

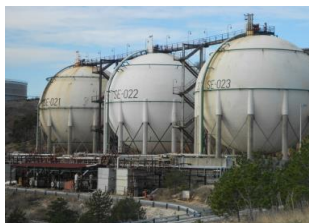
## **Management and planning of risk based environmental inspections linked to European environmental legislation (IED, SEVESO, RMCEI)**

### **Application of the Integrated Risk Assessment Method tool in Croatia**

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 Head of Section, Senior Environmental Inspector  
 Ministry for Environmental and Nature Protection  
 CROATIA

## **Contents**

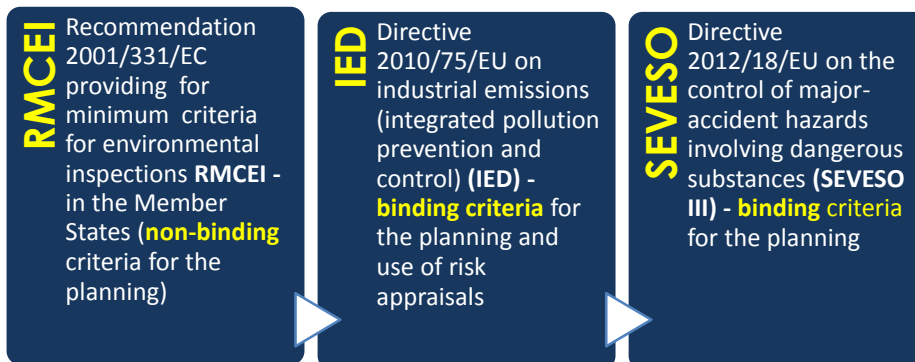
- Legal base for risk assessment planning
- Risk assessment planning in Croatian legislation
- Integrated Risk Assessment Method (IRAM)
- Developing risk assessment forms for IED installations



## A legal base for risk assessment

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Recognizing that there was a wide disparity between inspection systems in the Member States, the European Parliament and the Council adopted several legislation:



3

## RMCEI and planning

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*Recommendation 2001/331/EC*, providing for minimum criteria for environmental inspections in the Member States, **Article IV** :

- Member States should ensure that environmental inspection activities are planned in advance, by having at all times a plan or plans for environmental inspections providing coverage of all the territory of the Member State and of the controlled installations within it.
- Each plan for environmental inspections should as a minimum:
  - prescribe the **programmes** for routine environmental inspections, taking into account **environmental risks**; these **programmes** should include, where appropriate, the frequency of site visits for different types of or specified controlled installations;

4

## IED and planning

### *Industrial Emission Directive , Article 23 (2) IED 2010/75/EC*

- Member States shall ensure that all installations are covered by an environmental **inspection plan** at national, regional or local level and shall ensure that this plan is regularly reviewed and, where appropriate, updated
- Each environmental **inspection plan** shall include a general assessment of relevant significant environmental issues; the geographical area covered by the inspection plan; a register of the installations covered by the plan; procedures for drawing up **programmes** for routine environmental inspections; procedures for non-routine environmental inspections pursuant to paragraph; where necessary, provisions on the cooperation between different inspection authorities.



5

## IED and planning

### *Industrial Emission Directive, Article 23 (4) IED 2010/75/EC*

- Based on the inspection plans, the competent authority shall regularly draw up **programmes** for routine environmental inspections, **including the frequency of site visits for different types of installations.**
- The period between two site visits shall be based on a **systematic appraisal of the environmental risks** of the installations concerned and shall not exceed 1 year for installations posing the highest risks and 3 years for installations posing the lowest risks.

6

## SEVESO and planning

**Directive 2012/18/EU**, on the control of major-accident hazards involving dangerous substances (SEVESO) **Article 20** :

- Member States shall ensure that the competent authorities organize a system of inspections.
- Based on the inspection plans referred to in paragraph 3, the competent authority shall regularly draw up **programmes** for routine inspections for all establishments including the frequency of site visits for different types of establishments.

The period between two consecutive site visits shall not exceed one year for upper-tier establishments and three years for lower-tier establishments, unless the competent authority has drawn up an inspection **programme** based on a **systematic appraisal** of major-accident hazards of the establishments concerned.

7

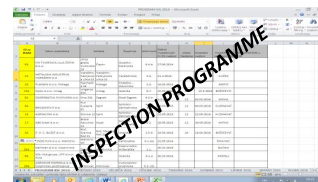
### Inspection plan:

- It is wider document comparing to a programme (IED Article 23(2) and 23(3))



### Programme:

- It is part of the inspection plan and tells the inspector when, where and what he or she should be doing. In practice this is often a table with the names of the installations, the name(s) of the inspector(s), the type of inspection, the date or time frame (week or month) the type and additional information needed to execute inspections. It is a kind of schedule for inspector work.



## Planning of risk based environmental inspections in Croatia

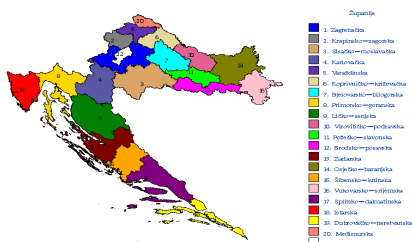
### Legal obligation for risk assesment in Croatian legislation

- IED and SEVESO Directive is transposed in Croatia Environmental Protection Act (EPA) (Official Gazette 80/13, 78/15), Regulation on environmental permit (OG No. 8/14) and Regulation on the prevention of major accidents involving dangerous substances (OG No. 44/14)
- obligation for risk assesment of **178 IED** installations in Croatia
- no risk assesment for SEVESO installations (inspection controls of **24 upper tier** installations every year and 3 years for lower tier installations regarding obligation in Regulation on the prevention of major accidents involving dangerous substances (OG No. 44/14))

9

## Planning of risk based environmental inspections in Croatia

- Ministry for Environmental and Nature Protection (MENP) – central authority for implementing environmental management and protection policy in Croatia (coordinating role)



- 75 environmental inspectors are operating through the Central Office in Zagreb and 20 Offices organized in 3 Branch Units (Zagreb, Šibenik and Osijek)

28.6.2016.

10

## Planning of risk based environmental inspections in Croatia

### Cooperation between inspection services

For inspection of IED and SEVESO industrial installations in Croatia we perform Coordinated inspection controls since 2007 according to *Agreement on cooperation between inspection services*

- Environmental inspection (coordinators)
- Water protection inspection
- Sanitary inspection
- Firefighting inspection
- Pressure equipment inspection
- Agricultural inspection
- Veterinary inspection
- Mining inspection



11

## Planning of risk based environmental inspections in Croatia

Why risk assesment? What do we regard as most important to inspect?



12

## Planning of risk based environmental inspections in Croatia

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**Risk-based approach**



**Highest risk first!**

(most inspection effort should be expended on the objects with the highest risks)

**Limited resources** (inspectors and finance)



**PRIORITISATION**

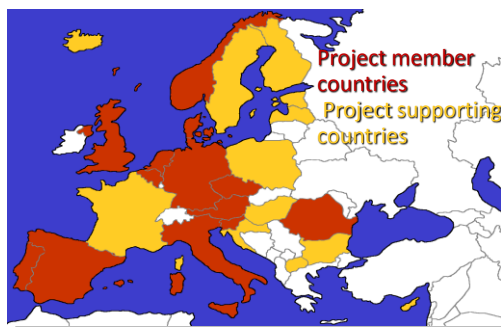
<b>HIGH RISK</b>	<b>12 months</b>
<b>MEDIUM RISK</b>	<b>24 months</b>
<b>LOW RISK</b>	<b>36 months</b>

13

## Planning of risk based environmental inspections in Croatia

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- 2010. - 2012. IMPEL easyTools Project: Risk assessment in inspection planning
- main objective of the project was to develop an easy and flexible risk assessment tool as part of the planning of environmental inspections linked to European environmental law (IED and SEVESO) and the RMCEI
- new rule based methodology was developed and tested, called **Integrated Risk Assessment Method (IRAM)**
- Croatia was participating in the Project



14



## Planning of risk based environmental inspections in Croatia

- In 2014. Croatia started implementation of **I**ntegrated **R**isk **A**ssessment **M**ethod (IRAM) for prioritization of inspection controls of IED installations ( legal obligation) and waste management operators (no legal obligation for risk assesment)
- In 2016. first inspection programme for IED installations partially based on **IRAM** method

15

## Planning of risk based environmental inspections in Croatia

- Croatia used experience of our neighboring country-Slovenia trough ECRAN and IMPEL meetings
- Participation in these networks was of the great benefit for Croatia



- Advantage:
  - - no language barrier
  - - there is no significant differences between type and number of IED installations and other installations /operators

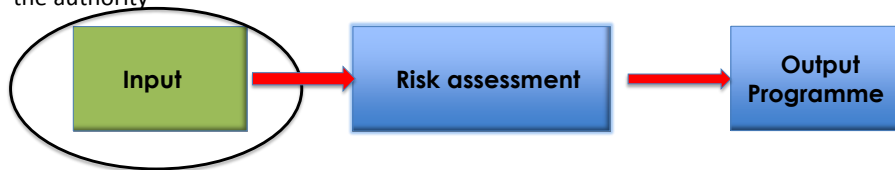
16



## Planning of risk based environmental inspections in Croatia

### Data for IRAM (Integrated Risk Assessment Method - input)

- Data base (register ) of activities and installations (numbers and geographical distribution of installations) EPA (AZO)
- Legal obligations to inspect (*Croatia Environmental Protection Act, Regulation on environmental permit and Regulation on the prevention of major accidents involving dangerous substances*)
- Resources (human and financial resources-75 environmental inspectors)
- Data from previous inspections (date of last visit, emissions, compliance with permit, EMAS, etc.)
- Information about companies and installations that fall under the competence of the authority



17

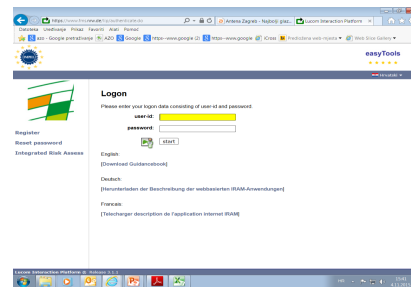
## Planning of risk based environmental inspections in Croatia

Integrated Risk Assessment Method (IRAM) is web based programme for risk assessment in inspection planning -Address of the programme:

<https://www.fms.nrw.de/lip/authenticate.do>

IRAM programme distinguishes:

- **Administrator** –highest level of authorization
- **Coordinator** – decides on inspection tasks, criteria, and steering terms and factors
- **Inspector** –does the risk assessment



18

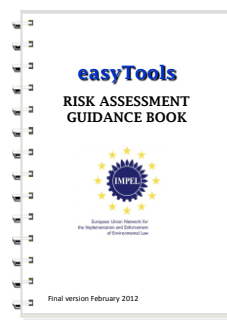
## Planning of risk based environmental inspections in Croatia

### Important steps for implementation of IRAM:

- Setting the national coordinator
- Registration in the system (coordinator and inspectors)
- **Development of Risk Assessment Forms for risk criteria**
- Training of inspectors
- Evaluation

### Recommendation:

- Introduction in Risk Assessment
- Integrated Risk Assessment Method (IRAM)
- Manual of the online IRAM tool
- Examples of impact and probability criteria



19

## Planning of risk based environmental inspections in Croatia

- **Risk** is function of the severity of the consequence (effect) and the probability this consequence will happen



- **Effect** depends on the source (how powerful is it ?) and receptor (how vulnerable is it ?) – **Impact Criteria (IC)**
- **Probability** is a function of the level of management, level of compliance with laws, regulations, permits, attitude, age of installation – **Operator Performance Criteria (OPC)**

20

## Developing risk assesment forms for IED installations

- Following Slovenian example, Croatia developed 6 IC and 3 OPC

Impact Criteria (IC)	Operator performance criteria (OPC)
Realises to air	Compliance
Releases to water	Attitude of the operator
Off-site transfer of waste	Environmental management system
Sensitivity of the local environment	
Risk of accidents	
Noise	

21

## Developing risk assesment forms for IED installations

### • Impact Criteria (IC)

#### Realises to Air

DESCRIPTION	VALUE
No stationary sources in to the air from installation and there are no releases to air	0
Stationary sources in to the air from installation, no treshold is exceeded of emission limit value (ELV)	1
Stationary sources in to the air from installation, 1 pollutant treshold is exceeded in amount < 10% emission limit value (ELV)	2
Stationary sources in to the air from installation, 2 pollutants treshold are exceeded in amount < 10% of emission limit value (ELV) or 1 pollutant treshold is exceeded in amount > 10% of emission limit value (ELV)	3

#### Realises to Water

DESCRIPTION	VALUE
There is releases from installation in to the water but no exceeded treshold emission limit value (ELV)	1
There is releases from installation in to the water, exceeded 1 treshold pollutant in amount < 10% emission limit value (ELV)	2
There is releases from installation in to the water, exceeded 2 treshold pollutant in amount < 10% of emission limit value (ELV) or exceeded 1 treshold pollutant in amount > 10% of emission limit value (ELV)	3

22

## Developing risk assesment forms for IED installations

### Off-site transfer of waste

DESCRIPTION	VALUE
On location of installation - non-hazardous waste <20 t/y or hazardous waste <0,5 t/y	0
On location of installation - non-hazardous waste 20-150 t/y or hazardous waste <0,5 t/y	1
On location of installation - non-hazardous waste >150 t/y or hazardous waste >0,5 t/y	2
On location of installation - waste management activity	3

### Sensitivity of the local environment (schools, kindergartens, hospitals)

DESCRIPTION	VALUE
No sensitive areas in the surroundings or distance is >10 km	0
Sensitive areas outside the influence sphere of emissions or distance is < 10 km	1
Sensitive areas within the influence sphere of emissions or distance is <5 km	2
Sensitive areas within the influence sphere of mayor accidents or distance is <1,5 km	3
Sensitive areas close to facility premises, the distance is <100 m	4
Facility lies within a sensitive area or in the direct vicinity	5

23

## Developing risk assesment forms for IED installations

### Operator performance criteria (OPC)

#### Compliance with Environmental Permit

DESCRIPTION	VALUE
No relevant non compliances of the installation with the permit conditions or violation of the operator duties	-1
One relevant non compliance of the installation with the permit conditions or violation of the operator duties	0
More than one relevant non compliance or one important non compliance with the permit conditions or violation of the operator duties	1



24

## Developing risk assesment forms for IED installations

### Attitude of the operator

DESCRIPTION	VALUE
Operator reacts immediately after recognising a condition of relevant non-compliance	-1
Operator reacts after receiving a warning letter form the competent authority	0
Operator reacts only after repeated warning letters or after a formal administrative decree of the competent authority	1



25

## Developing risk assesment form for IED installations

### Environmental management system

DESCRIPTION	VALUE
Site is registered under EMAS and the operator is working successfully with this environmental management system	-1
Site is not registered under EMAS but the operator is working successfully with an accepted environmental management system (ISO)	0
Site is not registered under EMAS and the operator is not working with an accepted environmental management system	1




26

**Logon**

Please enter your logon data consisting of user-id and password.

**user-id:**

**password:**

 **start**

English:  
[Download Guidancebook]

Deutsch:  
[Herunterladen der Beschreibung der webbasierten IRAM-Anwendungen]

Français:  
[Telecharger description de l'application Internet IRAM]

Logon Interaction Platform - Release 3.1.1

27

**easyTools**

Logged in as: Dubravka Pajkin Tuckar

**Welcome, Dubravka Pajkin Tuckar!**

Date of the last logon: 2015. studeni 21 at 21:06

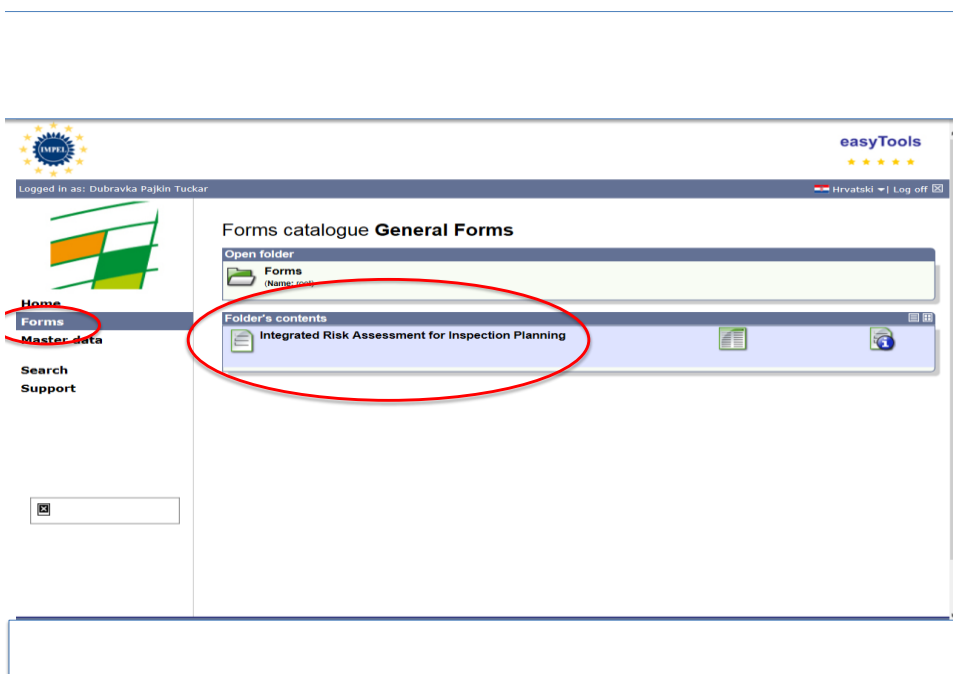
You are on the IMPEL form server that provides you with an application for risk assessment in inspection planning.

**Home**  
**Forms**  
**Master data**  
**Search**  
**Support**

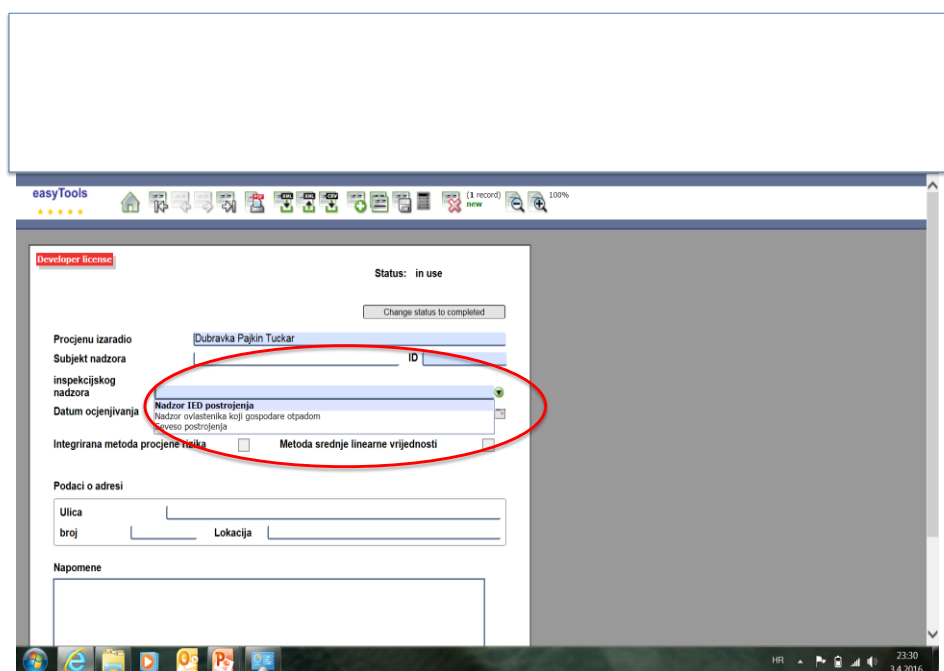
Hrvatski | Log out

Czech  
Deutsch  
English  
Français  
Portuguese  
Slovenian

28



29



30



### IMPACT CRITERIA (IC)

easyTools

	Najveći rezultat	Ocjena	Prostorna ocjena (redina)
Emisije onečišćujućih tvari u zrak	3	0	0
Nastajanje otpada	3	0	0
Rizik od nastanka velike nesreće/skladištenje opasne	3	0	0
Emisije onečišćujućih tvari u vode	3	0	0
Emisija buke	2	0	0
Utjecaj na ljudsko zdravlje i okoliš	3	0	0
Osetljivost okoliša u neposrednoj blizini operatera	5	0	0

Minimalni broj najviših ocjena: 2    Najniža kategorija rizika: 1    Najviša kategorija rizika: 3

Unos ocjena o ponašanju operatera

Kriterij usklađenosti subjekta

	Težina kriterija	Rezultat
Sustav upravljanja okolišem	1	0
Reakcija operatera na utvrđene nepravilnosti	1	0
Usklađenost operatera s okolišnom dozvolom	1	0

Srednja vrijednost ocjena o ponašanju operatera

31

easyTools

record 1 of 1 modified

Risk ranking number	21111100
Najviši ocjena rizika	2
Broj najviših ocjena rizika	1
Kategorija rizika	1
Inspeksijski nadzori s najviše uloženeog truda(100%)	25
Ukupna složenost nadzora	7
Inspeksijski nadzori s najviše uloženeog truda (postotak)	28 %
Kategorija(vrsta) inspeksijskog nadzora	B
Učestalost inspeksijskog nadzora	36
Rok najkasnije provedbe sljedeceg inspeksijskog nadzora	10.09.2017
Zbroj profila rizika	7
Srednja vrijednost profila rizika	1.0
Napomene	

Inspection frequency (36 months)

Latest inspection date

32

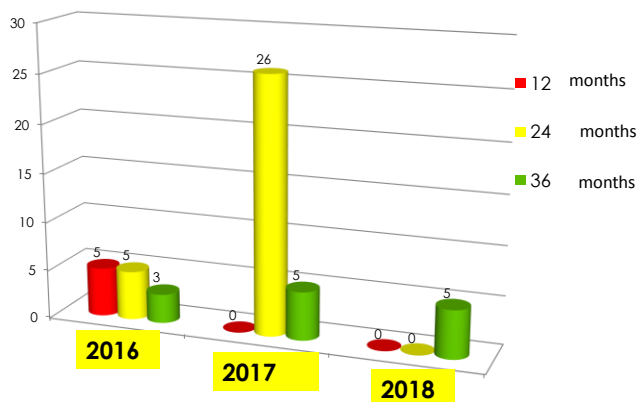
## Results of evaluation (2014.-2015.)

- 44 environmental inspectors participated in evaluation in IRAM
- 185 installations was evaluated after inspection controls (61 IED installations and 124 WMI-waste management installations (hazardous waste, recycling))

185 installations/ total	IED 61	%	WMI 124	%
HIGH RISK/12m	15	24,6%	45	36,29%
MEDIUM RISK/24m	33	54,1%	38	30,64%
LOW RISK/36m	13	21,3%	41	33,06%

33

Frequency of site visits for IED installations in 2016., 2017., 2018.  
regarding IRAM evaluation



34

## PROGRAMME FOR COORDINATED INSPECTION CONTROLS IN 2016.

ID za IRAM	Name of operator	Address	County	Activity	Last inspection date	Frequency of site visit (month)	Name of COORDINATOR in last site visit	Name of COORDINATOR in 2016.
83.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC
21.	METALSKA INDUSTRIJA VARAŽDIN d.d.	Varaždin, Fabijanska ulica 33	Varaždin, Fabijanska ulica 33	Varaždinska	2.4.	21.3.2014.	KLUČEK	KLUČEK
22.	PLAMEN d.o.o. Požega	Njemačka 36	Požega	Požebilo - slavonska	2.4.	16.05.2014.	SERTIĆ	MATUJEVIĆ
154.	Spis d.o.o. Umag	Ungarska 40a	Istarska		6.7.	15.05.2014.	24	BOŽIČEVIĆ
85.	SLADORANA d.d. Županja	Šetfarska ul.	Županja	Vukovarsko-srijemska		12.09.2014.	SERTIĆ	MILETIĆ
30.	OV d.o.o. tvornica vijaka, Podružnica Knin	IV Gardijske Brigade 44	Knin	Šibensko - kninska	2.6.	25.2.2014.	KRINIĆ	KRINIĆ
27.	UPOVČKA d.o.o. Popovača	Lipovečka 22	Popovača	Štaško - moslavačka	2.5.8	28.11.2014.	TADIĆ	TADIĆ
84.	TVornica šetara Osijek d.d.		Osijek, Frankopanska 99	Opječko - baranjska	6.4.b	27.10.2014.	SERTIĆ	MANENICA
29.	DALEKOVOD-Proizvodnja d.o.o.	Trnobišća bb	Dugo Selo	Zagrebačka	2.6.	11.09.2014.	24	JELIĆ
63.	UNDE PUN d.o.o. Mahližno	Mahližno bb	Mahližno	Karlovčka	4.1.(a)	22.09.2014.	ŠIMUNIĆ	ŠIMUNIĆ
176.	Hartman d.o.o. Koprivnica	Dravska	Koprivnica	Koprivničko-križevačka	1.1.	20.10.2014.	RUČAN	RAČKI
69.	SOL-INA grupa, UTP d.o.o. Pula	Svetog Polikarpa 4	Pula	Istarska	4.1.a	20.10.2014.	KRSTELI	BOŽIČEVIĆ
168.	AGROKOR ENERGIJA d.o.o., bioplinisko postrojenje	Mitrovač	Mitrovač	Opječko - baranjska	5.3. (b)			Pubić

35

## PROGRAMME FOR COORDINATED INSPECTION CONTROLS IN JUNE 2016.

PROGRAM KN 2016 konačno 1 - Microsoft Excel													
Datoteka	Polazno	Umetanje	Izgled stranice	Formule	Podaci	Pregled	Prikaz						
Zaljeplji													
Meduspremkir													
C9													
20.-24.06.													
ID za IRAM	Name of operator	Address	County	Activity	Last inspection date	Frequency of site visit (month)	Name of COORDINATOR in last site visit	Name of COORDINATOR in 2016.					
1.	TLM Aluminium d.d. Slavonski	Narodni preporod 12, Slavonski	Slavonski	Slavonski	10.06.	10.06.	JADRANKA ŠTEIN	JADRANKA ŠTEIN					
2.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					
3.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					
4.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					
5.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					
6.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					
7.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					
8.	IPK TVORNICA ULJA ČEPIN d.o.o.	Ulica grada Vukovara 18, Čepin	Čepin	Opječko - baranjska	6.4.b	27.06.2014.	ŠTIMAC	ŠTIMAC					

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Inspection programme for coordinated inspection controls in 2016.  
(88 installations in total)

- 13 IED installations (IRAM risk assesment)
- 43 IED installations that have not been inspected yet and installations with oldest date of last inspection
- 24 upper tier SEVESO installations (obligation regarding Regulation on the prevention of major accidents involving dangerous substances, OG No. 44/14)
- 8 lower tier SEVESO installations (obligation regarding Regulation on the prevention of major accidents involving dangerous substances,OG No. 44/14)

37

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### Future planned actions



#### 2016

- coordinated inspection controls of all IED and SEVESO installations to collect informations and assess the risk in IRAM easy tools

#### 2017

- adequate enforcement actions on all High Risk sites (HR) with low level of compliance sites, especially the ones with high risk classification (HR) in order to reduce the non compliances
- inspection of all high risk sites (HR)

#### 2018

- follow-up inspections in order to check whether the measures were implemented and if compliance has improved (in case of HR and low compliance sites) and inspection of the MR

38

**Thank you for your attention**

**DUBRAVKA PAJKIN TUČKAR**  
Ministry of Environmental and Nature  
Protection  
Directorate for Inspection  
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