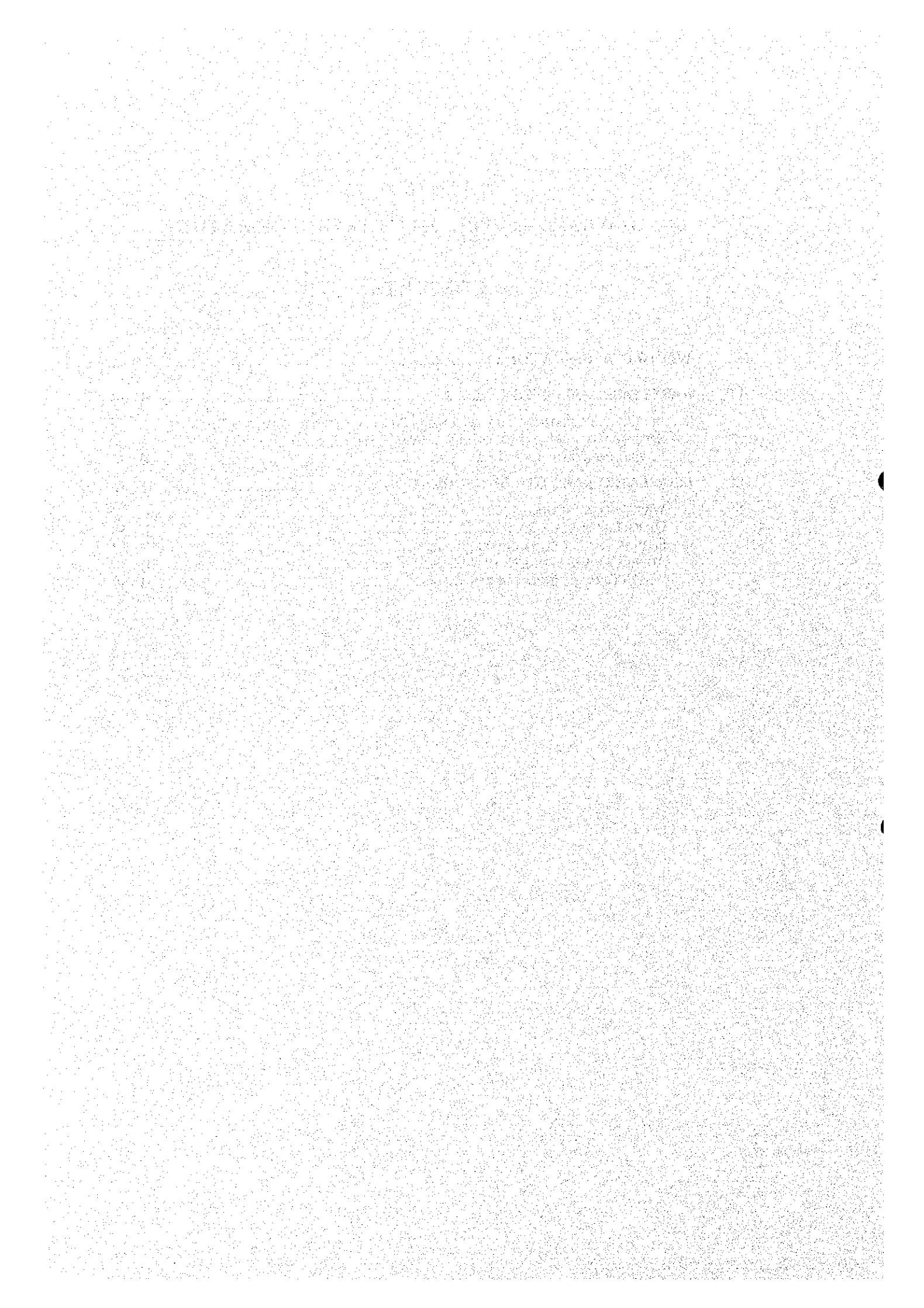


ANNEX H
SOLID WASTE – SUPPLEMENTARY INFORMATION

CONTENTS

H.1	WASTE CLASSIFICATION	H - 1
H.2	WASTE DISPOSAL SITES	H - 14
	1. REGISTER OF EXISTING OLD ENVIRONMENTAL LOADS (WASTE DISPOSAL SITES).....	H - 14
	2. SPECIFIC ENVIRONMENTAL HISTORICAL WASTE SITES AND ASSOCIATED ENVIRONMENTAL ISSUES.....	H - 14
H.3	LEGISLATION AND OTHER INFORMATION	H - 37
	1. WASTE LEGISLATION	H - 37
	2. OTHER LEGISLATION.....	H - 37
	3. SLOVAK TECHNICAL STANDARDS.....	H - 38
	4. ADDRESSES AND PHONE NUMBERS.....	H - 38
	5. WASTE TERMS – ENGLISH AND SLOVAK	H - 39



H.1 WASTE CLASSIFICATION

Table H.1-1 contains information on the classification of waste materials in Slovakia. This includes the three main categories of waste, namely:

- Hazardous;
- Special;
- Other Waste.

Each category contains a range of waste types, which are then further divided into sub-types of waste. This gives a very comprehensive range of waste types, but as a result there is considerable potential for misunderstanding for producers when completing waste statistics forms, due to the similarity of certain sub-types of waste.

Table H.1-1: Slovakian Waste Categories

Kód odpadu	Názov odpadu	Kategória odpadu	Type of Waste
1	nadskupiny 9)		waste from vegetables and animals
11	sprac.tukov a z hosp. zvierat)		waste from foods, meals and feeds
111	Odpad z potravín		waste from foods
11102	poškodeným obalom	O-other	food after warranted time , food with damaged packing
11103	Otruby, plevy, plievky, obilný prach	O	tailings , chaff
11104	Zvyšky obilia a zrnín	O	remainders from grains and corn
11107	Kal z výroby octu	O	sludge from acelfication
11108	Zvyšky z výroby konzerv	O	rest from cannery production
11109	Zvyšky z výroby zmrzliny	O	rest from ice-cream production
11110	Zvyšky melasy	O	rest from molasses
11111	Zvyšky múky, cesta, pečiva a chleba	O	flour, bread rest
11112	Repné odrezky a strojky	O	beet slices
11113	Kal z výroby cukru	O	sludge from sugar production
11114	Zvyšky z arašidov, hrachu, sóje a ďalších strukovín	O	rest from peanuts, peas soya beans and other legumes
11115	Zvyšky z výroby potravinových koncentrátov	O	rest from production of food concentrate
11116	Potravinový mikrobiálne a inak chýbné	N - hazardous	microbional food and food with other defects
114	Odpad z pochutín		waste from meals
11401	Pochutiny po záručnej lehote	O	meals after warranted time
11402	Tabakový prach, stonky a časti listov, drvina, kal	O	tabacco dust, parts of leaf , sludge and drillings
11403	Chýbné šarže cigariet	O	defected cigarettes
11404	Sladové mláto, sladové klicy, sladový prach, kvet	O	malty dust, malt residue, flower
11405	Chmelové mláto	O	hooter residue
11406	Odpad z čistenia jačmena, splavky z jačmena	O	waste from barley cleaning , rest from barley
11407	Ovocné výpalky	O	fruits stillage
11408	Obilné výpalky	O	corn stillage
11409	Zemiakové výpalky	O	potatos stillage
11410	Sulfitové výpalky	O	sulphit stillage
11411	Mladinový kal	O	thicket sludge
11412	Pivovarský kal	O	brewary sludge
11413	Kal z výroby vína	O	sludge from vine production
11414	Kal z výroby liehovín	O	sludge from distillates production
11415	Výlisky, kôstky, šupky, dren a podobné zvyšky	O	rapes, cores, skins, and other rest
11416	Zvyšky zo spracovania kávy	O	rest from coffee processing
11417	Zvyšky zo spracovania čaju	O	rest from tea processing
11418	Zvyšky zo spracovania kakaa	O	rest from cacao processing
11419	Zvyšky kvasníc a podobný odpad	O	rest from yeast and similar waste
11420	Kondenzát z tabakového dymu	N	condensate from tabacco dust
11421	Vyplachovacie a pracie vody znečistené škodlivinami	N	rinsing and washing water polluted by deleterious substance
11422	Zvyšky korenia	O	rest from spice
11423	Odpad z výroby pochutín a prísad do pečiva	O	waste from meals production and flavourings
11424	Odpad z výroby chutových a vonných látok	O	waste from production of taste and smell substances
11425	Odpad z výroby etylvanilínu	O	waste from production of ethylvanilin
11426	Potravinárske kaly znečistené škodlivinami	N	food sludge polluted by deleterious substances
117	Odpad z krmív		waste from feeds
11701	Odpad z krmív rastlinného pôvodu	O	waste from vegetable feeds
11702	Odpad krmív živočíšneho pôvodu	Z - special	waste from animal feeds
11703	Silážne a senážne šťavy	Z	silage juice
12	Odpad z rastlinných a zo živočíšnych tukových produktov		waste from vegetable and animal oil products
121	Odpad z rastlinných a zo živočíšnych olejov		waste from vegetable oil and animal oil
12101	Výlisky z olejných semien	O	rapes from oil seed
12102	Odpadové rastlinné oleje	Z	waste vegetable oils
12103	Odpadové éterické oleje (silice)	O	waste volatile oil
12104	Odpadový lecitín	O	waste lecithine
123	Odpad rastlinných a živočíšnych tukov a voskov		waste from vegetable and animal oils and waxes
12301	Odpadové vosky	O	waste waxes
12302	Odpadové tuky znečistené škodlivinami	O	waste oil polluted by deleterious substances
12303	Zvyšky mazadiel na ťahanie drôtov	Z	rest of greases
12304	Zvyšky mastných kyselín	Z	rest from grease acid
12305	bifenylní	N	waste oil polluted by polychloridizing bifenylní
125	Emulzie a zmesi z výroby rastlinných a živočíšnych tukov		emulzion and mixing from production of vegetables and animals oils
12501	Obsah odlučovačov tukov	Z	content of oil separators
12502	Odpad zo spracovania mlieka	O	waste from milk processing
12503	Odpadové olejové, tukové a voskové emulzie	Z	waste oil, fat and wax emulsion
12504	Odpadové masové vývary	O	waste from meat
126	Odpad výrobkov z rastlinných olejov		waste from products with vegetable oils
12601	Mazacie a hydraulické oleje (okrem minerálnych olejov)	Z	hydraulic oil (besides mineral oil)
127	Kal z výroby rastlinných a živočíšnych tukov		sludge from production of vegetable and animal oil
12702	Kal z výroby pokrmových tukov	O	sludge from production of edible fat
12703	Kal z výroby pokrmových olejov	O	sludge from production of edible oil
12704	Kal z odstredieviek mlieka	Z	sludge from milk whizzer
129	Odpad z rafinácie rastlinných a živočíšnych tukov		waste from refining of animal and vegetable oil
12901	Odpadová bieliaca hlinka	Z	waste whitening colouring earth
13	Odpad z chovu, zo zabíjania a spracovania zvierat		waste from processing, breeding and killing of animal
131	Odpad zo zabíjania a spracovania		waste from killing and processing

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
13101	Chĺpy, šteliny, rohy, kopytá	Z	hairs, horns, hoof
13102	Koší a zvyšky kože	Z	bones and rest of skin
13103	Odpadové vnútornosti	N	waste entrails
13104	Odpad z hydiny	Z	waste from poultry
13105	Odpad z rýb	Z	waste from fishes
13106	Odpadová krv	Z	waste bloods
13107	Odpadové perie	Z	feather waste
13108	Obsah zaúdkov a ciev	N	contents from stomach
13109	Odpad zo zveriny	Z	waste from game
13110	Nespracovateľný odpad z mäsa	Z	non-processing waste from meat
13111	Odpad z vajecných škrupín	Z	waste from eggs
13112	Iný odpad z výroby mäsových výrobkov	N	other waste from meat production
13113	Odpad z vajec a empy	N	waste from eggs and embryo
13114	Odpadová krv infekčná	N	waste blood - infected
134	Ťelá zvierat		animal bodies
13401	zvieratá (kadavery)	N	dead, killed, animals
13402	Pokusné zvieratá uhynulé a zmrámené	N	experimental animal - dead
13403	nákazového hľadiska	N	all bodies of animal harmful for health
13404	Čelá telá zvierat a casti tel zvierat	Z	all bodies of animal and parts of bodies
137	Zvieracie fekálie		animal cesspits
13701	Hydinový trus	Z	poultry trus
13702	Hnojovica z chovu ošípaných	Z	liquide manure from pig breeding
13703	Hnojovica z chovu hovädzieho dobytká	Z	liquide manure from beef cattle breeding
13704	Hnojovica z chovu iných zvierat	Z	liquide manure from breeding of other animals
13706	Infekčný hnoj, trus a hnojovica	N	infection manure, trus and liquid manure
14	Odpad z kozí, koziek a usní		waste from leathers, skins and hides
141	Odpad z kozí, koziek a usní		waste from leathers, skins and hides
14101	Odrezy z kože	Z	leather cuttings
14102	Odpad z lúhovania	N	waste from liming
14103	(lázy)	N	waste from degreasing containing solvent (withour liquid)
14104	Garbiarska brecka s obsahom chrómu	N	slip with Cr contain
14105	Garbiarska brecka bez obsahu chrómu	Z	slip withouth Cr contain
14106	Kaľy s obsahom chrómu	N	sludge with Cr contain
14107	prach z brúsenia	N	waste from leather tinnig with Cr contains (cuttings, dust from grinding)
14108	Odpad z prípravy a finalizácie kozí	O	waste from preparation and finalisation of leather
14109	Iný odpad z kozí, koziek a usní	Z	other waste from leathers, skins and hides
15	Rastlinný odpad		vegetal waste
153	Casti rastlín		parts of plants
15301	Zvyšky rastlín	O	plants leavings
15302	Listie z ovocných drevín a viniča hroznorodého	O	leaf from fruits woods and vinegrape
15303	Struky z bôbovítých rastlín	O	legumes from plants
15304	Vnat a buriny	O	hulm and weed
155	Znehodnotené produkty		dead production
15501	Skladovaním znehodnotené rastlinné produkty	Z	dead vegetal proucts caused by storing
15502	Zvyšky rastlín a osiv znečistené škodlivosťami	N	plants leaving and seed polluted by harmful materials
159	Iný rastlinný odpad		other vegetable waste
15901	Chrastie	O	small firewood, loose sticks
15902	Iný rastlinný odpad	O	other vegetable waste
17	Odpad z dreva		waste from woods
171	Odpad z dreva		waste from woods
17101	Kóra, haluzina	O	coretex, brushwood
17102	Odrezy, triesky	O	cuttings, beards
17103	Pílidy, hobliny znečistené škodlivosťami	O	granule, chips polluted by pollutants
17104	Prach a kaľ z brúsenia dreva	O	dust and sludge from wood grinding
17105	Kaľ a odpad z výroby drevovláknitých dosák bez spojiva	O	sludge and waste from production of binder without surfacing
17106	Kaľ a odpad z výroby drevovláknitých dosák so spojivom	Z	sludge and waste from production of binder with surfacing
17107	Korkový odpad vrátane drviny	O	cork waste including frass
17108	Odpad z drevotrieskových dosák bez povrchovej úpravy	O	waste from wood beards without surfacing
17109	Odpad z drevotrieskových dosák s povrchovou úpravou	Z	waste from wood beards with surfacing
172	Odpad z dreva z oblasti jeho použitia		waste from wood from its using
17201	Odpadové obaly z dreva	O	waste packing from wood
17202	Odpadové stavebné drevo, drevo z demolácií	O	waste building wood, wood from demolition
17203	Odpadová drevená vlna	O	waste wooden cotton
17204	Odpadová sprievodnica a zvyšky výdrevy	Z	waste shaft and leavings of firing
17205	Drevené rošty z čistenia koksárenského plynu	Z	wooden grates from coke gas cleaning
17207	Železnice a banské podvaly	Z	railway and mining putlogs
17209	Koly a stĺpy	Z	plies and pillars
17210	Podvaly, koly a stĺpy znečistené škodlivosťami	N	putlogs, piles and pillars polluted by pollutants
17211	škodlivosťami	N	woody flour, granule and waste from wood polluted by oil
18	Odpad celulózy, papiera a lepenky		waste cellulose, paper and card board
181	Odpad z výroby celulózy		waste from cellulose production
18101	Kaľ z výroby celulózy	O	sludge from cellulose production
18102	Zvyšky z regenerácie chemikálií pri výrobe celulózy	Z	leavings from chemicals regeneration by cellulose production
184	Odpad zo spracovania celulózy		waste from cellulose processing
18401	Zvyšky z výroby papiera (výmety)	O	rest from paper production

Kód odpadu	Název odpadu	Kategória odpadu	Types of Waste
18402	Kal z výroby papiera	O	sludge from paper production
18403	Kal z výroby umelého hodvábu	N	sludge from production of artificial silk
18404	Kal z výroby celulóзовých vláknien	O	sludge from production of cellulose fibres
18405	Odpad z alkylcelulózy	O	waste from alkyl cellulose
18406	Odpad z alkalické celulózy	O	waste from alka cellulose
18407	Odpad z xantogenátu celulózy	N	waste from xantogenat of cellulose
18408	Odpad z viskózy	O	waste from viscose
18409	Odpad zo zvláknovania, zblanovania viskózy	N	waste from fibring , membraning of viscose
18410	Odpad zo spracovania viskóзовých fólií a vláknien	O	waste from processing viscose foils and fibres
187	Odpad z papiera a lepenky		waste from paper and cardboard
18701	Odrezy a zvyšky papiera a lepenky	O	cuttings and leavings from paper and cardboard
18702	Znečistená buničina	O	polluted cellulose
18703	Odpadový fotografický papier	N	waste photographic paper
18704	Odpadový voskový papier	O	waste wax paper
18705	bitúmenom	Z	waste asphalt cardboard and paper saturated by resin and bitumen
18706	Odpadový farebný papier, makulatúra, papierové štocky	O	waste color paper , maculature, papere
18707	Zberový papier	O	collection paper
18708	na spracovanie	O	other waste polluted paper, unsuitable for processing
18709	Papierové filtre nasýtené olejom	N	paper filters saturated by oil
18710	škodlivosťami	N	filter materials on the basis of paper and polluted cellulose
18714	Obalový materiál znečistený škodlivosťami	N	covering polluted material
19	z gúmy a textílií		other waste of animal and plant origin except waste from textil
199	rastl. produktov		other waste from processing and treating animal and plants products
19901	Škrobový kal	O	starchy sludge
19902	Kal z výroby želatíny	O	sludge from production of gelatin
19903	Odpad zo spracovania želatíny	O	waste from processing of gelatin
19904	Zvyšky z výroby zemiakového škrobu, drvina	O	leavings from production of potatoes starchy , crumb
19905	Zvyšky z výroby kukuričného škrobu	O	leavings from corn starchy
19906	Zvyšky z výroby ryžového škrobu	O	leavings from rice starchy
19907	Kal z výroby čnievkových strún	Z	sludge from production gut wire
19908	Mydlárske spodné lúhy	Z	soap down lyes
19909	Zvyšky z kotolní pri výrobe mydla a želatíny	Z	leavings from boiler room by soap and gelatine productions
19910	Kal z výroby mydla	Z	sludge from soap productions
19911	Odpad z čriev	Z	waste from guts
3	procesov		mineral waste including treating processes
31	Odpad minerálneho pôvodu (okrem kovového odpadu)		mineral waste except metal waste
311	hutn. a ži. sušie		waste from furnace inwalls, boilers, incinerators
31101	Hutnícka a žiakovarská suš	O	metallurgical and flow talus
31102	Črep kremenných teglikov	O	shatter of quartz crucibles
31105	Výmurovky z vykurovacích a zo spaľovacích zariadení	O	inwalls from heating, incinerating facilities
31106	Odpadový dolomit	O	waste dolomite
31107	Odpadový chróm-magnezit	O	waste chrom magnetite
31108	Odpad z pecí z metalurgických procesov	Z	waste from furnaces of metallurgical processes
31109	Odpad z pecí na výrobu skla, z keramiky a karbidov	Z	waste from furnaces for glass ceramic and carbid production
31110	škodlivosťami	N	inwalls from incinerating polluted
312	Hutnícke trosky, stery a prach		metallurgical scoria, drosses and dust
31202	Trosky z kuplových pecí	O	scorias from cupola furnaces
31203	Trosky z výroby nezelezných kovov	Z	scoriac from production of non-iron metals
31204	Olovené stery	N	Pb dross
31205	Stery ľahkých kovov s obsahom hliníka	N	dross of light metals with aluminium
31206	Stery ľahkých kovov s obsahom horčíka	N	dross of light metals with Mg
31207	Trosky z tavných elektrolyz	N	scorias from melting electrolyza
31208	Sintované oxidy železa	O	sintered oxigen of Fe
31209	Ferosiliková troska	O	Ferrosilic scorias
31210	Zinková troska	Z	zinc scorias
31211	Solné trosky s obsahom hliníka	N	salt scorias with aluminium
31212	Solné trosky s obsahom horčíka	N	salt scorias with Mg
31213	Cínový popol	Z	stannum ashes
31214	Olovený popol	N	aluminium ashes
31215	Prach z kychlových plynov	N	blast furnace dust from gas
31216	Prach z filtrov s obsahom železných kovov	Z	dust from filters with Fe metal content
31217	Prach z filtrov s obsahom nezelezných kovov	N	dust from filters with non-Fe metal content
31218	Elektropečná troska	Z	electric-furnacial scorias
31219	Vysokopečná troska	O	high-furnacial scorias
31220	Konvertorová troska	O	converted scorias
31221	Ostatná troska z výroby ocele	O	other scorias from steel production
31222	Ostatná troska z výroby ferózliatin	Z	other scorias from ferroalloys
313	Popol, troska, škvara, popolček a prach zo spaľovania		ashes, scorias, dust from incineration
31301	Popolček, prach a sadze	N	fly-ash, dust, smuts
31306	neznečistené škodlivosťami	O	ashes from wood incineration and polluted wood waste
31307	Škvara, troska a popol zo spaľovania uhlia, koksu	Z	cinder, scorias and ashes from coal and coke incineration
31308	Škvara, troska a popol zo spaľovní odpadu	N	cinder, scorias and ashes from waste incinerations
31315	Sadza z odsírovania plynov z energetických zariadení	Z	plaster from off sulfation of gas from energetics equipment
314	Iný tuhý minerálny odpad		other solid mineral waste
31401	Odpadová formovacia zmes s prírodným spojivom	O	waste forming mixture with natural connection

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
31402	Zvyšky abrazívnych hmôt	Z	leavings from abrasive materials
31403	Odpadový vápencový piesok	O	waste limestone sand
31404	Odpadová formovacia zmes so syntetickým spojivom	N	waste forming mixture with syntehtical connection
31405	Odpad sklenených vlákien	O	waste from glass fiber
31406	Odpadové sklo vhodné na ďalšie spracovanie	O	waste glass suitable for next processing
31407	Keramikový odpad neznečistený škodlivosťami	O	ceramic waste polluted by deleterious substance
31408	ďalšie spracovanie	O	waste glass not-polluted by deleterious substance, unsuitable from next processing
31409	škodlivosťami	O	construction talus and other construction waste polluted by deleterious substance
31410	Odpad z demolácií vozoviek neznečistený škodlivosťami	O	waste from demolition of roads not polluted by deleterious substance
31411	Azbestocementový kusový odpad	Z	asbest-cement partial waste
31412	Prach z azbestocementu	N	dust from asbestocement
31413	Hlušina a keramika	O	tailings and earthenware
31414	Odpadový šamot	O	waste chamotte
31415	Odpadová formovacia hĺna	O	waste forming clay
31417	Odpad z aktívneho uhlia	O	waste from active coal
31418	Prach z kamena, obrusný prach	O	dust from stone and grinding dust
31419	Prach z úpravy trosky	Z	dust from scoops adaptation
31420	Zvyšky plniacich sadzí	O	leavings of filling smut
31421	Uhľový prach	O	coal dust
31422	Kýzové výpalky	O	pyrite dust
31423	Zemina znečistená ropnými látkami	N	soil polluted by oil materials
31424	Iné znečistené zeminy	N	other polluted soils
31426	Úlomky betónu znečistené škodlivosťami	N	parts from concrete polluted by deleterious substance
31427	Úlomky betónu neznečistené škodlivosťami	O	parts from concrete not polluted by deleterious substance
31428	Použitie materiály na zachytávanie olejov	N	using materials for oil catching
31429	Grafitový odpad znečistený škodlivosťami	N	graphit waste polluted by deleterious substance
31430	Odpad z minerálnych vlákien znečistený škodlivosťami	N	waste from mineral fibres polluted by deleterious substance
31431	Odpad z minerálnych vlákien neznečistený škodlivosťami	O	waste from mineral fibrew not polluted by deleterious substance
31432	Grafitový odpad, grafitové vlákna, prach	O	graphit waste, graphit fibres, dust
31433	Odpad skla a z keramiky znečistený škodlivosťami	N	waste from glass and ceramic polluted by deleterious substance
31434	c.škodlivosťami	O	waste filters , adsorption substances unpolluted by deleterious substances
31435	hmoty(kremelína,akt.hĺnky,uhlie)z nec.škodlivosťami	N	waste filters , adsorption substances polluted by deleterious substances
31436	Azbestový prach a vlákna	N	asbest dust and fibres
31437	Azbestový kusový odpad	Z	asbest partial waste
31438	Odpadová sadra	O	waste plaster
31439	Minerálne zvyšky z čistenia plynu	Z	mineral leavings from gas cleaning
31441	Stavebná sut a výkopová zemina znečistené škodlivosťami	N	construction talus and cutting earth polluted by deleterious substance
31442	Odpad z kyseliny kremickej a neznečistenej kremelíny	O	waste silica acid and unpolluted kieselguhr
31444	Odpadové brusivá	O	waste abrasive
31445	Odpadová sadra znečistená škodlivosťami	N	waste plaster polluted by deleterious substances
31446	škodlivosťami	N	waste from silica acid and kieselguhr polluted by deleterious substance
31448	Odpad z výroby stavebných hmôt	O	waste from production of construction materials
31449	Odpad z rekonštrukcií, opráv a modernizácií objektov	O	waste from reconstruction , repairs and restoration of objects
316	Minerálny kal		mineral sludge
31601	Kal z výroby betónu	O	sludge from concrete production
31602	Kal z brúsenia kamena	O	sludge from abrasion of stones
31603	Filtračný kal z výroby bieliacich hĺniiek	O	filtrated sludge from production of colouring earth
31604	Suspenzia ílu	O	suspension of clay
31605	Kal z výroby cementu	O	sludge from concrete production
31606	Kal z výroby vápnopieskových tehál	O	sludge from lime-sand brick
31607	Kal z výroby malty	O	sludge from mortary production
31608	Červený a hnedý kal (lúzenec)z výroby oxidu hĺlnika	N	red and brown sludge from aluminium dioxide production
31609	Azbestocementový kal	N	sludge from asbest-cement
31610	Smaltový kal, smaltovacia brecka	N	enamel sludge, enamel waste
31611	Grafitový kal	O	graphit sludge
31612	Vápnový kal	O	lime sludge
31613	Sadrový kal	O	plaster sludge
31614	Kal zo železiarní	Z	sludge from iron factory
31615	Kal z valcovní ocele	Z	sludge from steel factory
31616	Kal zo zlievární	Z	sludge from alloy factory
31617	Kal z brúsenia skla	O	sludge from glass drining
31618	Karbidový kal	Z	carbide sludge
31619	Kal z čistenia kychťových plynov	N	sludge from blust dust cleaning
31620	Sadrový kal znečistený škodlivosťami	N	plaster sludge polluted by deleterious substance
31621	Vápnový kal znečistený škodlivosťami	N	lime sludge polluted by deleterious substance
31622	Kal z oxidu horecnatého	O	sludge from magnesium dioxide
31623	Dikalciumpfosfátový kal	O	dicalcium phosphate sludge
31624	Kal z oxidov železa z redukčných procesov	O	sludge from Fe2 from reduction process
31625	Kal s obsahom zeminy a piesku	O	sludge containing earth and sand
31626	Kal z metalurgie nezelezných kovov	Z	sludge from metalurgy non-iron metals
31627	Kal z oxidu hĺlnikého	O	sludge from aluminium dioxide
31628	Kal z kaliami s obsahom kyanidov	N	sludge from sludge plant containing cyanid
31629	Kal z kaliami s obsahom dusičnanov a dusitanov	N	sludge from sludge plant containing trinitrate
31630	Kal z uhličitanu bárnatého	N	sludge from carbonate barium
31631	Kal zo síranu bárnatého	O	sludge from sulphate barium

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
31632	Kal zo spránu bárnateho s obsahom ortute	N	sludge from sulphate containing mercury
31633	Kal z brúsenia skla znečistený škodlivinami	N	polluted sludge from glass grinding
31634	Karbonatový kal (saturovaný)	O	carbonated sludge (saturated)
31635	Zemina z prania repy	O	ground from beet washing
31636	Kal z vrtov znečistený škodlivinami	N	polluted sludge from bores
31637	Fosfatizačný kal	Z	carbonated sludge (saturated)
31638	Kal zo sířičitanu vápenatého	Z	sludge from CaSO4
31639	škodlivinami	N	polluted sludge from other condensing and solving processes
31640	minerálných látok	Z	suspension of fillings and separated materials with share of solid minerals
31641	Kal z fluoridu vápenatého	O	sludge from fluorite calcareous
31642	Kal z čistenia kotlov	Z	sludge from boilers cleaning
31660	Kal z čistenia plynov a výstupných plynov	Z	sludge from cleaning gases and discharged gases
31661	neznečistený škodlivinami	O	sludge from CaSO4 - unpolluted
31662	Uhoľný kal	O	carbonaceous sludge
31663	Kal z vrtov neznečistený škodlivinami	O	unpolluted sludge from bores
35	Odpad s obsahom kovov		waste containing metals
351	Odpad zo železa a z ocele		waste from iron and steel
35101	Prach s obsahom železa	O	dust containing iron
35102	Okraje	O	
35103	využívané ako druh suroviny	O	iron scrap including vehicles and facilities determined for use as a secondary material
35104	Odpad z obrábania neznečistený škodlivinami	O	waste from cultivation
35106	škodlivinami	N	polluted iron scrap, metal pots and covers
35107	Odpadové olejové filtre	N	waste oil filters
35108	Okraje zaošľované	N	
35109	Odpad z obrábania znečistený škodlivinami	N	polluted waste from cultivation
353	Odpad z nezelezných kovov		waste from non-iron metals
35301	Odpad z obrábania znečistený škodlivinami	N	polluted waste from cultivation
35302	Odpad z olova, zliatiny, zličeniny	N	waste from lead, alloy compound
35303	Odpad zo zinku, zliatiny, zličeniny	O	waste from zinc alloy, compound
35304	Odpad z hliníka, zliatiny, zličeniny	O	waste from aluminium, alloy compound
35305	Odpad z kobaltu, zliatiny, zličeniny	N	waste from cobalt, alloy, compound
35306	Odpad zo selénu, zliatiny, zličeniny	N	waste from selenium, alloy compound
35307	Odpad z berýlia, zliatiny, zličeniny	N	waste from beryllium, alloy, compound
35308	Odpad z horčíka, zliatiny, zličeniny	Z	waste from Mg, alloy compound
35309	Odpad z tália, zliatiny, zličeniny	N	waste from Ta, alloy, compound
35310	Odpad z meďi, zliatiny, zličeniny	O	waste from Cu, alloy, compound
35311	Odpad z antimónu, zliatiny, zličeniny	N	waste from An, alloy compound
35312	Odpad z telúru, zliatiny, zličeniny	N	waste from Te, alloy compound
35313	znečistené škodlivinami	O	scrap from non-iron metals covers from non iron metals
35314	Odpad z káblov	Z	waste from cables
35315	Iný odpad s obsahom nezelezných kovov	Z	other waste containing non iron metals
35316	Prach s obsahom olova	N	dust containing Pb
35317	Prach s obsahom hliníka	Z	dust containing Al
35318	Prach s obsahom berýlia	N	dust containing Be
35319	Prach s obsahom horčíka	N	dust containing Mg
35320	Prach s obsahom zinku	Z	dust containing Zn
35321	Prach s obsahom ostatných nezelezných kovov	N	dust containing other non iron metals
35322	Odpadové olovené akumulátory	N	waste leaded accumulators
35323	Odpadové nikel-kadmiové akumulátory	N	waste nickel-cadmium accumulators
35324	Odpadové batérie s obsahom ortuti	N	waste batteries containing mercury
35325	Odpadové suché galvanické články	N	waste dry galvanic items
35326	žiarivky	N	waste from mercury leavings containing mercury, mercury valves lamps
35327	Obaly a nádoby z nezelez. kovov znečistené škodlivinami	N	polluted covers and pots from non-iron metals
35328	Odpadová zubná amalgámová výplň	Z	waste teeth amalgam filling
355	Kal s obsahom kovov		sludge containing metals
35501	Kal s obsahom zinku	N	sludge containing zinc
35502	Kal z brúsenia železných a nezelezných kovov	N	sludge from grinding iron and non iron metals
35503	Kal s obsahom olova	N	sludge containing Pb
35504	Kal s obsahom cínu	N	sludge containing Sn
35505	Anódový kal	N	anode sludge
35506	Kal s obsahom ostatných kovov okrem Al, Fe, Mn	N	sludge containing other metals except Fe, Mn, Al
39	produktov		other waste of mineral origin including treated products
399	Iný odpad minerálneho pôvodu		other waste of mineral origin
39902	Jarositový kal	Z	
39903	Zvyšky kamennej soli (zliovina)	Z	leavings of rock salt
39904	Plynárenská čistiaca hmota	N	gassing cleaning substance
39905	Zvyšky hasiacich práškov	Z	leavings from extinguisher sands
39906	Skoroditový kal	Z	sludge
39907	Zvyšky z elementárneho sírou	Z	leavings with elementary sulphate
39908	Zvyšky sklárskych kmenov	O	leavings from glass rocks
39909	Zvyšky sklárskych kmenov znečistené škodlivinami	N	leavings from glass rocks
39910	Iný tuhý odpad minerálneho pôvodu znečistený škodlivinami	N	other solid waste of mineral origin polluted
4	Odpad z úpravy odpadov		waste from waste treatment
41	Odpad z mechanickej úpravy		waste from mechanic treatment
411	Vratky dopravných prostriedkov, strojov a mechanizmov		goals of vehicles, machines and mechanism

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
41101	Katalyzátory z motorov	N	catalyzer from engines
41102	Kovové casti z procesu drvenia, lisovania	Z	metal parts from process of grinding pressing
41103	Plastové casti z procesu drvenia, lisovania	Z	plastic parts from process of grinding and pressing
412	Elektronický odpad a šrot		electronic waste and scrap
41201	Elektronický odpad a šrot znečistený škodlivosťami	Z	electronic waste and scrap polluted
41202	Elektronický odpad a šrot neznečistený škodlivosťami	O	electronic waste and scrap unpolluted
41207	Iný odpad mechanicky induradovaný	O	other waste mechanically induradovaný
42	Odpad po fyzikálno-chemickej úprave		waste after physic-chemical treatment
421	Odpad stabilizovaný fyzikálno-chemickou úpravou		waste stabilized by physic-chemical treatment
42101	tvrdnúcim spojivom	N	hazardous waste stabilized by hydraulic in the water hardenings connector
42102	s elimin.nebezp.vl.	Z	quality
42103	tvrdnúcim spojivom	Z	special waste stabilized by hydraulic in the water hardenings connector
42104	Nebezpečný odpad stabilizovaný organickým spojivom	N	hazardous waste stabilised by organic connector
42105	elimin.nebezp.vlastnosťami	Z	hazardous waste stabilised by organic connector with elimination of risky qualities
42106	Zvláštny odpad stabilizovaný organickým spojivom	Z	special waste stabilized by organic connector
422	Vitrifikovaný odpad a odpad z vitrifikácie		vitrificated waste and waste from vitrification
42201	Vitrifikovaný odpad	Z	vitrificated waste
42202	plynov	Z	vitrificated flues and other waste from cleaning of waste gases
42203	Odpad z procesu vitrifikácie	Z	waste from the vitrification process
42204	Kvapalný odpad z procesu vitrifikácie	Z	liquide waste from vitrification process
43	Odpad z biologickej úpravy		waste from biological treatment
431	Odpad z aeróbnej úpravy odpadov		waste from aerobic waste treatment
43101	odpadov	Z	composted unable leavings of communal and similar wastes
43102	zivočíšneho pôvodu	Z	non-composted leavings from vegetable and animal waste
43103	Kompost nevhovujúcej akosti	Z	compost of unsuitable quality
43104	Nebezpečný odpad biologicky upravený	N	hazardous waste - biological adapted
43105	nebezpečnými vlastnosťami	Z	hazardous waste - biological adapted with eliminated hazardous characters
432	Odpad z anaeróbnej úpravy odpadov		waste from anaerobic adaptation of municipal waste and similar waste
43201	podobných odpadov	Z	waste from anaerobic adaptation vegetable and animal waste
43202	zivočíšneho pôvodu	Z	other not listed waste from anaerobic adaptation of waste
43203	Iný nazaradený odpad z anaeróbnej úpravy odpadov	Z	hazardous waste biological adapted
43204	Nebezpečný odpad biologicky upravený	N	hazardous waste biological adapted with eliminated hazardous characters
43205	nebezpečnými vlastnosťami	Z	
5	Odpad z chemických procesov (vrátane textilného odpadu)		waste from chemical process
51	Oxidy, hydroxidy, soli		dioxide, hydroxide, salt
511	Neutralizačné kaly z galvanických procesov		neutralizing sludge from galvanic process
51101	Neutralizačný kal s obsahom kyanidov	N	neutralizing sludge containing cyanide
51102	Neutralizačný kal s obsahom šesťmocného chrómu	N	neutralizing sludge containing sexivalent chrome
51103	Neutralizačný kal s obsahom trojmocného chrómu	N	neutralizing sludge containing trivalent chrome
51104	Neutralizačný kal s obsahom meďi	N	neutralizing sludge containing Cu
51105	Neutralizačný kal s obsahom zinku	N	neutralizing sludge containing Zn
51106	Neutralizačný kal s obsahom kadmia	N	neutralizing sludge containing Cd
51107	Neutralizačný kal s obsahom niklu	N	neutralizing sludge containing Ni
51108	Neutralizačný kal s obsahom kobaltu	N	neutralizing sludge containing Co
51110	Neutralizačný kal s obsahom ušachtilých kovov	N	neutralizing sludge containing valuable metal
51111	Neutralizačný kal s obsahom olova alebo cinu	N	neutralizing sludge containing Pb, and tin
51112	Iný kal z galvanizovní	N	other sludge from galvanizing plant
513	Iné oxidy a hydroxidy		other dioxide and oxide
51301	Odpadový oxid zinocnatý	N	waste zinc oxide
51302	Odpadový hydroxid zinocnatý	N	waste zinc hydroxide
51303	Odpadový oxid cinicitý, cinovec	O	waste tin dioxide
51304	Odpadový oxid manganicitý, burel	Z	waste manganase heptoxide
51305	Odpadový oxid hliniitý	O	waste aluminium oxide
51306	Odpadový oxid chromitý	N	waste chrome oxide
51307	Odpadový oxid meďnatý	N	waste cupric oxide
51308	Odpadový hydroxid hliniitý	O	waste aluminium hydroxide
51309	Odpadový hydroxid a oxid zelezitý	O	waste hydroxide and ferrous oxide
51310	Fe	N	oxide and hydroxide of other metal beside oxide and hydroxide Al and Fe
515	Soli		salts
51502	Odpadové soli na vycinovanie koži	N	waste salts for adaptation of leather
51503	Odpad fosforečnanu sodného a draselného	Z	waste from potassium phosphate and sodium phosphate
51504	Odpad impregnacných soli	N	waste from impregnate salts
51505	Odpadové garbiarske chemikálie, trieskoviny	N	waste tanning chemicals, tannings
51507	Zvyšky minerálnych hnojiv	Z	leavings from mineral fertilizers
51508	Odpadový uhličitan draselný (potaš)	Z	waste carbonate of potash
51509	Odpadový chlorid amónny (salmiak)	Z	waste ammone chloride
51511	Odpad solných kúpeľov	N	waste from salt bath
51512	Odpadový hydrogénechlorid amónny	N	waste hydrogenchloride ammone
51513	Odpadové arzenové vápno	N	waste arsenic lime
51514	Odpadový sulfid arzenitý	N	waste sulphide arsenic
51515	Koľový kamen	O	boiler stone
51516	Odpad brunirovacích soli	N	waste from browning salt
51517	Odpadový síran sodný (Glauberova soľ)	Z	waste sodium salt
51518	Odpadové bromidy	Z	waste bromide
51519	Odpadový chlorid zeleznatý	Z	waste ferric chloride

Kód odpadu	Názov odpadu	Kategória odpadu	Type of Waste
51520	Odpadový síran železnatý (zelená skala)	Z	waste ferric dischlorid
51521	Odpadový síran olovnatý	N	waste lead sulphate
51523	Odpadový chlorid sodný	Z	waste sodium chloride
51524	Odpadové soli olova	N	waste salt of lead
51525	Odpadové soli bárya	N	waste salt of barium
51526	Odpadový chlorid vápenatý	Z	waste lime chloride
51527	Odpadový chlorid horecnatý	Z	waste magnesium chloride
51528	zemín	N	waste sulphide of alkalic metal and metal of alkalic earth
51529	Odpadové sulfidy ťazkých kovov	N	waste sulphide of hard metals
51530	Odpadový chlorid meďnatý	N	waste cupric chloride
51531	Odpadový síran hlinítý a fosforecnan hlinítý	N	waste filter alum and epsom aluminium phosphate
51532	Odpadové chlórové vápno	Z	waste chlore lime
51533	Odpadová kalarenska sol s obsahom kyanidov	N	waste hardening salt containing cyanide
51534	dušičnanov	N	waste hardening salt containing nitrite and nitrate
51535	Odpadové soli vanádu	N	waste salt of vanadium
51536	Odkryvkové soli z ťazby	O	uncovering salt from exploitation
51538	Zvyšky bórxu	Z	leavings of borax
51539	Odpad s obsahom arzenu	N	waste containing arsenic
51540	Iné rozpustné soli	N	other solubility salts
51543	Odpadový amoniakálny roztok na leplanie meďi	N	waste ammonial mixture for etching of copper
52	Kyseliny, hydroxidy, koncentráty		acids, hydroxide, and concentrators
521	Anorganické kyseliny		anorganic acids
52101	Odpadová akumulátorová kyselina	N	waste accumulated acid
52102	Odpadové kyseliny, zmesi kyselín, moriace kúpele (kyslé)	N	waste acid, mixtures of acids, acid waters (pickling)
52105	Odpadová kyselina chromsúrová	N	waste chromosulphur acid
522	Organické kyseliny		organic acid
52201	Odpadové organické kyseliny halogénované	N	waste organic acid halogened
52202	Odpadové organické kyseliny nehalogénované	N	waste organic acid non-halogened
524	Hydroxidy		hydroxide
52402	(zásadité)	N	waste hydroxide, mixtures of hydroxide and pickling waters
52403	Odpadový roztok amoniaku (vodný roztok cpavku)	N	waste solution of ammonia
527	Koncentráty a roztoky		concentrators and solution
52701	Odpadové chlórnanové hydroxidy (bieliace chlórové kúpele)	N	waste hypochlorite hydroxide(whitening chlorite waters)
52707	Odpadové ustalovace	N	waste stabilizers
52708	Sulfitové nezahustené výludy	N	sulphite undensified lixivium
52709	Sulfátové nezahustené výludy	N	sulphate undensified lixivium
52711	Odpadové kyslé koncentráty a roztoky s obsahom síranov	N	waste acid concentrators and solutions containing sulphur
52712	chromu	N	waste concentrators and solutions containing sexivalent chrome
52713	Odpadové koncentráty a roztoky s obsahom kyanidov	N	waste concentrators and solutions containing cyanides
52715	Odpadové bieliace kúpele	N	waste whitening waters
52716	Odpadové koncentráty a roztoky s obsahom solí kovov	N	waste concentrators and solutions containing of metal salts
52721	Odpadový roztok chloridu meďnatého	N	waste solutions of copper chloride
52722	Odpadové roztoky chloridov železa	Z	waste solution of ferric chloride
52723	Odpadové vývojky	N	waste developers
52724	Odpadové anorganické chladiace roztoky	N	waste anorganic cooling solutions
52725	Iné odpadové koncentráty	N	other waste concentrators
53	škodc.		waste from appliances for plant protection fight against pests
531	škodcom		waste from appliances for plant protection fight against pests
53103	škodcom	N	leavings of destroyed appliances for plant protection and against pests
53104	Odpad z výroby prostr. na ochranu rastlín a proti škodcom	N	waste from production of appliances for plant protection and against pests
533	Odpad z kozmetických prípravkov		waste from cosmetics appliances
53301	Kozmetické prípravky po záručnej lehote	O	cosmetics appliances after warranty time
53302	Odpad z výroby kozmetických prípravkov	Z	waste from production of cosmetics appliances
535	Odpad farmaceutických výrobkov		waste from pharmacy products
53501	Vyradené lieky	N	junk medicines
53502	Odpad z výroby a úpravy farmaceutických výrobkov	N	waste from production and treatment of pharmacy product
53503	Odpad a zvyšky drog	N	waste and drugs leavings
53504	Výlisky z liečivých rastlín	N	poraces from herbals
53505	Mycélium húb	N	mushrooms mycellium
53506	Odpad z bielkovín	N	waste from proteins
53507	Odpadové dezinfekčné prostriedky	Z	waste cleaning equipment
53508	Zivné pôdy kontaminované	N	contaminated soils
536	Odpad z prostriedkov polichemickej ochrany		waste from anti-chemicals protection
53601	Prostriedky (balčky) protichemickej ochrany	N	appliances (package) of anti-chemical protection
54	ropy		waste from oil processing, coal adaptation and gas and oil transport
541	Ropné látky		oil materials
54101	Odpadové oleje s obsahom kyselín	N	waste oil containing acid
54104	Znečistené pohonné hmoty	N	polluted actuating materials
54106	PCB/PCT	N	waste transformer, heating, hydraulic oils, without PCB/PCT
54107	PCB,PCT	N	waste transformer, heating, hydraulic oils, with PCB/PCT
54108	Znečistený vykurovací olej	N	polluted calorific oil
54109	Odpadové vrtné, rezné a brúsne oleje	N	waste boring, drining and cutting oil
54110	PCB	N	eliminated machines and operating appliances containing PCB
54111	Iný odpad s obsahom PCB	N	other waste containing PCB
54112	Odpadové oleje zo spalovacích motorov a prevodoviek	N	waste oil from combustion engine and transmission housing

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
54113	Odpadové stroje a turbínové oleje	N	waste oil from engines and turbine oils
54114	obs.halog prod.vrátane PCB	N	waste oil from to the actuating and cooling appliances with halogenic prod. containing PCB
54115	Kondenzát z prepravy plynu a ropy	N	condensator from gas and oil transport
542	Tuky a vosky z minerálnych olejov		fat and wax from mineral oil
54201	Olejový gáč	N	
54202	Odpadové masťacie tuky	Z	waste lubricated fat
54203	Voskové smeti	O	waxes waste
54204	Zvyšky masných kyselín	Z	leavings of lubricated acid
54205	Stearínová smola	O	stearin resin
54206	Odpadové kovové mydlá	Z	waste metal soaps
54207	Odpadové vosky	O	waste waxes
54208	Odpadové deriváty masných kyselín	Z	waste derivators from lubricated acid
54209	Prevádzkové a pracovné prostriedky znečist.lukmi a olejmi	N	operating and working appliances polluted by oils
544	Emulzie a zmesi produktov z minerálnych olejov	N	emulsion and mixture's products from mineral oils
54401	Odpadové syntetické chladiace a masťacie prostriedky	N	waste synthetic cooling and lubricating appliances
54402	Odpadové vrtné, rezné a brúsne emulzie	N	waste boring, drilling and cutting emulsion
54404	Odpadové honovacie a lapovacie oleje	N	waste honing and lapping oils
54405	Kondenzát z kompresorov	N	condensator from cillurators
54406	Odpadové emulzie voskov	Z	waste emulsion of waxes
54407	Odpadové bitúmenové emulzie	N	waste bituminous emulsions
54408	Ostatné zmesi olejov s vodou	N	other mixture of oils with waters
545	Zvyšky z tazby ropy		leavings from exploitation of oil
54501	Vrtné výplachy a vrtná drvina, bez oleja	O	boring scavenging and borin crumb without oil
54502	Vrtné výplachy a vrtná drvina kontaminované ropou	N	boring scavenging and borinc crumb contaminated by oil
54503	Kal z ropy	N	sludge from oil
547	Kal s obsahom ropných látok		sludge containing oil materials
54701	Zvyšky v lapacoch piesku s obsahom ropných látok	N	leavings in sand appliances containing oil materials
54702	Odpad z odlucovacov olejov a benzínu	N	waste from separator of oil and petrol
54703	Kal z odlucovacov olejov	N	sludge from oil separators
54704	Kal z nádrží a zo sudov na uskl. ropy a ropných produktov	N	sludge from tank and barrels for storage of oil and oil products
54705	Zmes pemzy a oleja	N	mixture of oil and holystone
54706	Kal s obsahom parafínov	N	sludge containing alkane
54707	Kal z elektroerozívneho obrábania (s petrolejom a grafitom)	N	sludge from electric-erosine cultivation
54708	Honovací kal	N	honing sludge
54709	Lapovací kal	N	lapping sludge
54710	Brúsny kal s obsahom oleja	N	grinding sludge containing oil
54711	Ropné kaly z čistiarň odpadových vôd	N	oil sludge from water treatment plant
548	Zvyšky z rafinácie minerálnych olejov		leavings from refining of mineral oils
54801	Bieliace hlinky s obsahom minerálnych olejov	N	cleaning earth containing of mineral oil
54802	Kyslé živice, kyslé dechty	N	acid resin and acid tar
54803	Kal z rafinácie minerálnych olejov	N	sludge from refining of mineral oils
54805	Odpadová surová síra	Z	waste rare sulphur
54806	Zvyšky zo spracovania kyslých živíc	N	leavings from processing of acid resin
54807	Odpadové kyseliny s obsahom minerálnych olejov	N	waste acid containing mineral oil
54808	Zvyšky z rafinácie odpadových olejov s obsahom vody	N	leavings from refining of waste oil
54809	Bieliacia hlinka s obsahom parafínu	N	cleaning earth containing alkane
549	Ostatný odpad z produktov minerálnych olejov,		other waste from mineral oil products
54903	Kal s obsahom fenolov	N	sludge containing phenyls
54904	Kal s obsahom merkaptánov	N	sludge containing mercaptans
54905	Zvyšky s obsahom antracénu	N	leavings containing anthracene
54906	Zvyšky s obsahom naftalénu	N	leavings containing anaphtalene
54907	Zvyšky s obsahom fenolov	N	leavings containing phenyls
54908	Pelety zo splynovania oleja	N	
54909	Kal z mokrych odprašovavcov	N	sludge from wet dusters
54910	Odpadový asfalt	Z	waste asphalt
54911	Odpadový bitúmenový koks	O	waste bituminous coke
54912	Odpad z bitúmenu	N	waste from bituminous
54913	Zvyšky dehtu	N	leavings from tar
54914	Briketovacia smola	N	briquet resin
54915	Destilacné zvyšky z výroby dechtových olejov	N	distilling leavings from tar's oil production
54916	Zvyšky čiernouhľoého dehtu	N	leavings from black coal tar
54917	Odpadový tuhý tesniaci a izolacný materiál	O	waste solid sealing and isolating materials
54918	Fenolová voda	N	phenyls water
54919	Ropný koks	O	oil's coke
54920	Kal z čistenia glycerolu	O	sludge from glyceryl
54922	Zmes uhlia a oleja	N	mixture oil and coal
54923	Kal s obsahom kyanidov	N	sludge from cyanide
54924	Iný kal z koksárni a plynárni	N	other sludge containing from coke plant and gas plant
54925	Iný kal z petrochémie	N	other sludge from petrochemistry
55	Organické rozpúšťadlá,náterové hmoty,lepidlá, tmely, živice		organic solvent ,coating materials, guels and their mixture
552	Organické rozpúšťadlá halogenované a ich zmesi		organic solvent halogened and their mixture
55201	Odpadový etylénchlorid (1,2-dichlóretán)	N	waste dichloroethane
55202	Odpadové chlórbenzény	N	waste chlorobenzene
55203	Odpadový chloroform (trichlómetán)	N	waste chloroform
55204	Odpadový dichlórfenol	N	waste dichlorphenol

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
55205	médiá, rozpušťačlá	N	waste fluoro hydrocarbon, cooling, actuating media, solvents
55206	Odpadový metylénchlorid (dichlómetán)	N	waste methylenechloride
55207	Odpadový monochlórfenol	N	waste monochlorophenol
55208	Odpadové chlórované parafíny	N	waste chloride alkanes
55209	Odpadový perchlóretýlén (tetrachlóretýlén)	N	
55210	Odpadové zmäkčovadlá PVC	N	waste softener of PVC
55211	Odpadový tetrachlómetán	N	waste tetra chlorometan
55212	Odpadový trichlóretán	N	waste trichloroetane
55213	Odpadový trichlóretýlén	N	waste trichloroethylene
55214	Odpadové čistiace prostriedky (cistenie za studena)	N	waste cleaning appliances
55220	halog.org.rozpušťačlá	N	waste mixtures of solvent containing halog. organic solvents
55221	Odpadové halogenované zmäkčovadlá	N	waste halogened softener
55222	Odpadové chlórované fenoly	N	waste chloride phenyls
55223	Iné odpadové halogenované organické rozpušťačlá	N	other waste halog. organic solvents
55224	obs.halog.org.rozpušťačlá	N	waste mixture soluble in water containing halogen. organic solvents
553	Organické rozpušťačlá nehalogenované a ich zmesi	N	organic solvent nonhalogenated and their mixtures
55301	Odpadový acetón	N	waste acetone
55302	Odpadový etylacetát	N	waste ethylacetate
55303	Odpadový etylénglykol	N	waste ethene
55304	Odpadový etylglykol	N	waste ethyl glycol
55305	Odpadový etylfenol	N	waste ethylphenyl
55306	Odpadový benzén, toluén, xylén	N	waste benzene, toluene, xylene
55307	Odpadový butylacetát	N	waste butylacetate
55308	Odpadový cyklohexán	N	waste cyclohexane
55309	Odpadový dekahydronaftalén (dekalín)	N	waste decahydronaphtalene
55310	Odpadový dietyléter	N	waste diethylether
55311	Odpadový dimetylformamid	N	waste dimethylformamide
55312	Odpadový dimetylsulfid	N	waste dimethyl sulphide
55313	Odpadový dimetylsulfoxid	N	waste dimethylsulphoxide
55314	Odpadový dioxán	N	waste dioxane
55315	Odpadový metanol	N	waste methanole
55316	Odpadový metylacetát	N	waste methylacetate
55317	Odpadový metyletylketón	N	waste butanone
55318	Odpadový metylizobutylketón	N	waste methylisobutanone
55319	Odpadové chladiace zmesi s obsahom etylénglykolu	N	waste cooling mixtures containing ethylene glycol
55320	Odpadový pyridín	N	waste pyridine
55321	Odpadový sirouhlík	N	waste carbonsulphide
55322	Odpadový tetrahydrofurán	N	waste tetrahydrouranium
55323	Odpadový tetrahydronaftalén (tetralín)	N	waste tetrahydronaphtalene
55324	Odpadový terpentínový olej	N	waste turpentine oil
55326	benzín	N	waste tech. petrol, petrolether, ligroin, varnished petrol
55351	Odpadový etanol	O	waste ethanol
55352	Odpadové alifatické aminy	N	waste aliphatic amines
55353	Odpadové aromatické aminy	N	waste aromatic amines
55354	Odpadový butanol	N	waste butanol
55355	Odpadový glycerol (glycerín)	O	waste glycerol
55356	Odpadový glykoléter	N	waste glycolether
55357	hal.org.rozpušť	Z	waste cleaning appliances in cool without hal. organ. solvents.
55358	Odpadové krezoly	N	waste cresols
55359	Odpadové riedidlá pre náterové hmoty	N	waste diluent for coating material
55360	Odpadový petrolej	N	waste petroleum
55361	Odpadové polyéteralkoholy	N	waste poly-etheralcohols
55362	Odpadový propanol	N	waste propanole
55370	halogen.organic.rozpušťačlá	N	waste mixture of solvent without halog. organic solvents
55371	Odpadové chladičá nehalogenované	Z	waste frigorific non halogenic
55372	Odpadové zmäkčovadlá nehalogenované	N	waste softener of solvents
55373	Ostatné organické rozpušťačlá nehalogenované	N	waste mixture of solvents with water without halogen. organic solvents
55374	hal.org.rozpušťačlá	Z	waste mixture of solvents with water without non-halogen. organic solvents
55375	Odpadové brzdové kvapaliny	N	waste braking liquide
554	Kal a čistiacie prostriedky s obsahom rozpušťačlá		sludge and cleaning appliances containing solvents
55401	Kal s obsahom halogenovaných rozpušťačlá	N	sludge containing halogenic solvents
55402	Kal s obsahom nehalogenovaných rozpušťačlá	N	sludge containint non-halog. solvents
55403	Zvyšky čistiacich prostriedkov s obs.halog.org.rozpušťačlá	N	leavings of cleanings appliances containing halog. organ. solvents
55404	Zvyšky čistiacich prostriedkov s obs.nehal.org.rozpušťačlá	N	leavings of cleanings appliances containing non-halog. org. solvents
555	Farbivá a náterové hmoty		colourant and coatings materials
55501	Odpad z nanášania náterových hmôt	N	waste from coatings materials
55502	Odpadové stvrdnuté náterové hmoty	N	waste solidificated coatings materials
55503	Kal náterových hmôt	N	sludge from coating materials
55508	Odpadové náterové hmoty	N	waste coating materials
55509	Zvyšky tlačiarenských farieb	N	leavings of printer colours
55514	Odpadové organické pigmenty a farbivá	N	waste organic colours and pigments
55515	Odpadové anorganické pigmenty a farbivá	N	waste anorganic colours and pigments
55516	Odpad z odstránovania náterových hmôt	N	waste from elimination of coating materials
559	Lepidlá, tmely, živice		glues, mastics, resins
55901	Odpadové stvrdnuté gleje a prírodné lepidlá	O	waste solidificatid natural glues and glei

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
55903	Zvyšky nestvrdnutých živíc	N	leavings of non-solidificated resins
55904	Odpadové živicové oleje	N	waste resins oil
55905	Odpadové nestvrdnuté gleje a lepidlá	N	waste non-solidificated glues and gleis
55907	Odpadové nestvrdnuté tmely	N	waste non-solidificated mastics
57	Odpad plastov a gumy		plastic and gum waste
571	Odpad vytvrdených plastov		waste hardened plastics
57101	Odpadové fenolové a melaminové živice	Z	waste phenyls and melamines resins
57102	Odpad z polyesterov	O	waste from polyester
57103	Odpad z lialej živice	O	waste from resins
57104	Odpad z impregnačných živíc	O	waste from impregnated resins
57105	Odpadové fólie vrátane kaširovaných	O	waste foils includings bonded
57106	Odpad z polyetylénu	O	waste from polyethylene
57107	Odpad z vytvrdených lisovacích hmôt (duroplastov)	O	waste from duroplast
57108	Odpad z polystyrénu vrátane penového	O	waste from polystyrene including spumescent
57109	Tvrdený papier, tvrdená tkanina (vulkanfiber)	O	indurated papers, indurated fibres
57110	Odpad z polyuretánu	O	waste from polyurethane
57111	Odpad z polyamidov	O	waste from polyamide
57112	Odpad z tvrdej peny	O	waste from hard spumescent
57113	Odpad z umelých čriev	O	waste from artificial guts
57115	Odpad z filmu a celulóidu	O	waste from celuloïd and film
57116	Odpad z PVC	O	waste from PVC
57117	(plexiskla, polyakrylátu, polykarbonátu)	O	waste from organic glass
57118	Obaly a nádoby z plastov neznečistené škodlivosťami	O	package and tanks from plastics unpolluted
57119	Odpad z fólií z plastov	O	waste from folias, plastics
57120	Odpad z polyvinylacetátu	O	waste from polyvinyl acetate
57121	Odpad z polyvinylalkoholu	O	waste from polyvinyl alcohol
57122	Odpad z polyvinylacetátu	O	waste from polyvinil acetal
57123	Odpad z epoxidových živíc	O	waste from epoxide resins
57124	Ionomenicové živice neznečistené škodlivosťami	O	ion-exchange of resins unpolluted
57125	Ionomenicové živice znečistené škodlivosťami	N	ion-exchange of resins polluted
57126	Odpad z plastov obsahujúcich fluór	O	waste from plastics with leavings containing flourine
57127	Obaly a nádoby z plastov so zvyškami s obsahom škodlivín	N	package and tanks from plastics with leavings containing deleterious substance
57128	Odpad z polyolefinov	O	waste from polyephine
57129	Odpad z heterogénnych plastových materiálov	O	waste from heterogenous plastics materials
572	Odpad z nevytvrdených plastov, zo zložiek plastov		waste from undurated plastics, from plastics parts
57201	zložkami	N	waste softeners with halog. organic parts
57202	Odpad z výroby a zo spracovania plastov	N	waste from production and processing of plastics
57203	zložiek	N	waste softeners without halogen. organic parts
573	Kal a emulzie s obsahom plastov		sludge and emulsions containing plastics
57301	Kal s obsahom plastov bez rozpúšťadiel	O	sludge containing plastics without solvents
57303	Odpadové disperzie s obsahom plastov	N	waste dispersion containing plastics
57304	Odpadové emulzie s obsahom plastov	N	waste emulsion containing plastics
57305	Kal s obsahom plastov a halogénovaných rozpúšťadiel	N	sludge containing plastics and halogen. solvents
57306	Kal s obsahom plastov a nehalogénovaných rozpúšťadiel	N	sludge containing plastics and non-halogen. solvents
575	Tuhý gumový odpad vrátane odpadových pneumatík		solid gum waste including waste pneumatics
57501	Odpady z gumy	O	waste from gum
57502	Odpadové pneumatiky a ich odrezky	O	waste pneumatics and leavings from pneumatics
57503	Odpad z gumozbestu	Z	waste from gum-asbestos
57504	Odpad z gumokovu	O	waste from gum-metal
57505	Odpad z penového latexu	O	waste from spume latex
57506	Odpadová gumová múčka a prach	O	waste gum dust and powder
57507	Odpadový gumový granulát	O	waste gum granules
57508	Odpad z gumy znečistený škodlivosťami	N	waste from gum polluted by deleterious waste
577	Kal a emulzie s obsahom gumy		sludge and emulsions containing gum
57701	Odpadový latex	O	waste latex
57702	Kal a odpadové emulzie s obsahom latexu	Z	sludge and waste emulsion containing latex
57704	Odpadové roztoky kaucuku	N	waste rubber solutions
57705	Kal s obsahom gumy	O	sludge containing gum
57706	Kal s obsahom rozpúšťadiel	N	sludge containing solvents
58	Textilný odpad (z prírodných aj chemických vlákien)		textil waste (from natural and chemical fibres)
581	Textilný odpad		textil waste
58101	Odpad polyamidových vlákien	O	waste polyamide fibres
58102	Odpad z polyesterových vlákien	O	waste from polyester fibres
58103	Odpad z polyakrylových vlákien	O	waste from polyacrilic fibres
58104	Odpad z celulózových vlákien	O	waste from cellulosic fibres
58105	Odpad z vlny	O	waste from wool
58106	Odpad z rastlinných vlákien	O	waste from vegetable fibres
58107	Zvyšky látok a tkanín	O	leavings from cloth and wefts
58108	Odpadové odevy, handry, textil	O	waste clothes and textiles, rags
58109	Čistiaca bavlna a handry	O	cleaning cotton and rags
58110	Čistiace súkno	O	cleaning cloth
58111	Odpadové filtračné plachietky	O	waste filtrated sheet
58112	Odpadová leštiaca vlna	O	waste cleaning wool
58113	Odpadová leštiaca plst	O	waste cleaning felt
58114	Kal z textilných tovární, farbiarní a úpravni textilu	N	sludge from textil factories, dye house and textil adaptators

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
58117	Kal z pracovni vlny	Z	sludge from laundry of wool
58118	Kal z pracovni	Z	sludge from laundry
58119	škodlivinami	O	filtrated sheets and muffs chemical polluted by deleterious substances
58120	Textilný obalový materiál neznečistený škodlivinami	O	textil packing material polluted by deleterious substances
58121	Iné odpadové syntetické vlákna	O	other waste synthetic fibres
58122	Odpadové laminované látky a tkaniny	O	waste laminated clothes and wefts
582	Znečistené textilie		polluted textiles
58201	Filtračné plachietky a rukávy znečistené škodlivinami	N	filtrated sheets and muffs polluted by deleterious substances
58203	Textilný materiál znečistený škodlivinami	N	textil material polluted by deleterious substances
58205	Leštiaca bavlna a píst znečistené škodlivinami	N	cleaning wool and felt polluted by deleterious substances
59	Iný odpad z chemických procesov		other waste from chemical process
591	Výbušniny		explosives
59101	Pyrotechnický odpad	N	pyrotechnics waste
59102	Odpady z trhavin a munície	N	waste from high-explosive and ammunition
59103	Viacrát nitrované organické látky	N	many times nitrated organic materials
593	Laboratórny odpad a zvyšky chemikálií		laboratory waste and chemical leavings
59301	Odpadové chemikálie	N	waste chemicals
59302	Zvyšky organických chemikálií	N	leavings from organic chemicals
59303	Zvyšky anorganických chemikálií	N	leavings from anorganic chemicals
59304	Prevádzkové prostriedky znečistené chemikáliami	N	operating appliances polluted by chemicals
594	Odpad z detergentov a z pracích prostriedkov		waste from detergent and washing appliances
59401	Zvyšky pracích prostriedkov	Z	leavings from washing appliances
59402	Odpadové kvapalné tenzidy	Z	waste liquide tenside
59403	Odpadové tuhé tenzidy	Z	waste solid tenside
59404	Odpadové sulfónové mydlá, sulfónové kyseliny	Z	waste sulphone soap, sulphone acid
595	Katalyzátory		catalyzers
59504	Odpadové kontaktné hmoty	N	waste contact substances
59507	Odpadové katalyzátory	N	waste catalyzers
597	Odpad z destilácie		waste from distillation
59701	Destilacné zvyšky bez obsahu soli a rozpúšťadiel	Z	distilling leavings without salts and solvents
59702	Destilacné zvyšky s obsahom halogénovaných rozpúšťadiel	N	distilling leavings containing halogen. solvents
59703	rozpúšťadiel	N	distilling leavings containing non-halogen. solvents
59704	Destilacné zvyšky s obsahom soli	Z	distilling leavings containing salts
59705	Anorganické destilacné zvyšky	N	anorganic distilling leavings
59706	Organické destilacné zvyšky	N	organic distilling leavings
59707	Destilacné zvyšky z chemických čistiarň	N	distilling leavings from chemical purifying rooms
599	Iný odpad z chemických procesov		other waste from chemical processes
59901	Polychlórované bifenylly a terfenylly (PCB,PCT)	N	polychlorid biphenile and terpheniie (PCB,PCT)
59902	Obaly od sprejov	Z	package from sprays
59903	Fenoly	N	phenole
59904	Organické peroxidy	N	organic peroxide
59905	Anorganické peroxidy	N	anorganic peroxide
59906	Priemyselné smeti	N	industrial waste
59907	Šrot z elektrolytických kúpeľov, vaní a ciel	N	scarp from electrolytic bath, vat and cells
59908	Azidy	N	azides
59909	Organické zlúčeniny fosforu	N	organic compound of phosphore
59910	Organické kyanidy	N	organic cyanides
59911	Kongenéry PCDF (polychlórovaný dibenzofurán)	N	congerene of PCDF
59912	Kongenéry PCDD (polychlórovaný dibenzo-p-dioxin)	N	congerene of PCDD
7	Odpad obsahujúci rádioaktívne látky		waste containing radioactive substances
71	Rádioaktívny odpad z pracovísk mimo palivového cyklu		radioactive waste from work areas outside of fuel cycle
711	Odpad z pracovísk mimo palivového cyklu		waste from work areas outside of fuel cycle
71101	Odpadové otvorené zariadenie	N	waste open radiators
71102	Odpadové uzavreté zariadenie	N	waste closed radiators
72	Rádioaktívny odpad zo zariadení palivového cyklu		radioactive waste from appliances of fuel cycle
721	Odpad z ťažby a z úpravy uránových rúd		waste from exploitation and adaptation of uranium
72101	Tuhý odpad z ťažby a z mechanickej úpravy uránových rúd	N	solid waste from exploitation and mechanical adaptation of uranium
72102	Odpad z chemickej úpravy uránových rúd	N	waste from chemical adaptation of uranium
722	reaktormi		waste from operation of nuclear appliances with nuclear reactors
72201	Konzentráty a iónové vymieňace (ionexy) z čistenia vôd	N	concentrators and ionexchanger from water treatment
72202	Tuhý rádioaktívny odpad	N	solid radioactive waste
72203	Rádioaktívne oleje	N	radioactive oils
72204	Atypické rádioaktívne odpady kvapalné alebo tuhé	N	untypical radioactive waste solid or liquide
723	reaktormi		waste from elimination of nuclear equipment with nuclear reactors
72301	Kvapalný odpad	N	liquide waste
72302	Predmety a zariadenia znečistené rádioaktívnymi látkami	N	objects and equipments polluted by radioactive substances
724	Odpad z ostatných jadrových zariadení		waste from other nuclear equipment
72401	Odpad z fixácie kvapalného odpadu	N	waste from fixing of liquide waste
72402	Odpad z úpravy tuhých odpadov	N	waste from adaptation of solid waste
72403	Kvapalný odpad z prevádzky úložisk	N	liquide waste from storage operations
725	Vyhorené jadrové palivo		burnt nuclear fuel
72501	Vyhorené jadrové palivo určené na prepracovanie	N	burnt nuclear fuel for regeneration
72502	uloženie	N	burnt nuclear fuel for longterm storage
72503	Odpad z prepracovania vyhoreného jadrového paliva	N	waste from regeneration of burnt nuclear fuel
73	Iný rádioaktívny odpad		other radioactive waste

Kód odpadu	Názov odpadu	Kategória odpadu	Types of Waste
731	Iný rádioaktívny odpad		other radioactive waste
73101	ako s rádioakt. odp.	N	contaminated parts of environment, if they are as radioactive waste
73102	Kal z čistenia baských vôd s obsahom rádioaktívnych látok zdrojov zariadenia	N	sludge from cleaning of baska waters containing radioactive substances
732			radioactive waste outside of radioactive radiation sources control
73201	Nízkoaktívne kovové materiály	N	low-active metal materials
8	Odpad zo zariadení vodného hospodárstva		waste from equipments of water management
81	Kvapalný odpad zo zariadení na nakladanie s odpadmi		liquide waste from equipment from waste storage
811	Odpad zo zúmp		waste from drain-well
81101	Odpad zo zúmp z poľnohospodárstva	Z	waste from drain-well from agriculture
81102	Odpad zo zúmp	N	waste from drain well
82	kanalizačnej siete		waste from water treatment plant and sewage nets operation
825	odpadových vôd		sludge from mechanic-chemic-biological treatment of waste waters
82501	Surový kal	N	rare sludge
82502	Stabilizovaný kal	Z	stabilized sludge
826	Odpad z čistenia priemyselných odpadových vôd		waste from treatment of industrial waste waters
82601	škodlivinami	N	sludge from treatment of industrial waste waters polluted by deleterious substances
82602	škodlivinami	Z	sludge from treatment of industrial waste waters unpolluted by deleterious substances
827	Odpad z kanalizačnej siete a z čistenia odpadových vôd		waste from sewage net and from treatment of waste waters
82701	Zhrabky z hrábic neznečistené škodlivinami	Z	sludge from rakes unpolluted by deleterious waste
82702	Odpad z čistenia stôk a dažďových vpusť	Z	waste from flows treatment and rain inlets treatment
82704	Odpad z lapacov piesku	Z	waste from sand lappings
82705	Kal z dažďových zdrží	O	sludge from rain arrest
83	vodných nádrží		waste from water treatment and from operations of water flows and water reservoirs
831	Kal z úpravy vody		sludge from water treatment
83101	Sedimentálny kal	O	sediment sludge
83102	Kal zo zmäkčovania vody	O	sludge from water softing
83103	Kal z čistenia vody	O	sludge from purifying of water
83105	Kal z úpravy napájacej vody a z čistenia kotlov	O	sludge from feeding water and from tanks cleaning
832	Odpad z prevádzky vodných tokov a vodných nádrží		waste from operation of water flows a water reservoirs
83201	Sedimenty z prevádzky vodárenských tokov a nádrží	O	sediment from operation of water flows, reservoirs and ponds
83202	rybníkov	Z	sediments from operation of other water flows, reservoirs and ponds
83203	Odpad z prevádzky vodných tokov, nádrží a rybníkov	Z	waste from operation of water flows, reservoirs and ponds
83204	Odpad z dreva	O	waste from wood
9	živnosti, z priemyslu, úradov		communal waste and similar waste from trade, businesses, industry and offices
91	Komunálny odpad		communal waste
911	Domový odpad		house waste
91101	Domový odpad z domácností	Z	house waste from household
91102	Odpad podobný domovému odpadu z obcí	Z	waste similar to house waste from municipalities
91103	Oddelene vytriedený domový odpad s obsahom škodlivín	N	separately selected house waste with deleterious substances content
91104	Odpad zo septikov a zúmp z komunálneho hospodárstva	Z	waste from septic and pipes from communal waste
913	Objemný odpad		valuable waste
91301	Objemný odpad z domácností	Z	valuable waste from household
91302	Objemný odpad z obcí	Z	valuable waste from municipalities
915	Ulicné smeti		street garbage
91501	Ulicné smeti	O	street garbage
917	Odpad zo zelene		waste from vegetables
91701	Odpad zo zelene	O	waste from vegetables
93	Odpad špecifický pre zdravotnú a veterinárnu starostlivosť		specific waste for health and veterinary care
931	Odpad špecifický pre zdravotnú a veterinárnu starostlivosť		specific waste for health and veterinary care
93101	osob. nakladanie	N	specific waste for health and veterinary equipment, which determine special handling
93102	(inj. ihly, kanjily, skalpely, úlomky skla)	N	waste from used objects, tools, cover materials
93103	škodlivinami	Z	waste from health and veterinary equipments unpolluted by deleterious waste
93104	Odpad charakteru komunálneho odpadu	Z	waste od communal waste characters
94	Odpad špecifický pre kúpeľné prevádzky		waste specific for spa operations
941	Odpad špecifický pre kúpeľné prevádzky		waste specific for spa operations
94101	Rašelinové a liečivé bahno	O	turf and healing mud

H.2 WASTE DISPOSAL SITES

1. REGISTER OF EXISTING OLD ENVIRONMENTAL LOADS (WASTE DISPOSAL SITES)

Table H.2-1: Details of Waste Disposal Sites in the Study Area, based on GSSR Digital Database from 1992-1993

An explanation of the abbreviations and codes is given in the accompanying Tables H.2-2 – H.2-5.

2. SPECIFIC ENVIRONMENTAL HISTORICAL WASTE SITES AND ASSOCIATED ENVIRONMENTAL ISSUES

(1) Introduction

Details of some specific old waste disposal sites and old environmental loads (OELs), are provided below. Where information is known about their present status, then it is supplied. In some cases, reference to site treatment relates to preferred or proposed options, rather than to what has actually happened to the sites. The information has been collated from data supplied by the Waste Departments of the Okres in the Study Area, based on questionnaire returns.

(2) Specific Sites

1) Banská Bystrica

Decline in recycling activities of municipal waste in Banská Bystrica City: Containers of various colour for primary separation in residential areas of Banská Bystrica City were removed after 1996, because attempt to recycle municipal waste resulted in financial loss.

Old environmental burdens – old waste sites (Banská Bystrica - Bucina a Stredoslovenské cementárne, Horné Pršany, Hrocho , Poniky, ...). As an industrially developed area, the Banská Bystrica District has waste sites, which are results of industrial and municipal activities in past. The most serious recognised problems have already been solved, or are in the process. Reclamation work of waste disposals of Bucina Banská Bystrica (wood processing factory) and Stredoslovenské cementárne Banská Bystrica (cement factory) are complete and the municipal waste sites of Poniky, Hrocho and Slovenská Lupca - Jablonka are reclaimed.

The old municipal landfill of Banská Bystrica City near Horné Pršany requires reclamation. About 10 millions SK is estimated to take some measures till 2000 to make old municipal landfill save (according the WMP of Banská Bystrica District Till 2000).

Soviet Army Military Stations near Vlkanová and Sliac: Rehabilitation works have been carried out on lands contaminated by activities of Soviet Army near Vlkanová and Sliac. In 4 localities within the River Hron Basin (Vlkanová in Banská Bystrica District, Sliac in Zvolen District and 2 smaller sites in Nove Zamky Districts), connected with the stay of the former Soviet Army, contamination of groundwater and soil was proved. Military airforce base in Sliac and fuel storage facility in Vlkanová appeared to be most seriously contaminated sites from them. Illegally constructed and handled over- and underground tanks and pipelines mostly for fuel transportation were recognised as main sources of contamination. More than 50% losses of transported fuel were reported in some pipelines.

Another serious threat for environment were waste dumps without any protection measures applied, containing hazardous waste (including not used ammunition). The biggest one in locality "Tri duby - májer" was removed and after material selection according waste types replaced to appropriate landfills (M. Gálisová, 1998).

From the area occupied by the Soviet Army (1969 - 1992) there were about 380 000 l of petrol products pumped out within the years 1980 - 1990. Extent of contamination were investigated by geological works and estimated to about 50 000 m³ in Sliac and 150 000 m³ in Vlkanová of soil contaminated by petrol products in concentration from 1 000 to 25 000 mg.kg⁻¹.

Contaminated ground water is pumped out as well as collected by drainage system and than cleaned in two Contaminated Water Cleaning Stations. From 1990 more than 150 000 l of petrol products in Sliac and more than 60 000 l of petrol products in Vlkanová were extracted from groundwater. In addition more than 50 000 l of water mixed with petrol products was cleaned. Every year about 350 000 m³ in Sliac and 370 000 m³ in Vlkanová of contaminated water is cleaned.

Together with ground water cleaning the soil cleaning take place. Both methods of soil cleaning contaminated by petrol products is utilised - on site (*in situ*) and off site (*ex situ*). (R. Ondrejzáková - Z. Bacová - M. Razičky, 1998). The main scheme of clean-up is designed to be completed by 2000, but there is no specified date for the continuing soil cleaning. (Ref 3.x, Appendix 7, Section C).

Špania Dolina tailing pond: Špania Dolina tailing pond was build near Špania Dolina processing plant. That plant processed ores from several sources. From 1964 it was old heaps with Cu content as a remain of Au (+ Ag) mining from medieval times in Špania Dolina valley.

From 1977 it was slag containing Cu - Pb from Banská Štiavnica and from 1985 it was mercury ore from Malachov. Finally after some break in the beginning of 90-ties it is talc from Hnúšča deposit till today.

Tailing pond can be divided to old one and new one. Old part contains about 0,5 million ton of mainly flotation sands and it was in use till mid 70-ties. It is now partly covered by waste rocks and planted by successive plants.

New part thickness reaches 10 m. It contains heterogeneous material from several sources in amount of about 700 000 m³. Local creek was put into pipe under the tailing pond body, but even though it caused landslide of one side of the pond. Deposited material was tested according the waste legislation (prospecting well VODS-1/1994, 24,0 - 29,0 m) and it meet criteria for III. leachate class, so it would be deposited in the 3rd class landfill (M. Arvensis, 1995).

2) Banská Štiavnica

No appropriate landfill for deposition of municipal waste: Landfill "Principlac" used by Banská Štiavnica municipality is licensed till 2010 and it is marked as the one of 3rd class (according the questionnaire filled by the Environmental Department of the District Office), though landfill database of SAZP marked this waste sites as the one of 2nd class. At least that means, that "Principlac" is of low operational level, because it was not built according to the present legislative criteria.

Heaps of rocks and tailing ponds: Banská Štiavnica surrounding is a historical mining area, where precious metals were mined from medieval times. In the beginning of 90-ties, mining was stopped for economical reasons.

Near Banská Štiavnica processing plant two tailing ponds originated - Sedem Zien (Seven Women) and Lintich. One tailing pond is near Banská Hodruša.

Sedem Zien (Seven Women) tailing pond has volume about 2.5 million m³. Water from tailing pond is collected and led to water cleaning station. Piezometric wells are developed to control level of ground water.

Lintich site consists of tailing ponds and 2 slug heaps. More than 0,5 million m³ of flotation slurry was deposited here from 1965.

Banská Hodruša tailing pond contain flotation slurry of amount 1 250 000 m³ from Pb - Zn - Cu ores processing. Waste water after some pre-processing (sedimentation) is released to the Hron river ($Q = 6,0 \text{ l.s}^{-1}$). Waste water has increased sulfate contents and bear remains of flotation agents (M. Arvensis, 1995).

Another example of the negative effects of mining is locality Banská Belá - Šobov. Here the heap of mostly quartz rocks with sulfide (pyrite, arsenopyrite) content as a result of quarrying in the quartz quarry in Šobov is deposited. The heap is about 1 km length and about 20 m high. Heap amount is estimated to 600 000 t.

Pyrite oxidation as well as Fe compounds hydrolysis caused extremely acid leachate reaction ($1 < \text{pH} < 5$). Leachate moves to the surrounding and contaminated ground and surface water with the acids and Zn and Cu dissolved. Now, several ways how to neutralize the quartz heap leachate are considered.

3) Brezno

Goudron waste sites of Petrochema Dubová: Petrochema Dubová is a petrochemical plant, where oil processing led to origination of 2 hazardous waste sites - so called "goudron basins" Predajná I. and Predajná II.. Goudron is the remain from oil refining, consists of liquid and pulpy acid resin and acid tar (waste number 54 802 - Predajná I.) and waste acids with mineral oils content (waste number 54 807 - Predajná II.). They originated within the years 1962 - 1982. They are of about 100 m length and about 70 - 80 m width both, located 1 km to the north from Hron river, 1 km to the east from Predajná.

Ground water monitoring proved contamination with oil products (*NEL* - in B category) caused by waste sites. Main environmental risk represents highly contaminated rain water, collected in basins. They are of concentrated leachate character, with high sulphate, volatile hydrocarbons and oil products content (I. Pirman - Z. Potyš, 1997). Contaminated rain water can overrun the basin dam and pollute surrounding during the extreme rainfall

Goudron basin Predajná I. was within the years 1980 - 1993 covered by special wooden "floating" construction combined with geotextile and geomembrane. Final cover consisted of soil (turf) with grass. Because of problem with gas origination and deformation of the impermeable cover that attempt was not successful and cover is not functional. Contaminated rain water overflows soil, kill the grass and now is pumping out and cleaned in Petrochema cleaning water station. Reclamation project is under preparation.

In 1993 the Environmental Department of the Brezno District Office decided to liquidate Predajná II. waste site. The hazardous content of Predajná II. waste site is burned in Petrochema Dubová facility. Treatment of the waste dump is programmed to be complete by 2010.

Antimony smelter waste site in Vajsková: Antimony in the Vajsková plant was processed more than 100 years till 1993, when the smelter was closed. From the present point of view, smelter waste was treated at non-acceptable way and no protection measures were managed against the dustfall and emissions at all. As a main source of As and Sb contamination of the site today, the waste stockpile was recognised.

Data concerning As concentration in the surface water of Vajsková creek, running through the pipe under the stockpile, comes back from 1986 till today. The leakage from the stockpile and from the plant area as a whole has an important role in water pollution. Results of that detailed environmental investigation are that serious As as well as Sb contamination is present (A. Ilkanic a kol., 1996):

Concerning *As contamination*, from the area of 39 ha of the plant :

67 % belongs to	A category (> 20 mg/kg)
23 %	B category (> 50 mg/kg)
10 %	C category (>100 mg/kg)

On some places C limit was exceeded more than 50 times.

Concerning *Sb contamination*, from the area of 39 ha :

9 % belongs to	A category (> 20 mg/kg)
8 %	B category (> 50 mg/kg)
84 %	C category (> 100 mg/kg)

In these days reclamation works are in progress on the site, financed by the Ministry of the Environment. Reclamation in general consists of these steps:

- Removal of highly contaminated soils (determined areas) and placement of soils to the existed smelter stockpile;
- Covering of the stockpile by impermeable cover (clayey liner) and construction of underground sealing wall around it;

- Digging of drainage shaft of several 10 meters length under the stockpile with the mouth towards the creek.

By the computer modeling was proved, that the gradual leakage from covered stockpile is not sufficient enough for creek contamination (not above A level). This proposal is economically as well as environmentally acceptable and will result in gradual significant decrease of existing toxic risk, though not absolute elimination of it.

Waste site of Zeleziarne Podbrezová in Šiklov: Waste site (stockpile) of steelwork slag covers area about 9 ha and amount of slag deposited here is estimated to 2,5 million ton. That waste site is result of nearly 100 year of steel production in Podbrezová. Zeleziarne (steelworks) Podbrezová produces steel products - mainly pipes. For that production only waste iron - scrap iron is used. Scrap iron is partly imported, because local sources are not sufficient to cover requirement.

Though steelwork slag itself is not serious contaminant, together with slag also various waste including waste petrol products were deposited in the site. Cadmium and boron contamination of groundwater were observed (contents are moving within B and C category), as well as volatile chlorinated hydrocarbons (C category).

Reclamation plan was adopted last year. About 2/3 of the whole stockpile is going to be reclaimed and covered by vegetation cover. Part of the slag deposited in the stockpile will be reprocessed and waste iron will be extracted. The one sealed cassette for deposition of special kind of slurry will be built up (M. Mudráková - J. Schwarz, 1998).

4) Levice

Levice District in comparison with more industrial districts in River Hron Basin has no significant problems with contaminated waste sites. May be most dangerous waste site - waste disposal of industrial slurry in Levitex Levice was reclaimed in 1996. Contamination of Zn and some other elements (Cd, Cu, As) were observed in B and C categories, though contents were varying in time. Also volatile chlorinated hydrocarbons in B category were observed.

Levice District has 5 regional landfills of 3rd class (capable to dispose municipal waste), what is more than optimal number. That is not in accordance with the WMP of Slovak Republic. In a little simplified way the Program propose to build up just one regional landfill in one district in effort to concentrate waste handling activities to as few localities as possible.

The alarming example is existence of 2 regional landfill just several hundreds meters from each

other - in Kálna nad Hronom and Nový Tekov - Šándorhalma, though they both keep high operational level.

5) Nové Zámky

Rehabilitation works on lands contaminated by activities of Soviet Army

Similar to district of Banská Bystrica and Zvolen, Nové Zámky District also has some remains after the Soviet Army stay in Slovakia. They are considerably smaller and consists of barracks, storage facilities and garages in two sites in Nové Zámky (Zapájev Barracks, Dó a Barracks) and one in Štúrovo.

Oil products as a main contaminant were recognized in ground water in Nové Zámky (R. Masiar, 1991). About 700 m³ till 1991 and 400m³ in years 1996 - 1998 of contaminated soil were clean up by bioremediation "*ex situ*". Ground water cleaning is performed from 1996 till now (V. Méry - K. Kováčik - M. Drahoš, 1998).

6) Zlaté Moravce

Zlaté Moravce District waste management was substantially improved by changes in Calex plant (refrigerators production). In Calex Zlaté Moravce and its consecutive companies (Samsung - Calex) new technologies were adopted, accepting present trends to use in refrigerator circulators only materials causing no harm to ozonic layer (no freon). Thus amount of hazardous waste dropped substantially.

No appropriate landfill for deposition of municipal waste

Though Zlaté Moravce landfill "Pod kalváriou" has sufficient remaining capacity (about 700 000 m³), it was not built according to the present legislative criteria. The SEA landfill database marked this landfill by 2nd class, though it is used for municipal waste disposal. The District WMP do not point to that problem and questionnaire only state, that "requirement of special conditions were fulfill by the operator". At least that means, that landfill is of low operational level, and license deadline (till 2000) indicate possible problems.

7) Zvolen

Rehabilitation works on lands contaminated by activities of Soviet Army near Sliac

See "Rehabilitation works on lands contaminated by activities of Soviet Army near Vlkanová and Sliac" in chapter Banská Bystrica District.

8) Zarnovica District

District has no licensed landfill for municipal waste (3rd class).

Zarnovica District has no licensed landfill for municipal waste. That situation is result of new land and administrative organization of Slovak Republic (Act No. 221/1996), when the old infrastructure was changed and new not yet developed.

Zarnovica District dispose its waste in Bzenica landfill in Ziar nad Hronom District. Bzenica landfill is marked as 3rd class landfill in questionnaire, but SEA landfill database marked that landfill as of 2nd class. That means probably low operational level. The landfill has license till 2002 and than probably a new place for municipal waste disposal will have to be found. According the Zarnovica District Waste Management Program about 12 000 t of municipal waste is produced every year in the district area. The municipality of Nova Bana (the largest in Zarnovica District) has been considering potential sites for a new landfill in their area.

Lack of appropriate landfill in a rather small and in respect to the waste production¹ not efficient area like Zarnovica District is not inevitable an environmental problem. Trend stated in the Slovak WMP is to build just several big landfills covering by the disposal services as big region as possible.

Regional Development and Institutional Strengthening Project (draft in May 1999, authors not stated) assessing districts of Ziar nad Hronom, Zarnovica and Banská Štiavnica in part Sub-Regional Solid Waste Management Strategy and Investment Plan prefers Scenario 4 of proposed alternative of waste management plan for municipalities. That scenario is based on improved landfill management at the Ziar nad Hronom site only with other sites being closed when their presently available capacity is utilized. From that time waste will be transferred either to the Ziar nad Hronom landfill, or out of the region. The separation and recycling of wastes will be accelerated.

In that scenario transfer stations play important role in waste handling from the source areas (municipality of Banská Štiavnica, Zarnovica and Nová Bana, possibly Kremnica).

¹ From different sources - mainly private investors - the 15 000 t of waste is the minimum for the landfill of 3rd class, which has to meet strict design criteria, to dispose to make profit. Another source states 25 000 t (REDIS - Sub Region Solid Waste Management Strategy and Investment Plan, draft May, 99).

9) Ziar nad Hronom

Aluminum smelter in Ziar nad Hronom is the biggest industrial facility in Hron River Basin. Aluminum production results in waste origination. "Red" and "brown" sludge stockpile of ZSNP Ziar nad Hronom is well visible from far around, it is about 40 m high. The stockpile length is about 1000 m and width about 400 m. It covers area of 45 ha. That stockpile is actually great tailing ponds, where "red" and "brown" slag was transported by hydraulic means for several decades. In present the term "sludge fields" is preferred.

Leachate from this sludge fields is extremely alkalinous ($8 < \text{pH} < 14$) and also ammonia and dissolved Na salts are far above limits (M. Drahoš, 1998). Sludge fields represent thus serious danger for river Hron water quality. River Hron runs just 600 - 700 m to the north and to the west from sludge fields.

To eliminate contamination the underground sealing wall was constructed around the sludge fields within the years 1993 - 1997. As monitoring of ground water quality proved, underground bentonit barrier efficiently prevents contaminated water enter the river Hron.

Another problem is to reclaim sludge fields in appropriate way and make it part of landscape. In these days long-term attempts of several ways, how to get and keep sludge fields green is performed. Grass rehabilitation seems to be the most appropriate way to do it. Unsolved problem is still how to deal with about 100 000 m³ of contaminated, highly alkalinous water inside the isolated sludge fields site (F. Lafférs - M. Chovanec, 1998).

Tailing ponds near Kremnica:

Kremnica - Horná Ves tailing ponds contain remains after Au (+ Ag) ore processing by cyanide method. It was in use in years 1986 - 1992 and about 51 600 t of waste slurry was deposited here. Cyanide content (CN⁻) in waste slurry was controlled continually, so deposited matter is consider to be non-toxic (M. Arvensis, 1995). Its composition is reported as 90% SiO₂, 3% Al₂O₃ and 2% Fe₂O₃.

Tailing pond dam impermeability is monitored by monitoring wells.

