



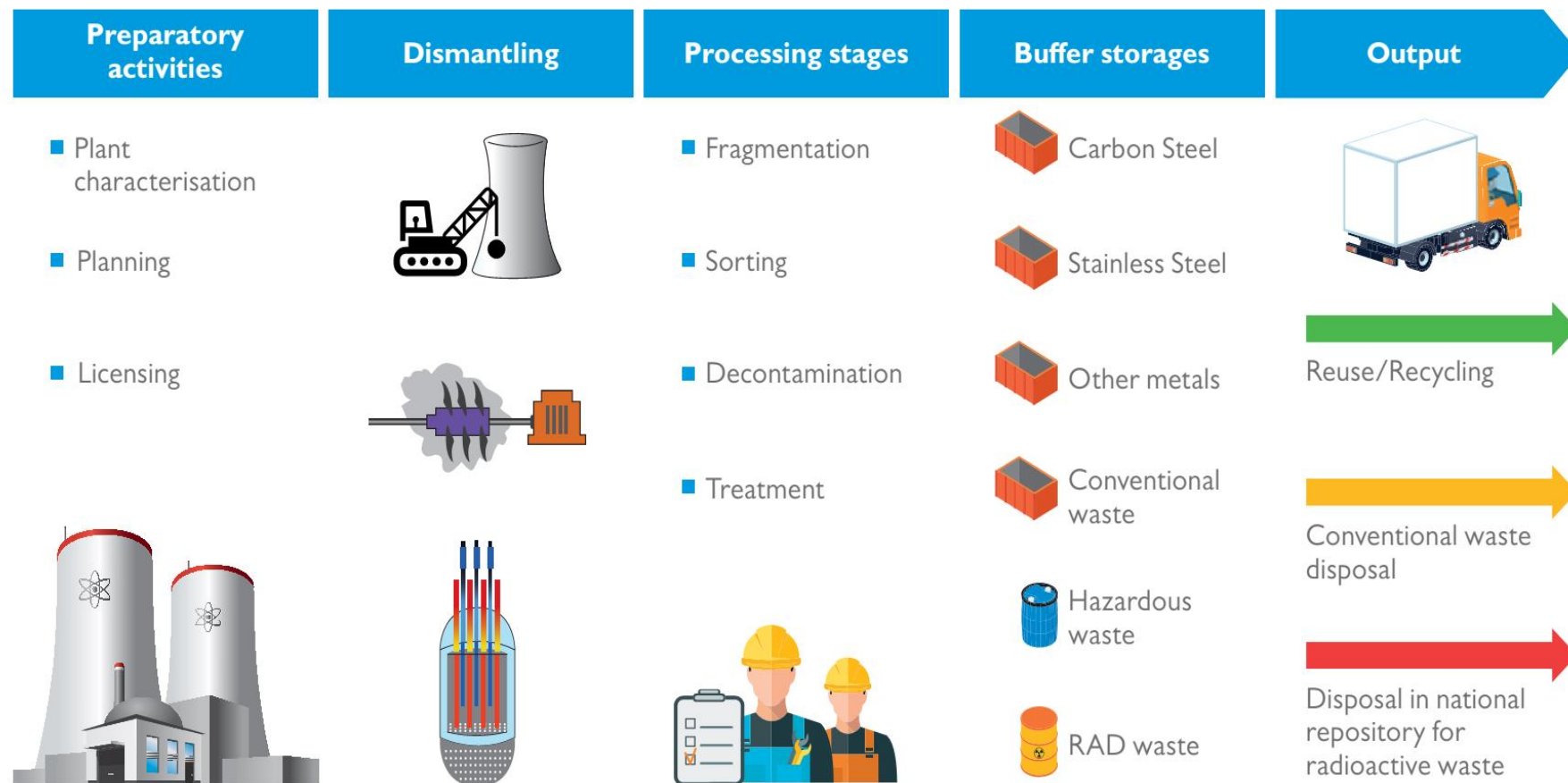
Material Logistics in V1 NPP Decommissioning Lessons Learnt

Ing. Eva Hrašnová

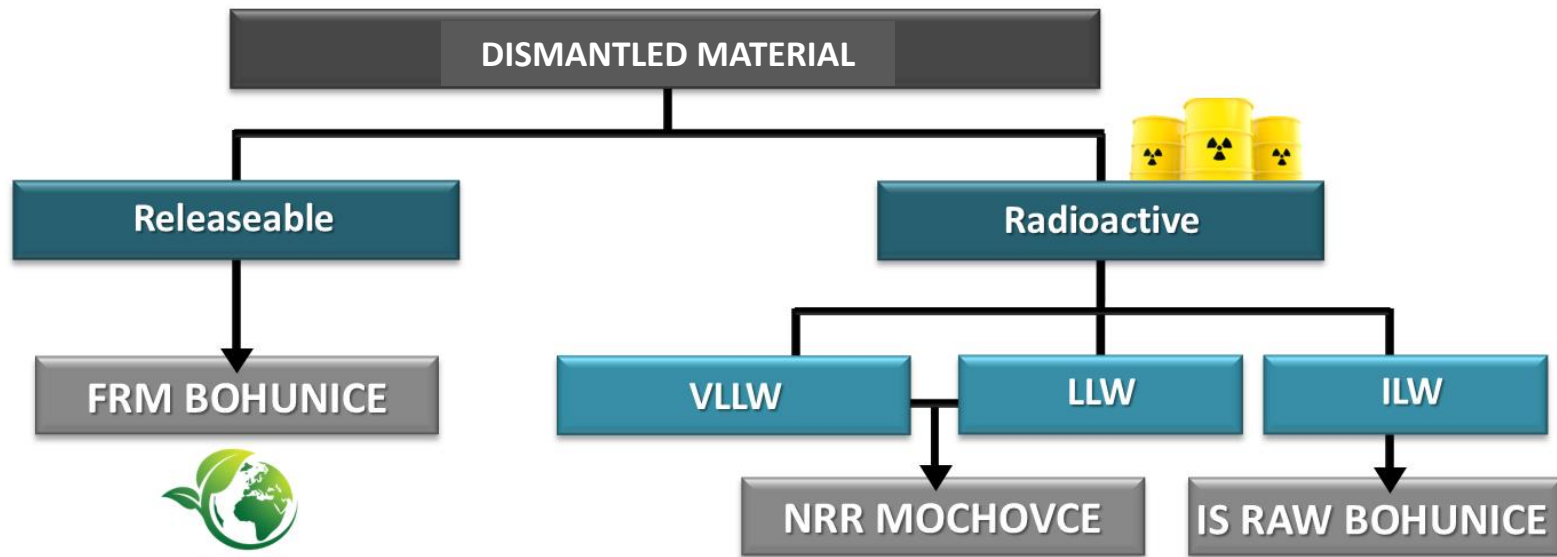
***Production Unit Facilities Dismantling Department
Decommissioning Realization Section***

Eastern and Central European Decommissioning
Trnava, 26 June 2019

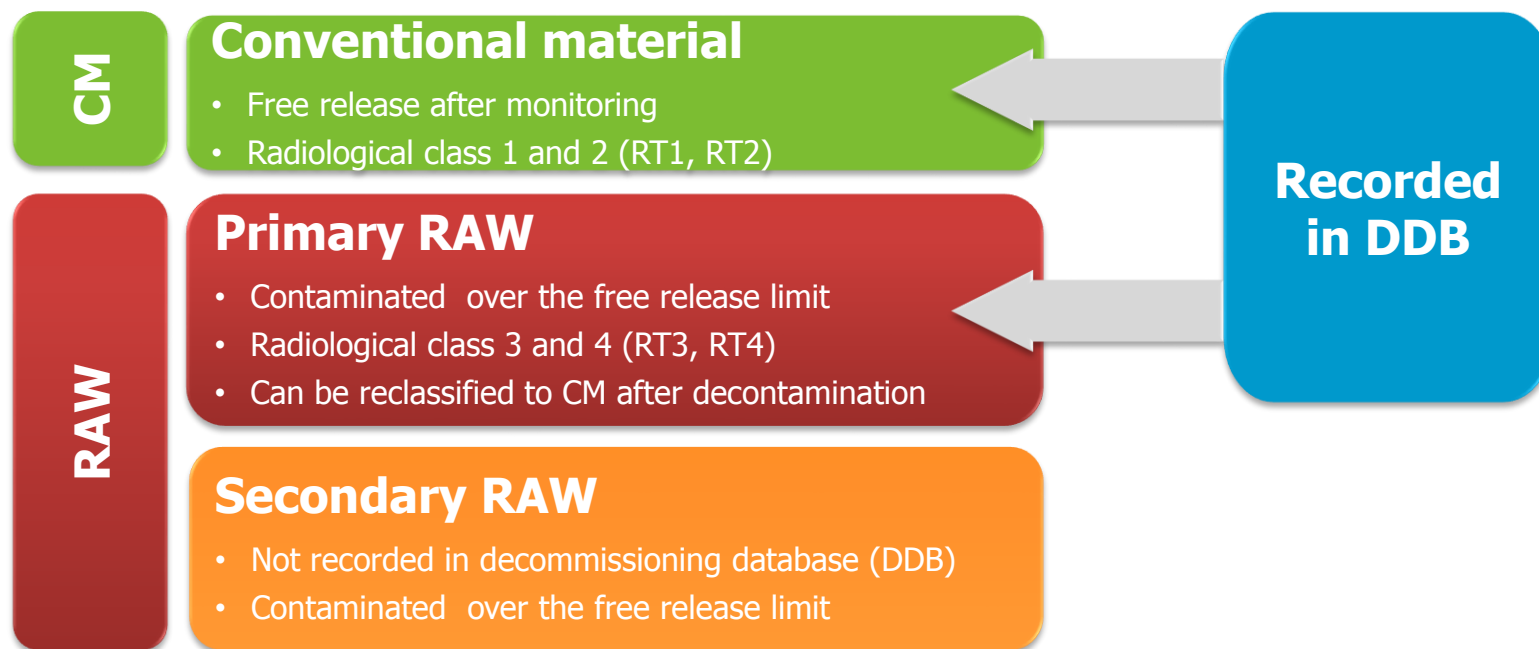
Solution scheme



V1 NPP Decommissioning Material Final Destination

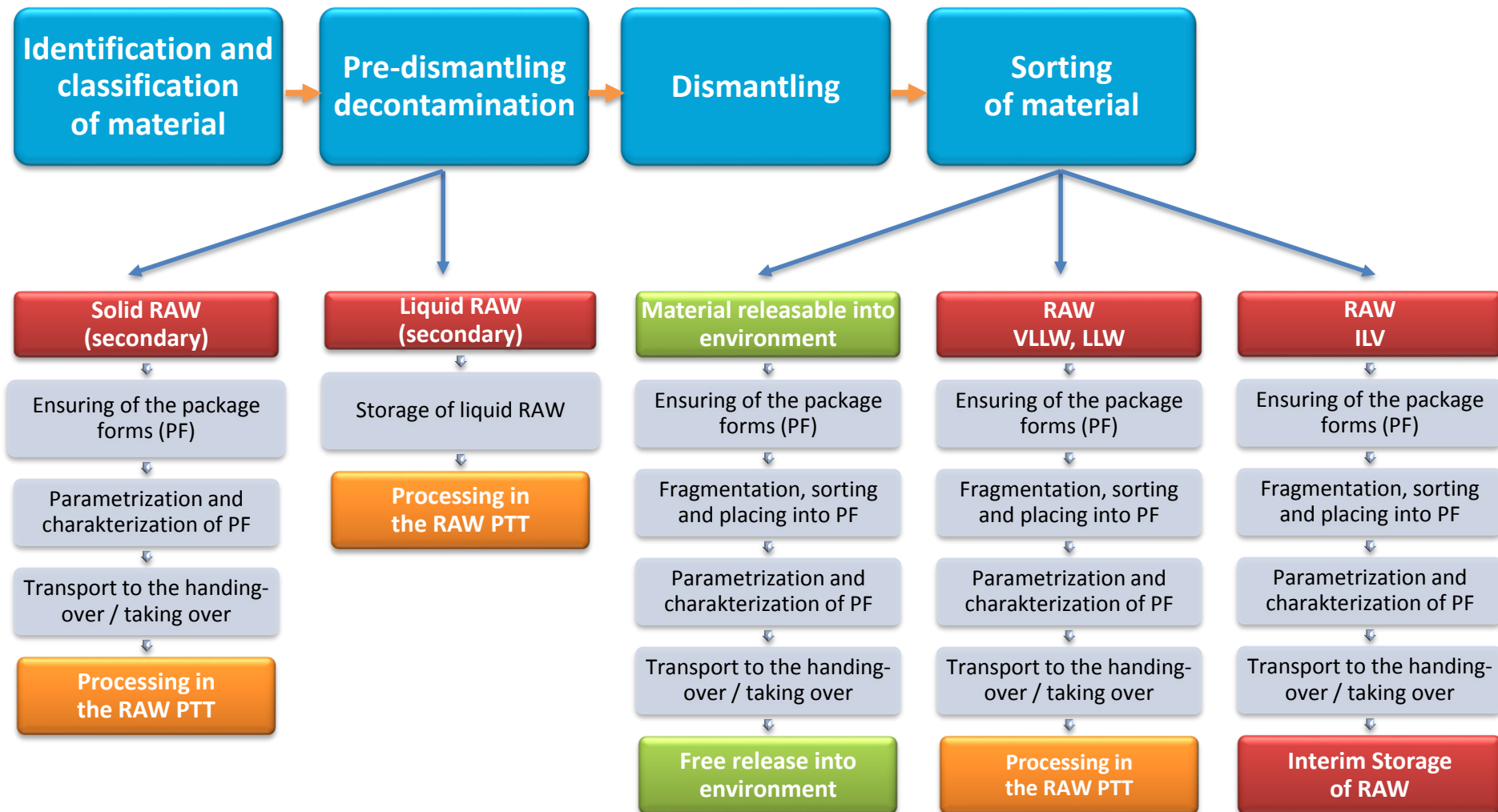


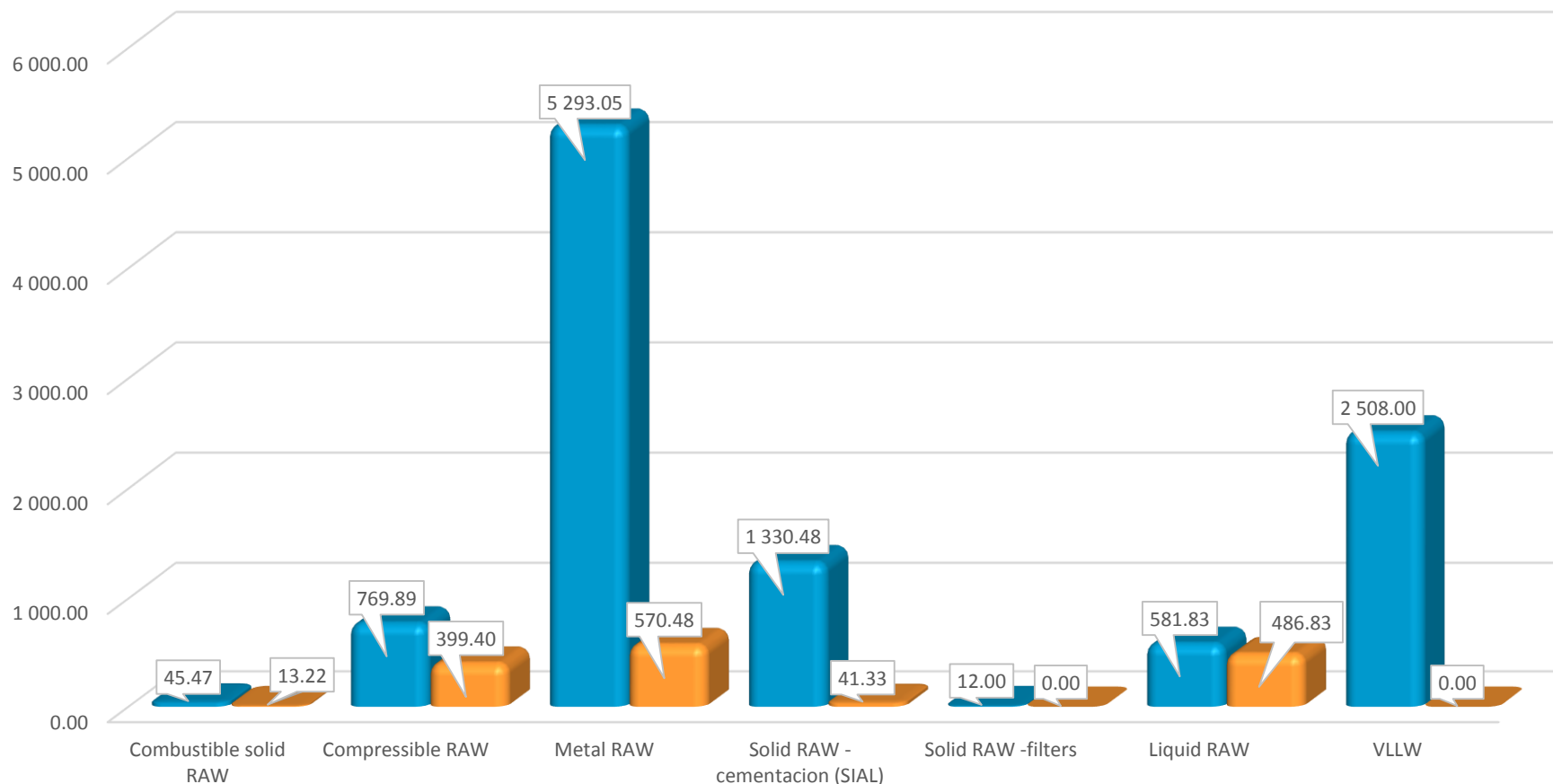
V1 NPP Decommissioning material classification (produced in controlled area)



Radiological classification (RT) must be monitored and specified before implementation of works

Schematic diagram of RAW management from decommissioning





■ Volume of Planned Safely Conditioned Waste

■ Volume of Achieved Safely Conditioned Waste (05/2019)



Recording of decommissioning material in INTEGRATED COMPUTER SYSTEM FOR V1 NPP decommissioning logistic SYSTEM (SAP C15-A)

Filling of logical unit (package form)

System Nápoved'

Kokpit - RAO

Informácie LJ

Status: Uvoľnená

Pracovisko: SK036/1

V1 - KP - Objekt 801:V1 - SK036/1

Druh obalu: 004

200 l sudy MEVA

Materiál: VLO1

Drobný feritický kov a jeho zliatiny, (d

Hmotnosť: 124,00

Objem: 0,221

Odh.mn.: 124,00

Hm. net.: 0,00

Výber LJ

ID Logickej Jednotky: 1000015724

ID OS RAO: JEV0220VL19

ID Obalu/Karty:

Zobrazenie

Zmena LJ

Zobrazenie obsahu LJ

RAO čaká

Presun LJ

História pôvodu mat.

Nasledovné LJ

Údaje

Ozn. urč. koef. RAO: P-VTL V-1

Už. popis: Ježkovia PG

Popis RAO: D4.2-NJF-Ježkovia PG

Balená forma:

Kategória RAO: PRAO

Názov projektu: D4.2

KC/JC: -

Poznámka RAO: Aktivitné hodnoty v bode č. 10 sprievodného listu RAO v obale na základe výpočtu!

Majoritný parameter: 1 Hmotnosť - kg

Dátum RAO ID: 30.01.2019

Pôvodca RAO: V1

VBK:

Prev. stav: VYRAD Vyrad'ovanie

Pôvod odpadu: P Primárny

Evidenčné číslo prepravy:

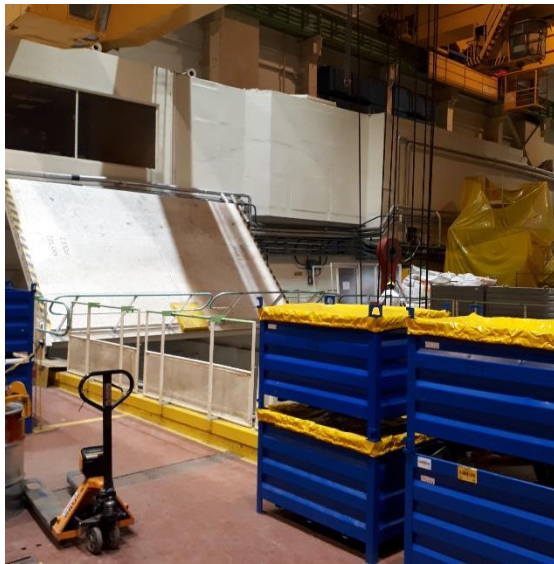
Dátum prepravy:

Dopočítať podľa vzorca Doplniť hmotnosť a objem

Rádio.parameter	Hodnota	ZMJ	Dátum	Čas
BIODEG. LÁTKY	NEOBSAHUJE			00:00:00
DAVKOVY_PRIKON	1.5			00:00:00
EXPLOZÍVNE LÁT	NEOBSAHUJE			00:00:00
HMOTNOST	124.00			00:00:00
KOMPLEXOTVORNÉ	NEOBSAHUJE			00:00:00
OBJEM	0.221			00:00:00
POV_KONT	0.25			00:00:00
PYROFOR. LÁTKY	NEOBSAHUJE			00:00:00
SUM_AKT_ALFA	3,51E+01			00:00:00
SUM_AKT_BETAGA	1,72E+05			00:00:00
TOXICKÉ LÁTKY	NEOBSAHUJE			00:00:00
VODA V TRANS.	NEOBSAHUJE			00:00:00
VOĽNÉ KVAPALIN	NEOBSAHUJE			00:00:00
VÝŠKA-SUD	820			00:00:00

Podiel zariadení

Identification of logical unit (package form)



Detailed Planning before dismantling works is a must Procurement of needed package forms

Σ of production/produkcia	20236		
Σ of package forms per months/ obalových súborov za mesiac		139	339
Peak production/Maximálna produkcia za mesiac	778		

Σ of 200 L drums production/produkcia 200 L sudov	3198		
Σ of drums per months/sudov za mesiac		6	41
Peak production/Maximálna produkcia za mesiac	156		

Σ of 2EM-01 production/produkcia 2EM-01	72		
Σ of 2EM-01 per months/2EM-01 za mesiac		0	0
Peak production/Maximálna produkcia za mesiac	2		

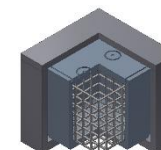
Σ of box pallets production/produkcia ohradových paliet	13015		
Σ of box pallets per months/ohradových paliet za mesiac		102	135
Peak production/Maximálna produkcia za mesiac	566		

Σ of big-bags production/produkcia big bagov	3715		
Σ of big-bags per months/big bagov za mesiac		31	163
Peak production/Maximálna produkcia za mesiac	350		

Σ of FCC production/produkcia VBK	236		
Σ of FCC per months/VBK za mesiac		0	0
Peak production/Maximálna produkcia za mesiac	16		

Containers for fision chambers/Kontajnery pre štiepne komory	14	0	0
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Container UKTIIA-130 for IBN-9 neutron source/Kontajner IBN-9 neutrónový zdroj	1	0	0
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Removal of potential bottleneck: increasing of free release capacities



Removal of potential bottleneck: new characterization capacities in V1 NPP



**RAW characterization workplace in SK231,
CB 801:V1**



**RAW characterization workplace in R215,
CB 800:V1, RoboCount 2020**

Initial inventory is for planning purposes and basic setting of decommissioning processes.
Sampling and characterization before and during dismantling is essential for real material flow adjustment.



Sampling of surface of steamgenerator



Sampling of reactor protection lid



Core drilling of covers
in reactor hall

Dismantling plan has to include the new transportation openings
Opening of ceiling above the pressurizer
Purpose: not to influence other parallel dismantling works



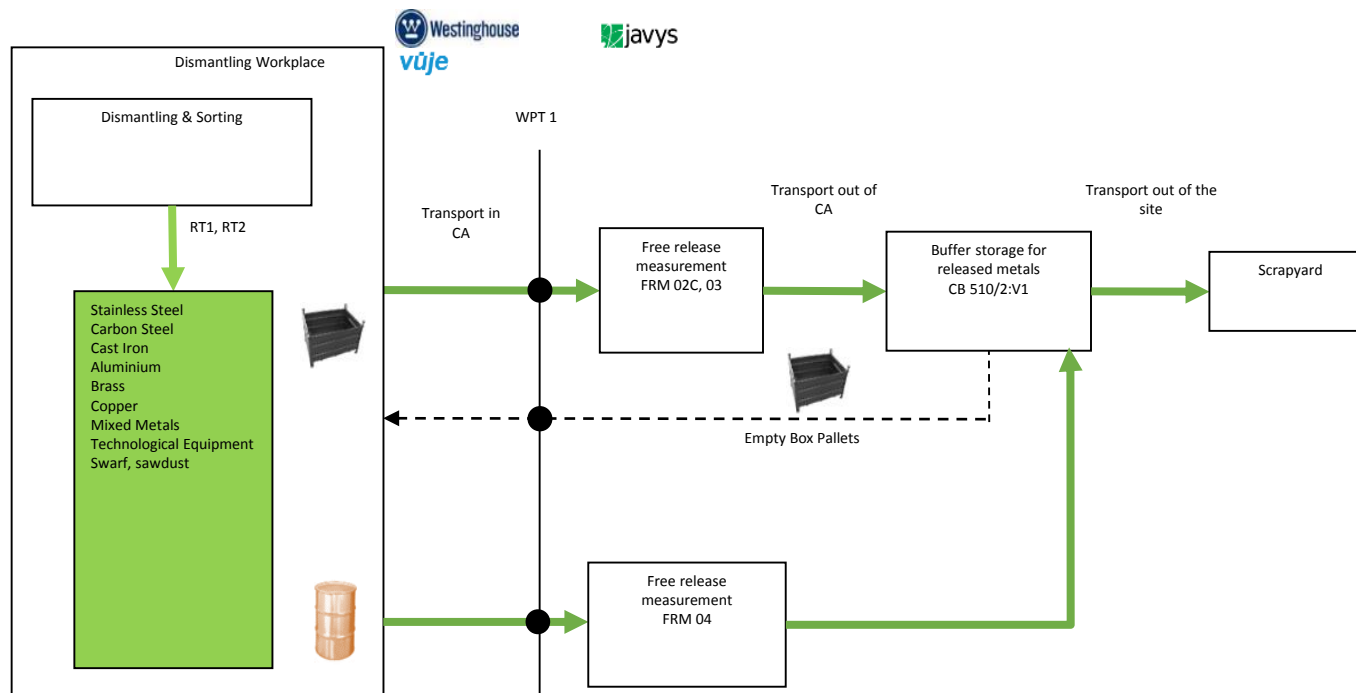
**Dismantling plan has to include the new transportation openings
Opening of covers to transport steamgenerators**



Precise distribution of responsibilities for material handling activities.

**Pay attention to the detailed definitions of the interface
customer / contractor**

Schematic Diagram of Clearable Metallic Waste Stream Management

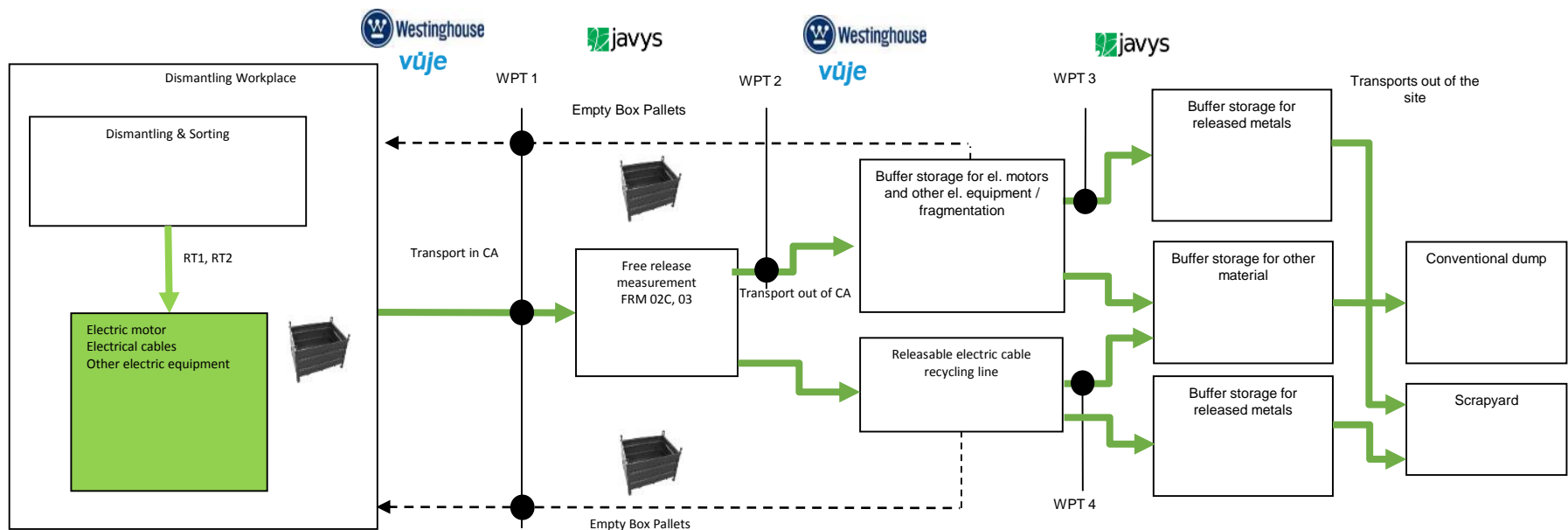


WPT – Waste Package Takeover – point in waste management where the waste packages are handed over by the Contractor and directly taken over by the Employer (or vice versa) for certain waste management activities according to determined responsibilities

Precise distribution of responsibilities for material handling activities.

**Pay attention to the detailed definitions of the interface
customer / contractor**

Schematic Diagram of Clearable Electrical and I&C Equipment Waste Stream Management

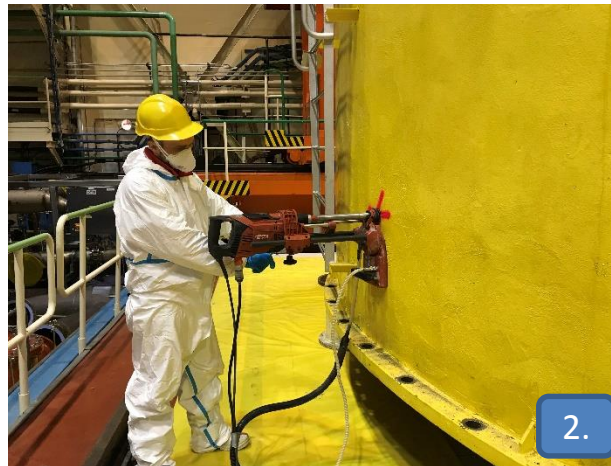
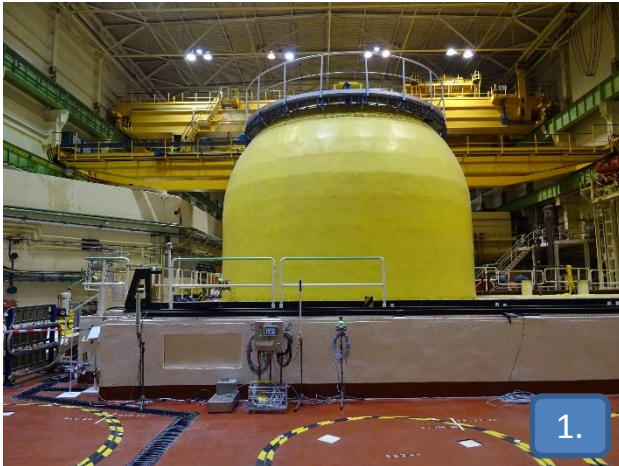


WPT – Waste Package Takeover – point in waste management where the waste packages are handed over by the Contractor and directly taken over by the Employer (or vice versa) for certain waste management activities according to determined responsibilities

Free release of large components: Universal traverse, Concrete container, Reactor protection lid



Reactor protection lid – free release



sampling



Fragmentation with diamond wire



100% surface monitoring



Free release

Smooth removal of disassembled material from transport routes = safety condition for dismantling personnel.

Management with concrete blocks out from reactor hall (decontamination in SO490)



PARALLEL dismantling work requires separate workplaces with conditions for safe work



Workplace with ventilation and air supply

PARALLEL dismantling work requires separate workplaces with conditions for safe work and immediate handling of dismantled material

Dismantling
of [Thermal Insulation](#)
of Reactor Pressure Vessel,
Unit I





Thank you for your attention

