	H	Absorbents, filtering mater., incl. oil filters	0.007	✓	
Total amount (t)			0.019	0.007	0.012
Total amount (%)			100 %	36.84 %	63.16 %

Production of Other and Hazardous Wastes on the J. Bohunice and Mochovce NRWR Sites off BIDSF Projects during the Years 2016 to 2019



Balance of Wastes Produced during BIDSF Projects

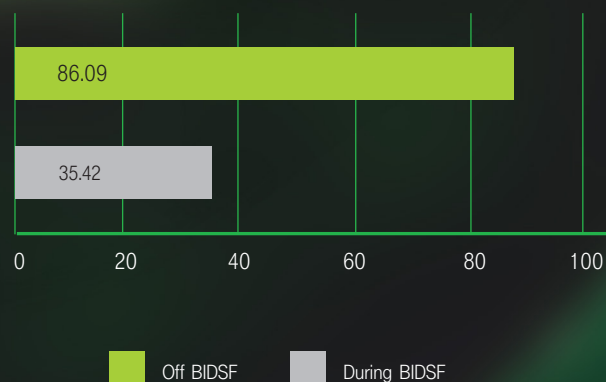
D4.1, D4.2, D4.4B and D4.4A projects were implemented by the JAVYS, a. s., within the V1 NPP decommissioning projects in the year 2019. The projects are a part of 2nd stage of the V1 NPP decommissioning which implements the V1 NPP Jaslovské Bohunice Decommissioning Strategy, based on the Decision of the Government of the Slovak Republic on the ultimate Bohunice V1 NPP shutdown of September 1999.

During the implementation of the mentioned projects, other wastes were produced that were recovered and disposed by contractors and subcontractors of individual project suppliers.

Amounts and Kinds of Other Wastes Produced in JAVYS, a. s., during BIDSF Projects in the Year 2019

Catalogue number	Waste kind	Name of other waste	Amount (t)	Recovered (t)	Disposed (t)
170201	O	Wood – BIDSF D4.1 project	2.840	✓	
150101	O	Paper and cardboard packaging – BIDSF D4.1 project	0.380	✓	
170203	O	Plastics – BIDSF A5-A3 project	13.140		✓
170203	O	Plastics – BIDSF A5-A2 project	6.860		✓
170904	O	Mixed wastes – BIDSF D4.1 project	4.440		✓
170904	O	Mixed wastes – BIDSF D4.2 project	1.620		✓
170043	O	Lead seals from reactor coolant system – BIDSF D4.2 project	4.020	✓	
200201	O	Biodegradable waste – BIDSF D4.1 project	2.120	✓	
Total amount (t)			35.42	9.36	26.06
Total amount (%)			100 %	26.43 %	73.57 %

Comparison of Amounts of Other Wastes from the Points of View of BIDSF Projects and Own Production in the Year 2019 (t)



Balance of Municipal and Biodegradable Wastes

The collection, removal and further management of municipal and biodegradable wastes are ensured contractually so that all requirements for the waste disposal or recovery are met, in compliance with requirements specified by the Act on Wastes No. 79/2015, Coll., as amended.

Amounts of Municipal and Biodegradable Wastes Produced in JAVYS, a. s., on the Jaslovské Bohunice Site in the Year 2019

Catalogue number	Waste kind	Waste name	Amount (t)	Recovered (t)	Disposed (t)
200301	O	Mixed municipal wastes	37.700		✓
200201	O	Biodegradable wastes	9.080	✓	
Total amount (t)			46.780	9.080	37.700
Total amount (%)			100 %	19.41%	80.59 %

In addition to wastes, recoverable metallic materials usable in metallic materials recovery facilities are especially produced during the decommissioning of nuclear facilities.

Amounts and Composition of Kinds of Materials Removed From the Site in the Year 2019

Recoverable material	Weight (t)
1 Thin Fe < 6 mm	1,199.02
2 Reinforcements of concrete structures	386.62
3 Stainless steel	124.76
4 Al content > 99.5 %	21.16
5 Other Al	0
6 Cu content > 99.5 %	7.20
7 Large-sized materials (1 – 10 t)	0
8 Other Cu (multi-component materials)	8.84
Total	1,747.6

05

SERIOUS INDUSTRIAL ACCIDENTS

JAVYS, a. s., complies with the basic legal regulation in the area of prevention of serious industrial accidents – the Act of the National Council of the Slovak Republic No. 128/2015, Coll., on Prevention of Serious Industrial Accidents and on Amendments of Certain Acts, as well as with all regulations related directly or indirectly to the Act.

JAVYS, a. s., is not included in categories “A” or “B”, within the meaning of the Act No. 128/2015, Coll., based on quantities and characteristics of hazardous substances present on the Jaslovské Bohunice site.

Nevertheless, the company is obliged to continue the regular monitoring of quantities, fire characteristics and kinds of hazardous substances present in the premises of the company and, in case that a need to change the company categorization is identified, to send a new notification to the District Office in the seat of the region.

The application “Management of Chemical Substances” (MCHS) is used to monitor the management of hazardous chemical substances. The application includes a code list of all chemical substances and mixtures purchased and used within the company and of those brought into JAVYS, a. s., premises by contractors and tenants as well. All the chemical substances and mixtures are categorized according to the Chemical Act, the Act on Waters and the Act on Prevention of Serious Industrial Accidents. “Safety Data Sheets” are accessible to staff members in this application for each chemical substance or mixture.

06

ENVIRONMENTAL IMPACT ASSESSMENT

Requirements specified by the Act of the National Council of the Slovak Republic No. 24/2006, Coll., on Environmental Impact Assessment and on Amendments to Certain Acts, as amended, are applied in the field of environmental impact assessment. They are implemented into the internal guideline BZ/OŽ/SM-04 Environmental Impact Assessment (EIA).

Environmental Impact Assessment Processes

Examination proceedings

In the year 2019, examination proceedings were performed for the following activities:

1. BIDSF D4.7 „V1 NPP Decommissioning – Stage 2 – Modification of Planned Final System of Buildings within the Framework of D4.7 Project Implementation“,
2. Optimization of incineration capacities in the RW PTT nuclear facility on the Jaslovské Bohunice Site.

Compulsory Assessment

In the year 2018, the compulsory assessment process was commenced in compliance with the Act No. 24/2006, Coll., for the proposed activity “Optimization of Processing Capacities in the JAVYS, a. s., RW PTT on the Jaslovské Bohunice Site”. In the year 2019, an intention was submitted to the Ministry of Environment of the Slovak Republic in relation to the proposed activity, the Report on Environmental Impact Assessment for the proposed activity was prepared on the basis of the determined scope of assessment and, subsequently, two public hearings were held in relation to the Assessment Report. The process of environmental impact assessment for the proposed activity has not been completed in the year 2019.

Activities Performed during the Authorisation Proceedings of Assessed Activities

The implementation and operation of activities that were assessed in compliance with the Act on Environmental Impact Assessment is only possible on condition that compliance is demonstrated between the implementation of the activities and the final position resulting from the assessment process or the decision issued during the examination proceedings. The compliance is demonstrated by way of preparing a written evaluation of conditions specified in the final position by the Ministry of Environment of the Slovak Republic, or of conditions specified in the decision issued during the examination proceedings, respectively, and by attaching it to the application for permission. During the year 2019, written evaluations were prepared in relation to the meeting of conditions specified in final positions to the following permission proceedings:

1. Expansion of the National RAW Repository in Mochovce for the Disposal of Low-Level Radioactive Waste and Construction of Very-Low-Level Radioactive Waste Disposal Facility”, within the framework of „3rd Double-Row of the Low-Level Radioactive Waste Disposal Facility” project implementation.
2. BIDSF D4.1 „Modification of the Power Plant and Installation of New Equipment”
3. BIDSF D4.2 „Dismantling of Reactor Coolant System Large Components”

Post-Project Analysis

In connection with the implementation of assessed activities, it is the obligation of the company to carry out post-project analyses whose procedure and monitoring plans have been transformed into the internal documentation for the Jaslovské Bohunice and Mochovce sites.

Based on the task included in letter by the Nuclear Regulatory Authority of the Slovak Republic No. 2019/06516, the complete material „Post-Project Analyses for the Year 2018” was submitted to the Authority for all of the assessed JAVYS, a. s., activities in the year 2019. The material consisted of a table part, a text part interpreting selected parameters and ways of their monitoring and evaluation of conditions specified in final positions for individual proposed activities.

It follows from the results of the post-project analyses and evaluations of meeting the conditions specified in final positions of the Ministry of Environment of the Slovak Republic to individual permissions that JAVYS, a. s., performs all the assessed activities in accordance with the Act on Environmental Impact Assessment and with decisions issued under this Act.

In the year 2019, the separate document „Post-Project Analyses for JAVYS, a. s., RW PTT on the Jaslovské Bohunice Site for the period from 2015 to 2018” for the periodical review of nuclear safety for activities performed within RW PTT nuclear facility.

07

ENVIRONMENTAL MANAGEMENT SYSTEM

By maintaining the certified environmental management system in accordance with standard ISO 14001:2015 “Environmental Management Systems”, JAVYS, a. s., performed all its activities with regard to environmental protection in the year 2019.

Both the functionality and implementation of that system was verified by the independent certification company Det Norske Veritas from 11 to 13 November 2019 and, within the framework of the overall recertification ISM audit, DNV company repeatedly confirmed the validity of the internationally accepted certificate for JAVYS, a. s.

Within the process approach, the environmental protection is regularly inspected and verified by means of internal IMS audits during which the application of environmental management system requirements is verified as well. Minor findings resulted from the audits that were removed in specified time periods and within the meaning of recommendations defined in IMS audit reports. No non-conformances were identified during the performance of those audits.

ABBREVIATIONS

APS	Air pollution source
As	Arsenic
Bq	Bequerel
BIDSF	Bohunice International Decommissioning Support Fund - V1 NPP
BL	Bituminization line
BRWTC	Bohunice Radioactive Waste Treatment Centre
C _{org}	Organic carbon
Cd	Cadmium
CFP	Corrosion and fission products
CO	Carbon monoxide
CO ₂	Carbon dioxide
Co	Cobalt
Cr	Chrome
Cs	Caesium
CS	Civil structure
Cu	Copper
CRAM	Captured radioactive materials
DG	Diesel generator
DO	District Office
E	Environment
EIA	Environmental impact assessment
EU	European Union
FCC	Fibre concrete container
FCCP	Fibre concrete container production
FCM	Fibre concrete mixture
Fe	Iron (Ferrum)
FP LRW	Final Processing of Liquid Radioactive Waste
GBq	Gigabequerel
³ H	Tritium
Hg	Mercury
HCl	Hydrogen chloride
HF	Hydrogen fluoride
HP	Hazardous parts
HS	Hazardous substance
IRAW	Institutional radioactive waste
ISFS	Interim Spent Fuel Storage
IRWS	Interim Radioactive Waste Storage

JAVYS, a. s.	Jadrová a vyraďovacia spoločnosť, j.s.c.
MBq	Megabequerel
MCHS	Management of chemical substances
Mn	Manganese
MPD	Main Production Building
MW	Megawatt
Ni	Nickel
NO _x	Oxides of nitrogen
NPR	National Pollution Register
NRA SR	Nuclear Regulatory Authority of the Slovak Republic
NRWR	National Radioactive Waste Repository
OB	Outdoor buildings
OS	Organic solvents
Pb	Lead
P _{Total}	Total phosphorus
PHA SR	Public Health Authority of the Slovak Republic
Pu	Plutonium
RAW	Radioactive waste
RW PTT	Radioactive Waste Processing and Treatment Technologies
RBP	Reserve Boiler Plant
SE-EBO	Slovenské elektrárne, j.s.c., Bohunice Nuclear Power Plant
SE-EMO	Slovenské elektrárne, j.s.c., Mochovce Nuclear Power Plant
SEI	Slovak Environmental Inspectorate
SF ₆	Sulphur hexafluoride
SHI	Slovak Hydrometeorological Institute
SIA	Serious industrial accidents
SNF	Spent nuclear fuel
SO ₂	Sulphur dioxide
SP	Solid pollutants
Sr	Strontium
SRBP	Start-up and Reserve Boiler Plant
TAVOS, a. s.	Trnavská vodárenská spoločnosť, a. s. (Trnava Water Management Company, j.s.c.)
TI	Tellurium
TS	Technical Specifications (Limits and Conditions for Safe Operation)
VLLW	Very-low-level radioactive waste
VS	Ventilation stack



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