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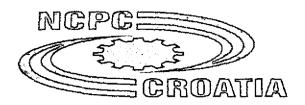
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PROJECT: GF/CRO/02/007

ENABLING ACTIVITIES TO FACILITATE EARLY ACTION ON THE IMPLEMENTATION OF THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS (POPs) IN THE REPUBLIC OF CROATIA

Amendment No:1

FINAL REPORT

On behalf of the Croatian Cleaner Production Centre:

Goran Romac

ZAGREB, MAY 2006

1	INTRODUCTION	2
2	RATIONALE FOR ADDITIONAL ACTIVITIES	
	2.1 DEFINING "WHITE SPOTS" OF THE PRELIMINARY INVENTORY AND ANALYTICAL TESTING OF POSSIBLE PCBS CONTAMINATED OIL TRANSFORMERS AND PCB CONTAMINATED SPOTS. 2.2 ORGANIZATION OF A HIGH LEVEL AWARENESS SEMINAR ABOUT IMPORTANCE OF STOCKHOLM CONVENTION	7
3	PERFORMED ACTIVITIES	4
	3.1 DEFINING "WHITE SPOTS" OF THE PRELIMINARY INVENTORY	4
	3.2 SAMPLING AND ANALYTICAL TESTING OF OIL TRANSFORMERS	
	3.3 ORGANIZATION OF A HIGH LEVEL AWARENESS SEMINAR ABOUT IMPORTANCE OF STOCKHOLM CONVENTION	
4	DISCUSION OF THE RESULTS	7
5	01211222 1 02 11 (
6	CONCLUSION	8
A	NNEX I: MEMBER OF TASK TEAMS FOR DEFINING WHITE SPOTS	10
A	NNEX II: TERITORIAL DISTRIBUTION OF THE SAMPLES	11
A	NNEX III: TASK TEAM MEMBER FOR ANALYTICAL TESTING	. 12
	NNEX IV: OIL TRANSFORMER DATA	,
A	NNEX V: AGENDA AND LIST OF PARTICIPANTS	. 22
Α	NNEX VI – PHOTO DOCUMENTATION FROM THE SEMINAR	. 24

INTRODUCTION

This report presents the results of the performed activities according to Amendment no.1 of the UNIDO Contract No. 2002/067, Project: GF/CRO/02/007 "Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants in the Republic of Croatia".

Activities were defined as follows:

- Definition of "white spots" of the preliminary inventory, verification of some data on quantities of PCBs and their contents
- Analytical testing of possible PCBs contaminated oil transformers and PCB contaminated spots
- Organization of a high level awareness seminar about importance of Stockholm
 Convention for national stakeholders and decision makers.

2 RATIONALE FOR ADDITIONAL ACTIVITIES

2.1 Defining "white spots" of the preliminary inventory and analytical testing of possible PCBs contaminated oil transformers and PCB contaminated spots.

Based on analysis and review of preliminary PCBs inventory performed by national and UNIDO experts (Mr. Mueller) need for clarification and checking of some of the data was determined. The preliminary PCBs inventory identified 23.000 capacitors (656 t) and 304 transformers (729 t) in Croatia.

Since during the inventory development phase data from some counties in Croatia related to amount of PCBs were missing, it was assumed that real amount of the PCB contained equipment *could be higher* than originally identified in the preliminary inventory.

Another issue which supported that assumption was the fact that NIP inventory development phase did not took into consideration the possibility of contamination of oil transformers with PCBs, as a results of improper manipulation during replacement and refilling of the transformers oil activities.

All above mentioned was the basis for additional activities oriented to definition of "white spots" and analytical testing of oil transformers, which would resulted in more precise PCBs inventory data and better information about the scope and extend of possible PCBs contamination of oil transformers in general in Croatia.

2.2 Organization of a high level awareness seminar about importance of Stockholm Convention

Since Croatia still did not ratify the Stockholm Convention, it was assumed that the additional activities i.e. organization of high level awareness seminar about importance of Stockholm Convention for national stakeholders and decision makers would enhance the process of ratification.

Ratification of Stockholm Convention could be harmonized with Croatian recent start of EU accession negotiations (end of 2005.) especially since EU requirements related to PCBs are even stricter than the requirements of the Stockholm Convention.

3 PERFORMED ACTIVITIES

3.1 Defining "white spots" of the preliminary inventory

"White spots" within the PCBs preliminary inventory were defined as:

- counties in Croatia with no registered PCBs equipment,
- equipment which is nominally PCB free, but possibly PCB contaminated,
- PCBs contaminated spots.

Since during the inventory development phase PCBs contaminated spots were not identified (National Implementation Plan; chapter 2.3.2.8.) activities were focused to the identification of the counties in Croatia in which there is no registered PCBs equipment and identification of possible PCBs contaminated oil transformers.

Due to the fact that HEP - Croatian electrical utility is the biggest owner of PCBs equipment it was decided that the focus of additional activities would be oriented to HEP's installation and facilities. That ensured the most effective and fastest process of data collection and verification, together with the analysis of transformer oils. Within its organization HEP has 4 Transmission and 21 Distribution Areas. Number of Distribution areas is equal to number of counties in Croatia.

The new task team (Annex I) consisting some of the members of the PCBs inventory task team, included in the previous phases of the Project was established. The representative of the HEP responsible for all 21 distribution areas, as well as local staff member were included in the definition of "white spots" and collection of new data.

Determined criteria's for identification of possible contaminated oil transformers were:

- production year;
- performed conditioning of transformers oil (centrifuging, vacuuming, filtration);
- performed refilling of transformers;
- performed regular maintenance;

It was assumed that during these activities by using the improper equipment and oil, the possible contamination with PCBs could have appeared.

These activities were performed from September to November 2005.

3.2 Sampling and analytical testing of oil transformers

3.2.1 Sampling of oil transformers

Collection of oil transformers samples was performed from October 2005. to February 2006. in coordination with HEP.

These activities resulted with sampling of 197 transformer oil samples from 11 Croatian counties (territorial distribution of the samples is shown in the Annex II of the Report).

3.2.2 Analytical testing

Analytical testing of samples was mostly done within the KONČAR* (Electro Technical Institute) laboratory by using the Clor-N-oil 50 ppm test kits (200 pieces). During the analytical testing 3 samples were analyzed twice with Clor-N-oil 50 ppm test kits to reconfirm positive result (list of task team members is given in the Annex III of the Report).

Summary of analytical testing results are given in Table 1:

Table 1: Results of analytical testing

Number of oil transformer samples	Number of samples confirmed as PCBs free	Number of samples identified as PCBs	Percentage of positive samples on PCBs
197	188	9	4,6

Detail information about performed activities are given in the Annex IV of the Report.

Information contains the following data:

- Sample No.
- Owner Location
- Transformer producer
- Transformer type
- Serial Number
- Year
- Power (MVA)
- Transformer ratio U1/U2 (kV/kV)
- Type of oil
- Weight of oil (in tons)
- Date of sampling

^{*} The biggest producer of transformers and electrical equipment in south-east Europe

- Results of analysis (>50 ppm)
- Photography Link

Every sample was photographed before and after analytical testing. In the electronically (MS Word) version of the Report links are provided to connect the data directly with belonging photography.

Analytical testing of oil transformers was performed parallel with sampling activities and it was finished by the end of February 2006.

According to the recommendation of UNIDO expert (Mr. Muller) after performed review of the results, two of the samples (No. 107 and 183 - Annex IV) were tested in GC laboratory on PCBs content. (Testing was performed in April 2006).

Result of the laboratory testing confirmed the assumption that during the analytical testing with Clor-N-oil test kits, these two samples had false positive result, i.e. these two samples are not PCBs contaminated.

Taking above mentioned into account the new updated results of the analytical testing are given in the Table 2.

Table 2: Updated results of analytical testing

Number of oil transformer samples	Number of samples confirmed as PCBs free	Number of samples identified as PCBs	Percentage of positive samples on PCBs
197	190	7	3.6

3.3 Organization of a high level awareness seminar about importance of Stockholm Convention

During the initial talks with the representatives of the Ministry of Environmental Protection, Physical Planning and Construction about the current status of the ratification process, it was concluded that the holding of the high level seminar about the importance of the Stockholm Convention fits in line with the current initiation of the ratification process started within the Ministry.

For this activity Croatian Cleaner Production Centre has received the support of the State Secretary within the Ministry of Environmental Protection, Physical Planning and Construction Mr. Nikola Ružinski (GEF National Focal Point).

The participation of representatives of the two departments within the Ministry (department for waste management and department for protection of atmosphere) was also agreed with the State Secretary.

Seminar was held on the 14th of November 2005, in Zagreb office of Croatian Chamber of Economy (Agenda and list of participants is given in the Annex V).

Participants from relevant ministries, national agencies, companies, NGO's and scientific institutions attended the seminar. (Photo documentation from seminar is given in the Annex VI.)

Seminar covered the topics of POPs legal requirements on Croatian, European and International level, as well as the review of performed activities up to now and practical implications of PCBs waste management problem in Croatia.

After the presentation and comprehensive discussion in as a conclusion it can be pointed out:

- 1. Hazardous waste in general and PCBs waste in particularly is the national priority from the point of accession to the EU.
- 2. The most important precondition is the PCB data base and its regular updating.
- 3. Croatian National Waste management Strategy (Official Gazette) has adopted the guidelines from the NIP related to the PCBs management.
- 4. Stockholm Convention is in the plan for the ratification in the 2006.
- 5. This was the first time that the estimation of the ratification costs was done (NIP), before the initiation of the ratification process.

Additional meetings and contacts with the representatives of the Ministry of Environmental Protection, Physical Planning and Construction were held in the period after the seminar to discuss how the process of ratification can be supported and catalyzed.

4 DISCUSION OF THE RESULTS

When the collected data from analytical testing are analyzed it is noticeable that most of transformers are produced by KONČAR.

All tested transformers can by divided in different categories:

Transformer age	Number of transformers
older than 1985 (incl. 85):	138
younger than 1985	50
unknown age:	9
Transformer power	Number of transformers
< 1 MVA	80
1 -10 MVA	48

Contaminated transformers can be also divided according to the same principle:

Transformer age	Number of transformers
older than 1985 (incl. 85):	6
younger than 1985	-
unknown age:	1
Transformer power	Number of transformers
< 1 MVA	4 ,
1 -10 MVA	3
> 10 MVA	-

Further on statistic shows that:

- 4.3 % of the transformers older than 1985 are contaminated
- 5 % of the transformers below 1 MVA are contaminated
- 6.3 % of the ones between 1 and 10 MVA are contaminated

5 UPDATED PCB INVENTORY DATA

In total, 7 new PCBs transformers were identified as the result of the analytical testing campaign. Their amount accounts for 7 160 kg.

Based on the above, the updated quantities and amount of PCBs in Croatia are as follows:

22 859 capacitors	655 705 kg
313 transformers	733 840 kg.

Consequently, the total amount of PCBs identified in closed systems in Croatia is: 1 389 545 kg.

Increase in total amount of PCBs in transformers is 1.0 %, and increase in total amount of PCBs in closed systems is 0.5 %.

6 CONCLUSION

As a conclusion it can be stated that assumption of possible contamination of oil transformers during manipulation and maintaining was present in Croatia.

Geographical distribution of positive samples shows that 7 PCBs contaminated oil transformers are located in 5 different counties in Croatia. They are all produced by KONČAR and their production year diverse from year 1971 to year 1984.

For the total scope and magnitude of the contamination further activities are needed, which requires more financial assets and time.

Usage of other equipment available on the market for determination of PCBs concentration in oil transformers (L 2000 – Dexsil), would gave more precise and realistic results about PCBs oil transformer contamination in Croatia, and that kind of activities would be recommended to HEP and KONČAR by the Cro-CPC as a possible continuation of PCBs inventory activities in Croatia in the future.

ANNEX I: MEMBER OF TASK TEAMS FOR DEFINING WHITE SPOTS

Goran Romac - Cro CPC

Sanja Grabar -- APO Ltd.

Ana Antolović - Eko usluge

Bruno Antolović - Eko Usluge

Hrvoje Žura – Eko Usluge

Stjepan Megla – HEP Ltd.

Additional local staff of the HEP Ltd.

ANNEX II: TERITORIAL DISTRIBUTION OF THE SAMPLES



1.	Zagrebačka županija
n.	Krapinsko-zagorska župenja
iñ.	Sleedto modevačka županija
íV.	Karkovečka župenija
Y , ,	Varaždinska župenije
/W.	Koprivničko-križavačka župenja
VIL	Bieloversko-hilogorulus župenile
VIII.	Primorako goranaka županta
IX.	Ličko centska županije
K.	Virovitičko-podravska županja
XJ.	Požetko-siavonska županija
XIL	Brodsko-posavska županija
XIII.	Zadarska županije
XIV.	Osietko baranisko župenilo
XV	Sibenako-krimska župunija
XVI.	Vukoversko-erijemska županija
XVIL	Splitsko-dalmalinska županija
XVIII.	Islanska županije
XIX.	Dubrovečko-nerebranska županija
1 441 52	
XX.	Međimuzaka župenije
	Grad Zagrab

a constantino	
Ĺ	County of Zegreb
IJ.	County of Krapkse-Zagorje
IN.	County of Steak-Monlavine
JV	County of Kentovec
V.	County of Varezain
VI.	County of Kaprhinian-Kristovci
VII.	County of Sjelover-Bloggra
VAK.	County of Printerja-Gorald ketter
IX.	County of Like-Son
X	County of Virovilics-Podravise
	County of Possos-Stevents
XIL	County of St. Brod-Possvine
	County of Zoder
XIX	County of Onfak-Bernnie
XV.	County of City and Make
	County of Sibenik Knin
XVI.	County of Vultavar-Sigem
XVX	County of Soft-Datmetic
	County of table
XZX.	County of Dubrownik-Neverva
AA,	County of Madimuja
	City of Zegreb
	· ·

ANNEX III: TASK TEAM MEMBER FOR ANALYTICAL TESTING

Goran Romac - Cro CPC

Sanja Grabar - APO Ltd.

Andrija Crnčević – APO Ltd.

Ana Antolović - Eko usluge

Bruno Antolović – Eko Usluge

Hrvoje Žura – Eko Usluge

Stjepan Megla – HEP Ltd.

KONČAR (Electro Technical Institute) laboratory staff

Additional local staff of the HEP Ltd.

ANNEX IV: OIL TRANSFORMER DATA

	Location	Transformer producer	Fransformer type	Serial Number	Year	Power (MVA)	Transformer ratio U1/U2 (kV/kV)	Type of ail	Weight of oil (tons)	Date of sampling	Results of analysis (>50 ppm)	Photography - Link to Appendix
	REGULACIJSKI TRAFO	KONČAR	ARN 3800-12	457511	1980	3,8	10,5/10,5	TECHNOL Y-3000	1,31	6.10.2005	ON	PC130001
	PBT-1, 110 kV	ACEC	4BCT 12134-1	4BCT 12134-1	1974	32 (45)	110	TECHNOL Y-3000	17,5	6.10.2005	O _N	PC130002
	PBT-2, 110 kV	ACEC	4BCT 12134-2	4BCT 12134-2	1974	32 ' (45)	110	TECHNOL Y-3000	17,5	6.10.2005	ON	PC130003
	BT-1, 110 kV .	KONČAR	TNP16000-110	303003	1957	16	110	TECHNOL Y-3000	19	6.10.2005	ON	PC130004
	BT-2, 110 kV	KONČAR	TNP16000-110	303002	1957	16	110	TECHNOL Y-3000	19	6.10.2005	Q.	PC130005
	TRAFO 20 MVA	KONČAR	3TR20000-123	334069	1969	20 .	110/36,75/10,5	TECHNOL Y-3000	17,5	15.9.2005	<u>Q</u>	PC130006
	AUTOTRAFO 150 MVA	KONČAR	KFRM18431/220E	337008	1965	150	253/115/10,5	SHELL DIALA C	51,3	15.9.2005	Q.	PC13000Z
	BLOK TRANSFORMATOR 1	KONČAR	TOVg 80000-245s	318000	1966	80	242/10,5	TECHNOL Y-3000	24	15.9.2005	ON ON	PC130008
	BLOK TRANSFORMATOR 2	KONČAR	TOVg 80000-123	309001	1966	80	121/10,5	TECHNOL Y-3000	15	15.9.2005	9	PC130009
	BLOK TRANSFORMATOR A	KONČAR	1TON43000-123/A	307035	1988	43	115/6,3	TECHNOL Y-3000	14	25.1.2006	O _N	PC260001
	REZERVNI BLOK TRAFO	KONČAR	1TON43000-123/A		1981	43	115/6,3	TECHNOL Y-3000	14	20.1,2006	NO	PC260002
\dashv	MJ.NAP.TRMJ.POLUE A- FAZA 4	KONČAR	6VPU-123	785764	1988		110	mineral	80'0	3.2.2006	Q.	P1070003
-	MJ.NAP.TRMJ.POLJE A- FAZA 8	KONČAR	6VPU-123	785763	1988		110	mineral	80'0	3.2.2006	ON	P1070004
14 HE Varaždín	BLOK TRANSFORMATOR B	KONČAR	1TOV50000-123	338036	1995	50	115/10,5	TECHNOL Y-3000	6	20.1.2006	ON	PC260003
15 HE Varaždin	BLOK TRANSFORMATOR A	KONČAR	1TBV50000-123	308005	1974	50	115/10,5	TECHNOL Y-3000	12,1	3.2.2006	ON	P1070006
16 HE Čakovec	BLOK TRANSFORMATOR A	KONČAR	1TON43000-123	307028ੌ	1981	43	115/6,3	TECHNOL Y-3000	14	20.1.2008	ON	PC260004
17 HE Čakovec	BLOK TRANSFORMATOR B	KONČAR	1TON43000-123	307027	1981	43	115/6,3	TECHNOL Y-3000	14	3.2.2006	ON	P1070005
18 TE Rijeka	1UT-1	KONČAR	2TRP20000/24	317001	1976	20	20./6	mineral		31.1.2006	ON	P1150001
19 TE Rijeka	2UT-4	KONČAR	2TRP20000/24	317002	1976	20	20./6	mineral		31.1.2006	NO	P1150002
20 TE Rijeka	st	KONČAR	1TRP25000-24	403000	1976	25	240/6	mineral	,	31.1.2006	ON.	P1150003
21 TE Rijeka	GT-1	SEVIELIANO		60734	1973	370	240/20	mineral		31.1.2006	2	P1150004

PC170024	PC170025	PC170026	PC200001	C200002	PC200003	PC200004	PC240001	PC240002	PC240003	PC240004	PC240005	PC240006	-C240007	PC240008	PC240009	PC200026	PC200027	PC200028	PC240010	PC240011	PC240012	PC240013
BC	BC	S.	S	Si .	2	2) A	S	S.		8	2	묎	욊	S	N N	N N	S		8		십
ON	Q.	ON.	ON	Q Q	ON	ON	ON	ON	9	8	g	9	õ	Q.	9	Q.	S S	ON ON	Ŋ	ON ON	ON	9
29.11.2005	29.11.2005	29 11.2005	29.11.2005	29.11.2005	29.11.2005	29.11.2005	2.12.2005	9.12.2005	6.11.2005	5.12.2005	29.11.2005	9.12.2005	8.11.2005	6.12.2005	29.11.2005	2.12.2005	6.12.2005	6.12.2005	7.12.2005	11.1.2006	11.1.2006	11.1.2006
0,48	0,38	0,45	96,0	0,59	65,0	0,49	0,16		0,16		96,0		0,16	0,45	0,45	0,177	9	6				0,03
mineral oil	mineral oil	mineral oil	minerat oi!	mineral oil	mineral oil	mineral oil	Omen		mineral		TECHNOL IEC296x		mineral		TECHNOL EC296x	Omen			·			
10/0,4	10/0,4	10/0,4	10/0,4	10/0,42	10/0,42	10/0/4	10/0,4	10/0,4	10/0,4	10./20	20/0,4	10/0,4	10/0,4	10/0/4	10/0,4	10/0,4	30/10,5	30/10,5	10/0,4	10/0,4	10/0,4	10/0,4
0,63	69'0	69'0	0,4	. 1	1	0,4	1,0	1	۵, ۱	91,0	6 9'0	0,25	0,1	සු '0	69'0	1'0	8	8	٥,1	50'0	90'0	90'0
1971	1976	1981	1985	1997	2000	1961	1963	1981	1979	1979	1994		1973	1978	1980	1966	1962	1962		1968	1962	1972
434156	451989	496111	520400	553842	559431	71748	2985	496212	481918	485924	544334	60342	439729	477863	491288	94780	182542	182544	3566	34523	19769	26253
3T630-12	7TBN 630-12/A	3TBN 630-24x/A	3TBNV400-24x/B	8EuTBNV1000- 24x/A	8EuTBNV1000- 24x/A	3TNp 20-10	2TNp 13-10	GTBNy1000-24x/A	T 100-12	TBN	3TBNV 630-24/B	2TNp 18-10	T 100-12	2TBN-630/24xB	3TBNv630-24/A	T100-12	T8000-38	T8000-38	TBPU-3572/10	Tn 50-12	TUN-51	NT 50/10-04
KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	Dinamo	ENERGOINVEST
TS 1555 SOKOLGRADSKA	TS 655 DESINEČKA	TS 1368 HRGOVIĆI	TS 1603 JARUN	TS 640 DOBOJSKA	TS 2011 STUBIĆKA- KOZGRA	TS 419 KIKIĆEVA	1TS38 MARTIN-PUT GRAB.	TS30/10 BOBOVICA	1TS186 PRESEČNO	TS 201 GRBANI	21S 43 DZ ZAPREŚIĆ	TS30/10 BOBOVICA	11S48 PSARJEVO GORNJE	TS 75 HBZ	21S33 KOMUNA ZAPREŠIĆ	11S32 ČRNEC DUGOSELSKI	3TS3 RUŽMARINKA	3TS6 DRŽIĆEVA	PTTS-1 STIPANOVCI	DSTS MOJMIR	DSTS-39 DUD∜Ć	DSTS-I KELESINKA
DP Zagreb-Pogon Zagreb	DP Zagreb-Pogon Zagreb	DP Zagreb-Pogon D.Selo	DP Zagreb-Pogon Samobor	DP Zagreb-Pogon Zelina	DP Zagreb-Pogon V.Gorica	DP Zagreb-Pogon Zaprešić	DP Zagreb-Pogon Samobor	DP Zagreb-Pogon Zelina	DP Zagreb-Pogon V.Gorica	DP Zagreb-Pogon Zaprešić	DP Zagreb-Pogon	DP Zagreb-Pogon Zagreb	DP Zagreb-Pogon Zagreb	DP Elektroslavonija- Pogon Naške	DP Elektroslavonija- Pogon Našice	DP Elektroslavonija- Pogon Našice	DP Elektroslavonija- Pogon Našice					
47	48	49	20	51	52	53	54	55	99	22	58	59	60	61	62	63	64	65	99	67	88	69

PC240014	PC240015	PC240016	PC240017	PC240018	PC240019	PC240020	PC240021	PC240022	PC240023	PC240024	PC250001	PC250002	PC250003	PC250004	PC250005	PC250006
	YES						<u> </u>									
ON 9		ON GO	ON 90	ON 90	ON NO	ON 9	ON 9	ON 9	ON 9	ON 9	05 NO	ON 90	ON SO	ON SO	SS NO	OD SO
11.1.2006	212,2005	13.12.2005	13.12,2005	13.12.2005	14.12.2005	10.1.2006	10.1.2006	10.1.2006	10.1.2006	10.1.2006	16.12.2005	22.12.2008	22.12.2005	22.12.2005	22.12.2005	13.12.2005
	61.0	0,27	0,16	0,155	0,145	0,4	0,33	0,4	0,33	0,235		3,1	5	2,06	4,9	0,24
		,														
10/0,4	10v0;4	10/0,4	10/0,4	10/0,4	10/0,4	10/0,4	10/0,4	10/0,4	10/0,4	10/D,4	35/10	35/10	35/10	35/10	35/10	10/0,4
0,1	G,16	0,25	0,16	0,16	0,1	69'0	ට ස	සු'0	හු '0	0,4	4	4	83	4	8	0,25
1978	1972	1965	1980	1974	1972	1978	1979	1968	1979	1982	1970	1963	1974	1979	1967	2004
43077	432499	25040	489486	444228	25240	479376	48766	14976	48759	501984	175336	96353	9741003	485581	967317	570971
T5-100	37160-12	T-250	31BN 160-12/A	TBN 160-12/A	NT 100/10-04	27BN 630-12/A	T5-630/C	T1-630	T5-630/C	3TBN 400-12/B/S	374000-38	7-4002	409/A	2TBN4000-38 A	409-8000	8EuTBN250-24x/A
MINEL	KONČÁR	F.T. BEOGRAD	KONČAR	KONČAR	ENERGOINVEST	KONČAR	MINEL	ELEKTROSRBIJA	MINEL	KONČAR	KONČAR	ELEKTROSRBUA	MINEL	KONČAR	Minel	KONĆAR
ŽSTS-2 VUKOJEVCI	2STS-18 Ante Starcevica 183	PTTS-1 KUŠEVAC, A.Starč.31	ŽSTS-2 ŠIROKO POLJE, Kal	PTTS-1 MRZOVIĆ, Vrbička	CSTS-1 PRESLATINCI, Grab.	KTS-88 SENJAK 28	KTS-92 SJENJAK 133	KTS-12 Ferde Livadića 1	KTS-186 Vijenac Slavka Kolara	KTS-147 Ladarska 8	TS BRANJIN VRH	TS 35/10 KV DALJ	TS-ISTOK, Osijek	TS SAMATOVC!	TS ZAPAD	VIRJE CENTAR
DP Etektroslavonija- Pogon Našice	DP Elektroslavonija- Pogon Đakovo	DP Elektroslavonija Pogon Đakovo	DP Elektroslavonija- Pogon Đakovo	DP Elektroslavonija- Pogon Dakovo	DP Elektroslavonija- Pogon <u>Dako</u> vo	DP Elektroslavorvija- Pogon Osijek	DP Elektroslavonija- Pogon Osijek	DP Elektroslavonija- Pogon Osijek	DP Elektroslavonija- Pogon Osijek	OP Elektrostavonija- Pogon Osijek	OP Elektroslavorija- Pog.B.Manastir	DP Elektroslavonija- Distribucija	DP Elekroslavonija- STEP distrib	DP Elektroslavonija- STEP distrib	DP Elektroslavonija- STEP distrib.	DP Koprivnica- Pogon Đurđevac
70	7.1	72	73	74	75	92	7.7	78	62	88	ξ	82	83	84	જ્	98

PC250007	PC250008	PC250009	PC250010	PC250011	PC250012	PC250013	PC250014	PC250015	PC250016	PC250017	PC250018	PC250019	PC250020	PC200005	PC200006	PC200007	PC200008	PC200009	PC200010	PC200011	PC200012	PC200013	PC200014	PC200015
9	Q.	ON	8	S.	-Q	S.	9	9	S.	9	9	9	9	9	9	Q.	9	9	9	9	9	ON.	õ	9
13.12.2005	14.12.2005	14.12.2005	15.12.2005	15.12.2005	15.12.2005	15.12.2005	15.12.2005	15.12.2005	15.12.2005	20.12.2005	20.12.2005	20.12.2005	20.12.2005	28.11.2005	28.11.2005	28.11.2005	28.11.2005	28.11.2005	28.11.2005	28.11.2005	28.11.2005	29.11.2005	29.11.2005	29.11.2005
0,115	0,102	0,11	3,27	2,84	2,06	0,18	0,4	0,11	0,102	0,13	0,12	0,12	0,115	2,06	2,06			-2,84	3,94	2,84	5,7			2,84
				1							`													
10/0,4	10/0,4	10/0,4	35/10	35/10	35/10	10/0,4	10/0,4	10/0,4	* 10/0,4	10/0,4	10/0,4	10/0,4	10/0,4	35/10	35/10	35/10	35/10	35/10	35/10	35/10	35/10	35/10	35/10	35/10
90'0	0,1	0,1	8	8	4	0,16	0,63	0,1	0,1	0,1	0,1	0,1	50'0	4	4	4	4	8	8	8	16	1,6	1,6	8
2003	1981	1979	1980	1998	1979	2004	1977	1978	1982	2003	1974	1974	1997	1980		1970	1976	2003	1976	2003	2005			2003
960699	497042	486671	493050	460134	485580	570140	476966	481393	504417	568803	443065	442954	553254	489880	479262	424223	454749	461005	450122	461178	461634	155008	155009	461081
8EuTBN50-24x/A	3TBN100-12/B	3TBN100-12/A	2TBN 8000-38/A	9NTBN 8000-38×	2TBN 4000-38/A	8EuTBN 160-24x/A	2TBN 630-12/A	2TBN 100-12/A	3TBN 100-12/13	8EuTRN 100-24#A	4TBN 100-12/A	4TBN 100-12/A	8EuTBN 50-24x/A	2TBN 4000-38	2TBN 4000-38	314000-38	7TBN 4000-38/F	9TBN 8000-38x	7TBN 8000-38/A	9TBN 8000-38x	TBN16000-38/G	3TNp 30-35	3TNp 30-35	9TBN 8000-38x
KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONĆAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR
1 Z Y 1	ŽDALA 1	REPAŠ 1	KPC 3 - KOPRIVNICA	TS35/10 PODRAVKA DANICA	ZS35/10 RASINJA	SVETI PETAR 1	SILOSI LUDBREG	KRIŻOVŁJAN	DONJA VELIKA	PEŚČENIK	JAGNJEDOVEC 1	HUDOVLJANI 1	G. MASLARAC	TS 35/10 kV IVANOVEC TR 1	TS 35/10 KV IVANOVEC TR 2	TS 35/10 kV ŠENKOVEC TR 1	TS 35/10 KV ŠENKOVEC TR 2	TS35/10 TROKUT CAKOVEC TR 3	TS35/10 TROKUT CAKOVEC TR 4	TS 35/10 PARK CAKOVEC TR	TS 35/10 PARK CAKOVEC TR 2	TS 35/10 ŻELEZNA GORA TR 1	TS 35/10 ŻELEZNA GORA TR 2	TS 35/10 MUR. SREDIŠĆE TR 1
DP Koprivnica- Pogon Đurđevac	DP Koprivnica Pogon Đurđevac	OP Koprivnica- Pogon Đurđevac	DP Koprivnica- Pogon Koprivnica	DP Koprivnica- Pogon Keprivnica	DP Koprivnica- Pogon Koprivnica	DP Koprivnica- Pogon Ludbreg	DP Koprivnica- Pogon Ludbreg	DP Koprivnica- Pogon Ludbreg	DP Koprivnica- Pogon Koprivnica	DP ELEKTRA Čakovec	DP ELEKTRA Ćakovec	DP ELEKTRA Čakovec	OP ELEKTRA Ćakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec				
87	88	89	90	91	82	93	94	95	96	97	98	66	100	101	102	103	104	105	106	107	108	109	110	111

PC200016	PC200017	PC200018	PC200019	PC200020	PC200021	PC200022		PC200024	PC200025	PC260005	PC260006	PC260007	PC260008	PC260009	PC260010	PC260011	PC260012	PC260013	PC260014	PC260015	PC260016	PC260017	PC260018	
Ş.	ð	2	9	ð	õ	ğ	Ë	ş	2	2	ş	ğ	身	ð	§	2	身	§	Ş	身	Ş	身	õ	
29.11.2005	29.11.2005	29.11.2005	29.11.2005	29.11.2005	29.11.2005	29.11.2005	29 11 2005	2.12.2005	2.12.2005	16.1.2006	17.1.2006	17.1.2006	17.1.2006	17.1.2006	17.1.2006	20.1.2006	20.1.2006	20.1.2006	20.1.2006	19.1.2006	19.1.2006	19.1.2006	19.1.2006	
2,84	1,6			3,37	3,27		2,08			4	2,8	2,8	2,8	3,27	2,38	2,27	1,7	2,2	2,5	0,5	0,42	0,28	0,42	
										INATRAFINA Y 3000					INATRAFINA Y 3000	INATRAFINA Y 3000			INATRAFINA Y 3000					
35/10	35/10	35/10	35/10	35/10	35/10	35/10	35/10	10/0,4	10/0,4	35/10,5	35/10,5	35/10,5	35/10,5	35/10,5	35/10,5	35/10,5	35/10,5	35/10,5	35/10,5	20/0,4	20/0,4	20/0,4	20/0,4	
8	4	4	4	. ao	æ	2,5	4	0,25	0,1	4	8	ω	8	8	4	4	4	4	2,5	69'0	69'0	0,25	0,63	
2003	1987	1976		1982	1980		1979	1981	1982	1960	1983	1983	1980	1982	1975	1973	1975	1982	1959	1998	1999	1996	1998	
461080	531630	454752	504052	504759	493048	165130	484938	497778	504501	175175	59683	59813	51676	9821750	450090	440601	93288	57128	165195	21429	558064	648756	556604	
9TBN 8000-38x	2TBN 4000-38	7TBN 4000-38/F	2TBN 4000-38	2TBN 8000-38/B	2TBN 8000-38/A	3TBN 34-35	2TBN 4000-38/A	3TBN 250-12/B	3TBN 100-12/B	3TNp 40-35	VT8000/35-21/10,5	VTB000/35-10,5	VT8000/35-21/10,5	TP-8117	7TBN 4000-38/B	3T 4000-38/E	NT 4000-35-21/10,5	VT 4000/35-21	3TNp 34-35	HTNP 630-24	8EuTBN 630-24/x-A	3TBNv 250-24x/A	8EuTBN 630/24x/A	
KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	ENERGOINVEST	ENERGOINVEST	ENERGOINVEST	MINEL	KONČAR	KONČAR	ENERGOINVEST	ENERGOINVEST	KONČAR	EMO OHRID	KONČAR	KONĆAR	KONČAR	
TS 35/10 MUR. SREDIŠĆE TR 2	TS 35/10 DEKANOVEC TR 1	TS 35/10 DEKANOVEC TR 2	TS 35/10 DONJI KRALJEVEC TR 1	TS 35/10 PRELOG TR 1	TS 35/10 PRELOG TR 2	TS 35/10 KOTORIBA TR 1	TS 36/10 KOTOR/BA TR 2	SKLADIŠTĒ	SKLADIŠTE	TS RAŚA	TS BUZET TR 1	TS CENTAR TR 1	TS POREČ 2 TR 1	TS PAZINKA	TS SVETVIČENT	TS NOVIGRAD TR 1	TS VODNJAN TR 2	TS KATORO TR 2	TS KAROJBA TR 1	TS OSJEČKA	TS VIDIKOVAC VILE	TS PLINARA STARA	TS MORNARIČKI PARK	
DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Ćakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP ELEKTRA Cakovec	DP ELEKTRA Čakovec	DP ELEKTRA Čakovec	DP Elektroistra Pula - Pogon Labin	DP Elektroistra Pula - Pogon Buzet	OP Elektroistra Pula - Pogon Puta	DP Elektroistra Pula - Pogon Poreč	DP Elektroistra Pula - Pogon Pazin	DP Elektroistra Pula - Pogon Pula	DP Elektroistra Puta - Pogon Buje	DP Elektroistra Pula - Pogon Pula	OP Elektroistra Pula - Pogon Buje	DP Elektroistra Pula - Pogon Pazin	DP Elektroistra Pula Pogon Pula	DP Elektroistra Pula - Pogon Pula	DP Elektroistra Puta - Pogon Pula	DP Elektroistra Puła - Pogon Pula	
112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	

le i	DP Elektroistra Pula - Pogon Pula	TS ALSO NEGRI	ENERGOINVEST	4VT 630/10-0,4	61627	1985	0,63	10/0,4		0,5	19.1.2006	Q.	PC260020
DP Elektroistr - Pogon Pula	DP Elektroistra Pula - Pogon Pula	TS BRIČANC!	ENERGOINVEST	NT 30/10-0,4	29026	1973	50,0	10/0,4		.0,92	19.1.2006	9	PC260021
DP Etektroistu - Pogon Pula	DP Etektroistra Pula - Pogon Pula	TS BELVEDER	ENERGOINVEST	NT 500/10-04	12855	1968	0,5	10/0,4		76,0	19.1.2006	9	PC260022
DP Etektroisti - Pogon Pula	DP Etektroistra Pula - Pogon Pula	TS PRNJANI	ENERGOINVEST	VT 50/20/10-0,4	45556	1978	90'0	10/0,4		0,15	19.1.2006	2	PC260023
DP Elektroist - Pogon Pula	DP Elektroistra Pula - Pogon Pula	TS MELNICA	ENERGOINVEST	NT 30/10	7496	1967	60,0	10/0,4		0,16	19.1.2006	9	PC260024
DP Etektrodalmacija Split	almacija	TS PLOĆE 14 - PLOČE	KONČAR	3TBN 400-12/B/8	502020	1982	0,4	10/0,4		0,236	1.12.2005	<u>Q</u>	P1220001
DP Elektrodi Split	DP Elektrodalmacija Split	TS VRANJAK - PLOĆE	KONCAR	2TBN 8000-38/AC	527087	1987	8	35/10,5		2,5	13.12.2005	O _N	P1220002
DP Elektrod Split	DP Elektrodalmacija Split	TS MEJE 1 - SPLIT	ĶONČAR	2TNP 400-20-10	71232		0,4	10/0,4	·	0,235	2.12.2005	Q.	P1220003
DP Elektroc Spfit	DP Elektrodalmacija Split	KOPILICA - SPLIT	KONČAR	2TNP 20-10	701,18		0.4	10/0,4		0,162	13.12,2005	ΥES.	P1220004
DP Elektrod Split	DP Elektrodalmacija Split	DUJMOVAČA - SPLIT	DINAMO-BGD	TU 630	9804	1982	69'0	10/0,4	:		2.12.2005	Q.	P1220005
DP Efektrod Split	DP Elektrodalmacija Split	SJEVERNA LUKA - SPLIT	KONČAR	2TNP 20-10	70661		0,4	10/0,4			2.12.2005	ON ON	P1220006
DP Elektrod Split	DP Elektrodalmacija Split	MILJEVAC - SPLIT	KONĆAR	31-8000-38	182574	1967	8	35/10		'n	5.12,2005	9	P1220007
OP Elektrod Split	OP Elektrodalmacija Split	BRIŽINE - SPLIT	KONČAR	4T-8000-38	441649	1973	8	35/10		4	5.12.2005	<u>8</u>	P1220008
OP Elektroc Split	OP Elektrodalmacija Split	KOTEZI 1 - VRGORAC	KONČAR	2TNP 20-10	500	1959	90'0	10/0,4		0,162	12.1.2006	Q Q	P1220009
DP Elektroc Split	DP Elektrodalmacija Split	DRAGLJANI 1 - VRGORAC	ENERGOINVEST		11803	1968	ව,ග	10/0,4		0,174	12.1.2006	O.	P1220010
DP Elektrod Split	DP Elektrodalmacija Split	PRISOJE 1 - DICMO	KONČAR	TN 100-12	429311	1969	1,0	10/0,4	:	0,177	5.1.2006	Q N	P1220011
DP Elektrod Split	DP Elektrodalmacija Split	PODI 1 - SPLIT	KONČAR	T 50-12	31170	1960	50,0	10/0,4		0,151	5.1.2006	Q 2	P1220012
DP Elektrod Split	DP Elektrodatmacija Split	TTS RUNOVIC 2 - IMOTSKI	KONČAR	2TBN 160-12/A	476654	1877	0,16	10/0,4		0,16	8.2.2006	<u>S</u>	P1220013
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Open State St	$\overline{}$	DP Elektrodalmacija Split	VRANJICA 4. TROGIR	KONČAR	3TBN Y400-24Y/B	532956	1988	0,4	20/0,4		0,38	10.2.2006	0	P1220014
Codiminacija SUPETAR 8 KONČAR STEN 400-12A 461888 1981 0.4 100.4 0.256 0.250 0.200 ND Codiminacija VRANJICA 2- TROGIR KONČAR TINP 16-10 \$61888 1986 0.4 100.4 0.256 15.2 2006 76 Codiminacija VRANJICA 2- TROGIR KONČAR TINP 16-10 \$25942 1984 17 110.64 0.256 15.2 2006 76 ZAGREB TSANUM TR 2 KONČAR TINP 16-10 \$25942 1886 0.63 100.64 0.256 15.2 2006 76 ZAGREB TSANUM TR 2 KONČAR TITE 20000-1230 354110 1906 10.065 mineral 0.256 15.2 2006 76 ZAGREB TSANUM TR 2 KONČAR TITE 20000-1230 35410 1906 10.065 11.0056 mineral 11.1 2006 NO ZAGREB TSANUM TR 2 KONČAR TITE 20000-1230 35341 196 10 10.056 mineral 11.1 2006		DP Elektrodalmacija Split	SUPETAR 10	EM OHRID	ETN 630-12	16779	1984	0,63	20/0,4		0,38	6.2.2006	ON	P1220015
COGATINAGIR KONÇAR TINP 15-10 673-61 1976 0,4 100,4 0,25 102,2000 100 COGATINAGIR KONÇAR TINP 15-10 673-61 1984 0,1 100,4 0,25 102,200 100 COGATINAGIR MONÇAR TINP 15-10 625-61 1984 0,1 100,4 0,25 152,2000 100 AGOREB TANCISO - PODGORA TINP 15-10 400,51 1984 0,1 100,4 0,25 152,2000 100 AGOREB TS ARLUN TR 2 KONÇAR TITR 20000-123A 236113 1586 0,2 100,4 0,28 152,2000 100 AGOREB TS ARLUN TR 2 KONÇAR TITR 20000-123A 236113 150,6 100,4 0,28 152,2000 100 AGOREB TS ARRUN TR 2 KONÇAR TITR 20000-123A 236113 156 20 110056 mineral 1112,2000 100 AGORES TT 8600 TTT 8600 156 150 200,10		DP Elektrodalmacija Split	SUPETAR 6	KONČAR	3TBN 400-12/A	497098	1981	0,4	20/0,4		0,235	6.2.2006	ON	P1220016
JANGCI RO - PODGORA KONCAR ThP 16-10 6774 1994 0,1 11004 0.255 15.2 2006 75.2 OMI 6 4 - OMIS A -		DP Elektrodalmacija Split	VRANJICA 2 - TROGIR	KONČAR	3TBN 400-12/A	481888	1978	0,4	10/0,4		0,25	10.2.2008	O _N	P1220017
OMIĞ 4 - OMIĞ KONĞAR 3TBN 630-12/J 6239-2 1986 0,683 100,4 0,283 15.22006 NO HVAR1 - HVAR HVART - HVAR KONĞAR 2TNP 15-10 40551 1984 1 100,4 0,283 15.22006 NO TS JARUN TR 2 KONĞAR TRP 20000-123/A 38913 1989 60 11026 mineral 0,283 15.22006 NO TS MELLOVAR TT KONĞAR TRP 20000-123/B 38913 1986 40 11026 mineral 0,283 15.0 11026 NO 11.122006 NO TS MEACLIN TT ASEA TRP 20000-123/B 52816 1665 150 220/110 mineral 11.122006 NO TS MEACLIN TT ASEA TRP 20000-123/B 52366 150 220/110 mineral 10,55 91.12006 NO TS DELINICE TZ 110365 KV KONĞAR TRP 20000-123/B 52366 10 110/35 mineral 10,55 91.112006 NO TS DELINI		DP Elektrodalmacija Split	JAKIĆI:90 - PODGORA.	KONČAR		aw a	1984		a		0,25	15.2.2006	λES	P1220018
TS JARUATR 2 KONČAR TIRP 20000-1234 336113 1969 1100,46 mineral 1,12,2006 1,12,2006 1,10,24 mineral 1,12,2006 1,		DP Elektrodalmacija Split	OMIŚ 4 - OMIŚ	KONĆAR	3TBN 630-12/J	523942	1986	69'0	10/0,4		0,253	15.2.2006	9	P1220019
TS JARUN TR 2 KONČAR TITRZ 60000-123/A 384110 1496 60 14036 mineral 11.22005 TS NOVA GRADIŠKA KONČAR TITRZ 60000-123/A 324110 1476 20 14036 mineral 2011 2005 TS NELLOVARTIT KONČAR TITRZ 40000-123/A 328119 1866 40 14036 mineral 2011 2005 TS WRACLIN TIT ASEA TFT 88000-123/A 452814 1886 150 14036 mineral 2011 2005 TS MRACLIN TITOGA KV KONČAR TFT 88000-123/G 572618 1866 150 220/110 mineral 11,12,2005 TS DELVICE TI 110/36 KV KONČAR TRP 20000-123/G 528663 186 20 110/35 mineral 10,55 91,12,005 TS DELVICE TI 110/35 KV KONČAR TRP 20000-123/G 458653 186 20 110/35 10,55 91,12,005 TS RAB TR 110/35 KV KONČAR TRP 20000-123/G 458653 1862 20 110/35 10,55 11,12,005		OP Elektrodalmacija Split	HVAR 1 - HVAR	KONČAR	2TNP 15-10	40551	1984	1	10/0,4	,	0,28	16.2.2006	ON O	P1220020
TS MAY GRADISKA KONČARR TITRP 20000-123/P 334110 1976 20 110736 mineral 3 01 1 2005 TS MALLOVAR TT KONČAR TITRP 40000-123/P 328119 1966 40 110736 mineral 9 31 1 2005 TS WILLIAT KONČAR TITRP 20000-123/P 5726181 1965 160 220/110 mineral 9 31 1 2005 TS MRACLIN TT ASEA TITR 8800 5726181 1965 160 220/110 mineral 1 1,12 2005 TS MRACLIN TZ ASEA TITR 8800 5726181 1965 150 220/110 mineral 1 1,12 2005 TS DELINICE TT 110/35 kV KONČAR TRP 20000-123/E 52868 1986 20 110/35 mineral 10,55 9.11 2005 TS DELINICE TZ 110/35 kV KONČAR TRP 20000-123/E 459163 1982 20 110/35 mineral 10,11 2005 TS RAB TR1 110/35 kV KONČAR TRP 20000-123/E 459629 1992 20 110/35 mineral 10,11 2005		OPS ZAGREB	TS JARUN TR 2	KONČAR	4TRZ 60000-123/A	338013	1969	90	110/35	mineral		1.12.2005	9	PC270001
TS BLIELOVART1 KONČAR ZTRP 40000-123PP 329119 1896 40 110,65 mineral 2311,2005 TS VIRJET1 KONČAR TTR 8000 57,26181 1896 160 10,75 mineral 90,11,2005 TS MRACLINTT ASEA TTF 8800 57,26180 1966 150 220/110 mineral 1,12,2005 TS MRACLINTZ ASEA TTF 8800 57,26180 1966 150 220/110 mineral 1,12,2005 TS OTOČAC T111035 kV KONČAR TRP 20000-123/E 528663 1986 20 110/35 mineral 10,55 9.11,2005 TS DELINICE T2 110/35 kV KONČAR TRP 20000-123/E 459639 1983 20 110/35 mineral 10,55 9.11,2005 TS RAB TR1 110/35 kV KONČAR TRP 20000-123/E 459629 1982 20 110/35 mineral 10 11,12005 TS KRASICATZ KONČAR TRP 20000-123/E 459629 1992 20 110/35 mineral 10 <td></td> <td>OPS ZAGREB</td> <td>TS NOVA GRADIŠKA</td> <td>KONČAR</td> <td>1TRP 20000-123/B</td> <td>334110</td> <td>1976</td> <td>20</td> <td>110/35</td> <td>mineral</td> <td></td> <td>30.11.2005</td> <td>Q</td> <td>PC270002</td>		OPS ZAGREB	TS NOVA GRADIŠKA	KONČAR	1TRP 20000-123/B	334110	1976	20	110/35	mineral		30.11.2005	Q	PC270002
TS VIRJETT KONČAR TITP 20000-123/D 45934T 1989 20 110/35 mineral 30.11.2005 TS MRACLINTT ASEA TFT 8800 572618T 1965 150 220/110 mineral 1.12.2005 TS MRACLINTS ASEA TFT 8800 572618T 1965 150 220/110 mineral 1.12.2005 TS OTCČAC T1110/35 KV KONČAR TRP 20000-123/E 52866S 1986 20 110/35 mineral 10,55 9.11.2005 TS DELNICE T2 110/35 KV KONČAR TRP 20000-123/E 62863 1986 20 110/35 mineral 10,55 9.11.2005 TS MELINA T2 400/22 kV KONČAR TRP 20000-123/E 459163 1982 20 110/35 mineral 10,55 9.11.2005 TS RAB TR1 110/35 KV KONČAR TRP 20000-123/G 45962A 1992 20 110/35 mineral 10 10.11.2005 TS RAB TR1 110/35 KV KONČAR TRP 40000-123/G 4597A 1996 20 110/35		OPS ZAGREB	TS BJELOVAR T1	KONČAR	2TRP 40000-123/P	328119	1996	40	110/35	mineral		28.11.2005	Q.	PC270003
TS MRACLIN T1 ASEA TFT 8800 5726180 156 150 220/110 mineral 1.12,2005 TS MRACLIN T2 ASEA TFT 8800 5726180 1965 150 220/110 mineral 1.12,2005 TS OFICACT T110/35 KV KONĆAR TRP 20000-123/E 528063 1986 20 110/35 mineral 10,56 9.11,2005 TS DELNICE T2 110/35 KV KONĆAR TRP 20000-123/E 528063 1986 20 110/35 mineral 10,56 9.11,2005 TS DELNICE T2 110/35 KV KONĆAR TRP 20000-123/E 459163 1982 20 110/35 mineral 10,56 9.11,2005 TS RAB TR1 110/35 KV KONĆAR TRP 20000-123/E 459629 1997 20 110/35 mineral 10 10.11,2005 TS RAB TR1 110/35 KV KONĆAR TRP 20000-123/E 459629 1997 20 110/35 mineral 10 10.11,2005 TS RAŠATZ KONĆAR TRP 40000-123/E 384136 20 110/35		OPS ZAGREB	TS VIRJE T1	KONČAR	1TRP 20000-123/D	459341	1989	20	110/35	mineral		30.11.2005	NO	PC270004
TS MRACLIN 12 ASEA TFT 8800 5726180 150 220/110 mineral 112,2005 TS OTOČAC 71 110/36 kV KONČAR TRP 20000-123/E 623666 1986 20 110/35 mineral 10,55 9.11,2005 TS DELNICE T1 110/36 kV KONČAR TRP 20000-123/E 459163 1986 20 110/35 mineral 10,55 9.11,2005 TS MELINA T2 400/220 kV KONČAR TRP 20000-123/E 459163 1983 20 110/35 mineral 10,55 9.11,2005 TS RAB TR 110/35 kV KONČAR TRP 20000-123/G 459629 1992 20 110/35 mineral 10 10.11,2005 TS RAB TR 110/35 kV KONČAR TRP 20000-123/G 459639 1994 20 110/35 mineral 10 10.11,2005 TS RASAT KONČAR TRP 20000-123/G 459797 1896 20 110/35 mineral 10,4 10.11,2005 TS RAŠAT KONČAR TRP 20000-123/F 334136 1997 20		OPS ZAGREB	TS MRACLIN T1	ASEA	TFT 8800	5726181	1965	150	220/110	mineral		1,12,2005	NO	PC270005
TS OTOCAC T1 11035 kW KONCAR TRP 20000-123/E 528666 1986 20 110/356 mineral 14,11,2005 14,11,2005 TS DELNICE T1 110/35 kW KONCAR TRP 20000-123/E 459163 1986 20 110/356 mineral 10,55 9.11,2005 TS DELNICE T2 110/35 kW KONCAR TRP 20000-123/E 459163 1988 20 110/35 mineral 10,55 9.11,2005 TS MELINA T2 400/220 kW KONCAR TRP 20000-123/GB 459629 1982 20 110/35 mineral 10 10.11,2005 TS RAB TR1 110/35 kW KONCAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11,2005 TS KRASICA T2 KONCAR TRP 40000-123/GB 459629 1992 20 110/35 mineral 10,4 10,11 TS RAŠATI KONCAR TRP 40000-123/G 45979 1996 20 110/35 mineral 10,4 11,10 TS RAŠATI KONCAR TRP 20000-123/G <t< td=""><td></td><td>OPS ZAGREB</td><td>TS MRACLIN T2</td><td>ASEA</td><td>TFT 8800</td><td>5726180</td><td>1965</td><td>150</td><td>220/110</td><td>mineral</td><td></td><td>1.12.2005</td><td>ON</td><td>PC270006</td></t<>		OPS ZAGREB	TS MRACLIN T2	ASEA	TFT 8800	5726180	1965	150	220/110	mineral		1.12.2005	ON	PC270006
TS DELNICE T111035 KV KONČAR TRP 20000-123/E 459653 1986 20 110/35 mineral 10,55 9.11.2005 TS DELNICE T2 110/35 KV KONČAR TRP 20000-123/E 459163 1986 20 110/35 mineral 10,55 9.11.2005 TS MELINA T2 400/220 kV KONČAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11.2005 TS RAB TR1 110/35 kV KONČAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11.2005 TS KASICA T2 KONČAR TRP 40000-123/GB 459797 1995 40 110/35 mineral 13,6 15.11.2005 TS RAŠA T1 KONČAR TRP 20000-123/F 334136 1986 20 110/35 mineral 10,4 11,11,2005 TS RAŠA T2 KONČAR TRP 20000-123/F 354136 1987 20 110/35 mineral 10,4 10,14 10,4 TS RAŠA T2 KONČAR RT 20/110/21/10,5		OPS OPATIJA	TS OTOČAC T1 110/35 KV	KONČAR	TRP 20000-123/E	523666	1986	20	110/35	mineral		14,11,2005	Q.	PC270007
TS DELNICE T2 110/35 KV KONČAR TRP 20000-123/F 459163 1986 20 110/35 mineral 10,55 911,2005 TS RAB TR1 110/35 KV KONČAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11,2005 TS RAB TR1 110/35 KV KONČAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11,2005 TS KRASICA T2 KONČAR TRP 40000-123/GB 459737 1985 40 110/35 mineral 10,4 8.11,2005 TS RAŠA T1 KONČAR TRP 20000-123/F 334136 1986 40 110/35 mineral 10,4 8.11,2005 TS RAŠA T1 KONČAR TRP 20000-123/F 334136 1987 20 110/35 mineral 10,4 8.11,2005		OPS OPATIJA	78 DELNICE T1 110/35 Kv	KONČAR	TRP 20000-123/E	528063	1986	20	110/35	mineral	10,55	9.11.2005	NO	PC270008
TS MELINA T2 400/220 kV KONČAR 1ABZ 400000- 4208/A 339019 1963 400 400/220 mineral 74,5 19.10.2006 TS RAB TR1 110/35 kV KONČAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11.2005 TS RAB TR1 110/35 kV KONČAR TRP 20000-123/GB 459694 20 110/35 mineral 10 10.11.2005 TS RAŠA T1 KONČAR TRP 20000-123/F 459797 1986 20 110/35 mineral 13,6 15.11.2005 TS RAŠA T2 KONČAR RT 20/110/21/F 55255 1997 20 110/35 mineral 13,9 811,2005		OPS OPATIJA	TS DELNICE T2 110/35 Kv	KONČAR	TRP 20000-123/E	459163	1988	20	110/35	mineral	10,55	9.11.2005	Q 2	PC270009
TS RAB TR1110/35 kV KONČAR TRP 20000-123/GB 459629 1992 20 110/35 mineral 10 10.11.2005 TS RAB TR1110/35 kV KONČAR TRP 20000-123/GB 459694 1994 20 110/35 mineral 10 10.11.2005 TS KRASICA T2 KONČAR TRP 20000-123/F 459797 1985 40 110/35 mineral 13,6 15.11.2005 TS RAŠA T1 KONČAR TTRP 20000-123/F 334136 1980 20 110/35 mineral 10,4 8 11,2005 TS RAŠA T2 KONČAR RT 20/110/21/10,5 55255 1997 20 110/35 mineral 13,9 8 11,2005		OPS OPATIJA	TS MELINA T2 400/220 kV	KONČAR	1ABZ 400000- 420s/A	339019	1983	400	400/220	mineral	74,5	19.10.2005	ON	PC270010
TS RAB TR110/35 kV KONĆAR TRP 20000-123/GB 459694 1994 20 110/35 mineral 10.11.2005 11.2005 TS KRASICA T2 KONĆAR TRP 20000-123/F 334136 1980 20 110/35 mineral 10,4 8.11.2005 TS RAŠA T1 KONĆAR RT 20/110/21/10,6 55255 1997 20 110/35 mineral 13,9 8.11.2005		OPS OPATIJA	TS RAB TR1 110/35 kV	KONČAR	TRP 20000-123/GB	459629	1992	20	110/35	mineral	10	10.11.2005	ON	PC270011
TS KRASICAT2 KONČAR TRP 40000-123/F 459797 1995 40 110/35 mineral 13,6 15.11.2005 TS RAŠA T1 KONČAR TTRP 20000-123/F 334136 1980 20 110/35 mineral 10,4 8.11.2005 TS RAŠA T2 KONČAR RT 20/110/21/10,5 55255 1997 20 110/35 mineral 13,9 8.11.2005		OPS OPATIJA	TS RAB TR1 110/35 KV	KONČAR	TRP 20000-123/GB	459694	1994	20	110/36	mineral	10	10.11.2005	ON	PC270012
TS RAŠA 71 KONČAR 1TRP 20000-123/F 334136 1980 20 110/35 mineral 10,4 8.11,2005 15.		OPS OPATIJA	TS KRASICA T2	KONČAR	TRP 40000-123/C	459797	1995	40	110/35	mineral	13,6	15.11.2005	NO	PC270013
TS RAŜA T2 KONĈAR RT 20/110/21/10,5 55255 1997 20 110/35 mineral 13,9 8.11.2005		OPS OPATIJA	TS RAŜA 71	KONĆAR	1TRP 20000-123/F	334136	1980	20	110/35	mineral	10,4	8.11.2005	NO	PC270014
		OPS OPATIJA	TS RAŠA 72	KONČAR	RT 20/110/21/10,6	55255	1997	20	110/35	mineral	13,9	8.11.2005 .	Q.	PC270015

	2005 NO PC270016	005 NO <u>PC270017</u>	2005 NO PC270018	006 NO P1010001	006 NO P1010002	006 NO P1010003	006 YES P1010004	006 NO P1010005	000 NO P1010006	006 NO P101000Z	9000101G ON 900	006 NO P1010009	006 NO P1010010	006 NO P1010011	006 NO P1010012	006 NO P1220021	.006 NO . P1220022	006 NO P1220023	006 NO P1220024	1006 NO P1220025	_
,	12,3 15.11.2005	19 8.11.2005	38,7 17.10.2005	22,2 12.1.2006	22,2 12.1.2006	19,5 11.1.2006	17,5 11.1.2006	22 11.1.2006	10 10.1.2006	19 11.1.2006	19 11.1.2006	10 12.1.2006	10 12.1.2006	19 10.1.2006	22 11.1.2006	15,5 13.2.2006	0,075 14.2.2006	19 13.2.2006	20 13.2.2006	0,075 14.2.2006	
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1	20	40	20	₽	40	20	20	18,9	20	63	63	20	20	16	18,9	. 04		40	31,5		
	1980	1975	1984	1975	1975	1966	1969	1971	2002	2002	2003	2003	1989	1973	1971	1986	1997	1970	1965	1997	
	334135	328019	334154	711618	711619	334052	334068	971683	461041	408112	338048	461093	459290	136624		9862063	786831	328006	335023	786833	
	1TRP 20000-123/F	1TRP 40000-123/A	1TRP 20000-123/L	TDLF 50000- 110MCu	TDLF 50000- 110MCu	21R 20000-123	3TR 20000-123	TPV 7004/315	TRP 20000-123/110	71RP 63000-123	8TRP 63000	TRP 20000-123/AI	TRP 20000-123/AI	TOR3 16000/110	TPV 7004/315	TP 8614-40	GVPU-123	TRZ 40000-123	,TRZ 31500-110	GVPU-123	
	KONČAR	KONČAR	KONČAR	TDR	ток	KONČAR	KONČAR	ELEKTROSRBIJA	KONČAR	KONČAR	KONČAR	KONČAR	KONČAR	ЕLTA	ELEKTROSRBIJA	Minel	KONČAR	KONČAR	KONČAR	KONČAR	
	TS KRK T2	TS DOŁINKA T2	TS LIČK! OSIK T2	TS ZADAR TR 1	TS ZADAR TR 2	TS STON TR 2	TS STON TR 1	TS OPUZEN TR 2	TS DUGIRAT TR 2	TS KOMOLAC TR 1	TS KOMOLAC TR 2	TS NIN TR 2	TS NIN TR 1	TS IMOTSKITR 1	TS OPUZEN TR 2	TS OSIJEK III - TR 1	TS D. MIHOLJAC V.P. NAŠICE	TS OSIJEK V - TR 1	TS OSIJEK I - TS 110/35 TR 1	TS D. MIHOLJAC P'0"	
	OPS OPATIJA	OPS OPATIJA,	OPS OPATIJA	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPSSPLIT	OPS SPLIT	OPS SPLIT	OPS SPLIT	OPS OSIJEK	OPS OSIJEK	OPS OSIJEK	OPS OSIJEK	OPS OSLJEK	
	177	178	179	180	181	182	183	187	185	186	187	188	189	190	191	192	193	194	35	196	

ANNEX V: AGENDA AND LIST OF PARTICIPANTS

SEMINAR ABOUT IMPORTANCE OF THE STOCKHOLM CONVENTION

Croatian Chamber of Economy Draškovićeva 45, Zagreb November 14, 2005.

10:30 - 11:00	Introduction
	⋄ Croatian Cleaner Production Centre (Cro CPC)
	 Ministry of Environmental Protection, Physical Planning and Construction
	Ministry of Economy, Labour and Entrepreneurship
11:00 – 11:30	Review of activities related to the Stockholm Convention – Mr. Goran Romac – Cro CPC
11:30 – 12:15	POPs chemicals and their influence to human health and environment - Mrs. Blanka Krauthacker – Institute for Medical Research
11:45 – 12:15	Harmonisation of POPs national legislation to EU legislation – Mrs. Jasenka Nećak - MOEPPC
12:15 – 12:45	Coffee break
12:45 – 13:15	National Legislation on PCB waste – Mr. Aleksandar Rajilić - MOEPPC
13:15 – 14:00	Replacement of PCB equipment within HEP – Mr. Igor Anić – APO Ltd.
14:00 – 15:00	Discussion and conclusion
15:00 – 16:00	Lunch

	Participant	Institution/company
1	Ante Groznica	Ministry of Environmental Protection, Physical Planning and Construction
2	Blanka Krauthacker	Institute for Medical Research
3	Brigita Štefančić	Ekonerg Ltd.
4	Carmen Bago	Cro CPC
5	Darko Rajhenbah	Ministry of Agriculture, Forestry and Water management
6	Đorđa Medić	Croatian Waters
7	Edvard Pučko	Ministry of Environmental Protection, Physical Planning and Construction
8	Goran Romac	Cro CPC
9	Gorana Hrlec	Institute for plant protection in agriculture and forestry
10	Gordana Ruklić	Ministry of Environmental Protection, Physical Planning and Construction
11	Ivana Halle	Ministry of Economy, Labour and Entrepreneurship
12	Jasenka Nećak	Ministry of Environmental Protection, Physical Planning and Construction
13	Mladen Jug	Končar
14	Lidija Bertović	INA - Croatian oil and gas industry
15_	Mirjana Čerškov Klika	APO Ltd.
16	Nikola Čabrajec	Croatian Chamber of Economy
17	Sandra Krmpotić	Ministry of Environmental Protection, Physical Planning and Construction
18	Saša Rajilić	Ministry of Environmental Protection, Physical Planning and Construction
19	Tamara Tarnik	HEP Ltd.
20	Zdenko Šmit	Public Health Institute - Zagreb
21	Zelena Akcija	NGO
22	Zoran Stanić	HEP Ltd.
23	Bruno Antolović	Eko Usluge
24	Ana Antolović	Eko Usluge
25	Alena Vlašić	Croatian Waters
26	Darka Hamel	Institute for plant protection in agriculture and forestry

ANNEX VI – PHOTO DOCUMENTATION FROM THE SEMINAR

