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International POPs Elimination Project

*Fostering Active and Efficient Civil Society Participation in
Preparation for Implementation of the Stockholm Convention*

The Role of Inter-Sectoral Partnerships in Development of Regional and Local PRTRs English Summary

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About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org>) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

IPEN gratefully acknowledges the financial support of the Global Environment Facility, Swiss Agency for Development and Cooperation, Swiss Agency for the Environment Forests and Landscape, the Canada POPs Fund, the Dutch Ministry of Housing, Spatial Planning and the Environment (VROM), Mitchell Kapor Foundation, Sigrid Rausing Trust, New York Community Trust and others.

The views expressed in this report are those of the authors and not necessarily the views of the institutions providing management and/or financial support.

This report is available in the following languages: English Summary and Full report in Russian

The Role of Inter-Sectoral Partnerships in Development of Regional and Local PRTRs

English Summary

According to the Stockholm Convention on Persistent Organic Pollutants, Parties of the Convention are obliged to develop pollutant release and transfer registers. "Volgograd-Ecopress" NGO initiated a seminar with non-governmental organisations to discuss participation of NGOs in development of pollutant release and transfer registers (PRTR). The main attention was paid to those enterprises which are considered to be a source of POPs releases. Among them there are the chemical industry, petrochemical industry and enterprises involving waste water treatment.

Background documents of the seminar noted that pollutant release and transfer registers (PRTRs) are directories/databases, containing information on releases and transfers of potentially hazardous chemicals, including information on nature and amounts of such releases and transfers. PRTR data are submitted by:

- point (fixed) sources (industrial facilities),
- scattered sources (transport).

PRTRs usually incorporate information on emissions/discharges to air, water and soils and waste flows to treatment or disposal facilities.

Main characteristic features of PRTRs:

- periodical data gathering to identify dynamic trends;
- application of common identifiers of chemicals, production sites and regions for easy data comparison and compilation;
- computerised data;
- easily accessible information.

PRTRs serve as tools, allowing to get systematic, regularly updated information on releases and/or transfers of chemicals of interest, and to make such information easily accessible for potentially interested parties and/or stakeholders. Essentially, PRTRs are tools to promote efficient activities in the sphere of environment and sustainable development.

Main objectives of PRTRs

- Identification of main sources of pollutant releases and transfers;
- Quantitative assessment of pollutant releases and transfers;
- Identification of trends of releases of specific pollutants;
- Identification of environmentally affected territories;
- Promotion of introduction of cleaner industrial production and pollution control measures;
- Identification of opportunities for reduction of environmental risks;
- Approximation and harmonisation of reporting requirements;
- Provision of environmental information to the general public;
- Improvement of public participation/interest in decision-making on environmental policy matters.

International POPs Elimination Project – IPEP

Website- www.ipen.org

In the course of the first stage of the project implementation, we focused on the following issues:

- organisation of discussions among NGOs on prospects of PRTR development in Russia;
- up-dating the information base on available expedience of development of PRTRs at the territory of the Russian Federation;
- preparatory activities for the NGO seminar.

Information materials were mailed within existing information networks that cover the European part of the Russian Federation: SRCEN, see-watch, seu-discuss, eco_accord_pops_news, Caspinfo, and ENWL. These materials incorporated brief information on POPs-related risks, potential sources of POPs at the territory of Russia, basic information on PRTRs, their aims, objectives and advantages (including advantages for the general public).

In order to update available information of experience of development of PRTRs and similar projects at the territory of the Russian Federation, relevant requests were sent to relevant regions, namely: Astrakhan Oblast (in 2003, they launched optimisation of the state monitoring system, seeking to develop an open information system), St. Petersburg and Sverdlovsk Oblast (in 1998 - 2000, in these regions, POPs-related projects were implemented, that were close to development of local PRTRs).

Negotiations were conducted with the Centre of International Projects - for many years, the Centre served as the leading organisation in the sphere of implementation of POPs-related projects of UNEP (including PRTRs).

In the course of preparatory activities for the NGO seminar, the meeting with industry representatives was held (they represented industrial facilities, that participated in development of the Volgograd Oblast PRTR and supervisory environmental authorities). In addition to status of the Volgograd Oblast PRTR, the meeting participants discussed preparations to the NGO seminar and participation of representatives of Volgograd Oblast in the seminar). The meeting participants had agreed on the specific facility to organise the meeting of the seminar participants with representatives of industrial facilities of Volgograd.

On the basis of results of analysis of already implemented registers in Russia and the experience of Volgograd Oblast, two booklets were developed: information on principles and main objectives of PRTRs in Russia and recommendations for organisation of PRTR development works. The key information of these booklets was also disseminated among non-governmental organisations that expressed their interest in the problem.

The information seminar, “The Role of Inter-sectoral Partnerships in Development of Regional and Local PRTRs”, was conducted for NGOs that expressed their intentions to facilitate development of the system of PRTRs in Russia, promoting the idea of development of local and regional PRTRs in their regions. Representatives of environmental NGOs of the European part of Russia were invited to the seminar: from Astrakhan, Moscow, Nizhniy Novgorod, Rostov, Saratov, Samara, Syktyvkar, Taganrog, and Yaroslavl.

In addition to representatives of NGOs from other regions, Volgograd representatives also actively participated in the seminar - representatives of environmental NGOs, mass media outlets (RIA "21VEK",

"Delovoie Povolzhie" newspaper), major industrial facilities of Volgograd ("Kaustik" Co. and "Lukoil" Co., located in the district of implementation of the local PRTR).

The seminar "The Role of Inter-sectoral Partnerships in Development of Regional and Local PRTRs" sought to disseminate experience of participation of NGOs in dialogue with industrial facilities for development of open information systems on pollution sources and practical experience of PRTR development in the territory of Volgograd.

Olga Speranskaya (Eco-Accord Centre, Moscow), the IPEP co-ordinator in the territory of Eastern Europe, Caucasus and Central Asia, presented information on the experience of development of PRTRs in other countries, international co-operation in the sphere and existing international documents on PRTRs. The seminar participants were provided information on available Russian experience and experience of PRTR development in Volgograd, as well as information on the concept of development of the regional PRTR of Volgograd Oblast, developed by "Volgograd-Ecopress" Information Centre.

In her presentation, N.V. Voronovich (the expert of the State Committee for Standards) provided information on legislative regulation of functions of facility-level environmental control, the system of the state environmental control in Russia, options for co-operation of NGOs, governmental organisations, sanitary and epidemiological facilities and environmental supervisory bodies. She particularly focused on problems of control and licensing/permitting activities in the sphere of environmental protection.

In connection with recent reorganisation of environmental enforcement authorities in charge of control of industrial facilities, activities of NGOs in the sphere of PRTR development should be considered as particularly relevant and necessary. The reorganisation resulted in declining quality of control, delays in assessment of environmental risks and, particularly in declining quality of forecasts of environmental risks.

In the course of the seminar, the meeting was held with representatives of industrial facilities that participate in the development of the local PRTR in Krasnoarmeiskiy district of Volgograd. The seminar participants were presented samples of electronic/paper versions of the local Register, developed in co-operation with industrial facilities.

The second day of the seminar was dedicated to discussion of potential options for participation of NGOs in development of PRTRs at local and regional levels. The seminar participants discussed organisational arrangements for development of regional PRTRs and main problems and prospects. Different options for development of registers were discussed: initiatives of governmental bodies (Saratov representatives consider this option as the most optimal); and involvement of major industrial facilities as partners (the latter option was particularly supported by NGOs from Taganrog and Astrakhan).

In addition, many specific issues were discussed, such as development of the scheme of PRTR with identification of stages, activity types and tasks, identification of activities under mandatory reporting requirements, lists of chemicals under PRTR reporting requirements, etc.

STAGES OF PRTR DEVELOPMENT

Step 1: establishment of a working group, incorporating:

- non-governmental organisations;
- representatives of governmental environmental authorities
- industrial facilities
- medical and technical research and education facilities
- mass media outlets

Step 2: selection of a facility (criteria):

- a major facility, with particularly hazardous toxic pollutants in its emissions and discharges (the largest emissions/discharges in qualitative and quantitative terms)
- top managers of the facility are ready to implement a policy of open provision of information on its emissions and discharges
- a well equipped analytical laboratory
- active public involvement.

Step 3: selection of chemicals:

As a first step in developing PRTR reporting, a group of 32 chemicals were selected as the most relevant pollutants in the Southern Industrial Zone of Volgograd. Future developments of PRTR for POPs-producing industries would include emissions of dioxins, furans, PCBS, HCB and other POPs relevant to the producing industries (on the basis of facility-level analytical measurements).

1. [ammonium nitrogen](#)
2. [nitrogen](#)
3. aluminum
4. [aniline salt](#)
5. [benzene](#)
6. pH
7. [suspended solid particles](#)
8. [vinylidene chloride](#)
9. [vinyl chloride](#)
10. [dichloroethane](#)
11. [ferriferrous](#)
12. [calcium](#)
13. [dimethylbenzene](#)
14. [methylene chloride](#)
15. [solid residue](#)
16. [synthetic surfactants](#)
17. [petrochemicals](#)
18. [nickel](#)
19. [nitrate ions](#)
20. mercury
21. [sulphate](#)
22. [sulphide](#)

23. [methylbenzene](#)
24. [trichlorethane](#)
25. [phenols](#)
26. [phosphates](#)
27. [phosphorous](#)
28. [fluorides](#)
29. chlorine
30. [chloride](#)
31. chlorine [methyl](#)
32. [chloroform](#)

Step 4: software application with information on:

- sampling points
- list of chemicals
- emission limits for water, air and waste

Further steps

1. Input of inspection data into the system
2. Co-operation with district residents and the facility personnel
3. Dissemination of the system among other facilities of the district.
4. Planning transition from "end-of-the-pipe" control to control of a chemical's life cycle at the facility

All these issues in addition to general information are incorporated into the brochure, developed by "Volgograd-Ecopress" Information Centre.

The seminar participants came to the following conclusions:

1. Now, development of PRTRs at local and regional levels is the most optimal option for introduction of a system of environmental reporting at the territory of Russia.
2. Organisation and implementation of information and awareness-raising campaigns among local authorities, governmental environmental bodies, industrial facilities, and mass media outlets are considered as decisive preconditions for initiation of the PRTR process. It is necessary to have special methodological materials for NGOs, with information and recommendations on organisational arrangements for PRTR development.
3. In order to ensure successful implementation of activities in the sphere, all stakeholders should participate in the process as equal partners. Depending on particular socio-political and economic situation in a region, it may be appropriate to develop PRTRs at the base of governmental environmental enforcement bodies or at the base of major industrial facilities-polluters.
4. Non-governmental organisations may play a decisive role in facilitation of development of regional and local PRTRs, in involvement of other stakeholders, provision of negotiation platforms, etc.

5. Lack of finance resources for necessary informational and organisational activities of NGOs is a major serious obstacle for PRTR development activities.

At the base of discussions, the seminar participants decided to initiate study of options for development of regional and local PRTRs in 3-4 other regions of the European part of Russia.

The seminar participants expressed their intentions to carry out necessary consultations in their regions after their return home, to discuss opportunities for development of PRTRs and to choose appropriate options for their regions. In order to optimise these activities, they decided to establish an information network for exchange of information and experience. "Volgograd-Ecopress" Information Centre was authorised to organise the network, to develop necessary recommendations and information materials.

The seminar participants were presented the local pollutant release and transfer register.

Data input screenshot:

РЕГИСТР ВЫБРОСОВ И ПЕРЕНОСА ЗАГРЯЗНИТЕЛЕЙ КРАСНОАРМЕЙСКОГО РАЙОНА ВОЛГОГРАДА													
Объекты контроля Анализы Отчеты													
c 01.09.2004 по													
Предприятия	Название компонента	ПДК			01.09.04					Доп. информация			
		Макс.	Мин.	Макс.	1 кв.	2 кв.	3 кв.	4 кв.	1/2год	год	Среднее	Макс.	% прев.
<input type="checkbox"/> ОАО "Саретта"	pH	10,5	0	0			9,51	8,36	7,28	8,55	8,425	9,51	
<input checked="" type="checkbox"/> ОАО "Каустик"	Азот аммонийный	5	0	0									
<input type="checkbox"/> ВСПКЗ	Азот нитригов	0	0	0									
<input type="checkbox"/> Промсток ТЭЦ 3	Алюминий	0	0	0									
<input type="checkbox"/> Промсток ТЭЦ 2	Анилин	0	0	0									
<input type="checkbox"/> Хозбытовые стоки Красн. р-на	Бензол	3	0	0						0,8	0,8	0,8	
<input type="checkbox"/> Сточные воды Светл. пром-на, БВК, ТЭЦ-3	БПК	0	0	0									
<input type="checkbox"/> Условночистый сток ВСПКЗ	Взвешенные вещества	0	0	0									
<input type="checkbox"/> Промсток ООО "Лукойл-ВНП"	Винилденхлорид	0,05	0	0									
<input type="checkbox"/> Керамический завод	Винилхлорид	0,05	0	0						0,072	0,072	0,072	44
<input type="checkbox"/> Судостроительный завод	Дихлорэтан	2	0	0						4,27	4,27	4,27	113,5
<input type="checkbox"/> ВЗТУ	Железо 3-вал	0	0	0									
<input type="checkbox"/> Промстройконструкция	Запах	0	0	0									
	Кальций	0	0	0			68,1		721		394,55	721	
	Ксиол	0	0	0									
	Метиленхлорид	0	0	0									
	Никель	0	0	0									
	Нитрат-ион	0	0	0									
	Ртуть общая	0	0	0			0,0034	0,00258		0,0026	0,00286	0,0034	
	СПАВ	0	0	0									
	Сульфаты	0	0	0									
	Сульфиды	0	0	0									
	Сухой остаток	0	0	0									
	Толуол	0	0	0						0,14	0,14	0,14	
	Трихлорэтан	0	0	0									
	Трихлорэтилен	0	0	0									
	Фенолы	0	0	0									
	Фосфаты	0	0	0									
	Фосфор общий	0	0	0									
	Фторид-ион	0	0	0									
	Хлор активный	0	0	0									
	Хлориды	0	0	0				651		671	661	671	
	Хлорметил	0	0	0									
	Хлороформ	0	0	0									
	ХПК	0	0	0				184		264	224	264	
	Цвет	0	0	0									
	ЧХУ	0	0	0									
	Нефтепродукты	0	0	0	7	4,1					5,55	7	

Adding new facilities screenshot:

	Наименование компонента	МинПДК	МаксПДК
<input checked="" type="checkbox"/>	рН	0	10,5
<input checked="" type="checkbox"/>	Азот аммонийный	0	5
<input checked="" type="checkbox"/>	Азот нитригов	0	0
<input checked="" type="checkbox"/>	Алюминий	0	0
<input checked="" type="checkbox"/>	Анилин	0	0
<input checked="" type="checkbox"/>	Бензол	0	3
<input checked="" type="checkbox"/>	БПК	0	0
<input checked="" type="checkbox"/>	Взвешенные вещества	0	0
<input checked="" type="checkbox"/>	Винилиденхлорид	0	0,05
<input checked="" type="checkbox"/>	Винилхлорид	0	0,05
<input checked="" type="checkbox"/>	Дихлорэтан	0	2
<input checked="" type="checkbox"/>	Железо 3-вал	0	0
<input checked="" type="checkbox"/>	Запах	0	0
<input checked="" type="checkbox"/>	Кальций	0	0
<input checked="" type="checkbox"/>	Ксилол	0	0
<input checked="" type="checkbox"/>	Метиленхлорид	0	0
<input checked="" type="checkbox"/>	Нефтепродукты	0	0
<input checked="" type="checkbox"/>	Никель	0	0
<input checked="" type="checkbox"/>	Нитрат-ион	0	0
<input checked="" type="checkbox"/>	Ртуть общая	0	0
<input checked="" type="checkbox"/>	СПАВ	0	0
<input checked="" type="checkbox"/>	Сульфаты	0	0
<input checked="" type="checkbox"/>	Сульфиды	0	0
<input checked="" type="checkbox"/>	Сухой остаток	0	0
<input checked="" type="checkbox"/>	Толуол	0	0
<input checked="" type="checkbox"/>	Трихлорэтан	0	0
<input checked="" type="checkbox"/>	Трихлорэтилен	0	0
<input checked="" type="checkbox"/>	Фенолы	0	0
<input checked="" type="checkbox"/>	Фосфаты	0	0
<input checked="" type="checkbox"/>	Фосфор общий	0	0
<input checked="" type="checkbox"/>	Фторид-ион	0	0
<input checked="" type="checkbox"/>	Хлор активный	0	0
<input checked="" type="checkbox"/>	Хлориды	0	0
<input checked="" type="checkbox"/>	Хлорметил	0	0
<input checked="" type="checkbox"/>	Хлороформ	0	0
<input checked="" type="checkbox"/>	ХПК	0	0

The following data are input:

- facility name;
- controlled components;
- ambient limits (maximal allowed concentrations) and/or emission limits. (Specific data for every individual facility).

Report screenshot:

РЕГИСТР ВЫБРОСОВ И ПЕРЕНОСА ЗАГРЯЗИТЕЛЕЙ КРАСНОАРМЕЙСКОГО РАЙОНА ВОЛГОГРАДА										
Наименование предприятия	Ингредиенты	ПДКmin	ПДКmax	Концентрация, мг/дм ³						Макс.
				1 кв.	2 кв.	3 кв.	4 кв.	1/2 год	год	
ОАО "Сарепта"	pH	0	10,5	8,1	7,98	7,98	7,96	7,73	7,89	8,1
	Азот аммонийный	0	0			0,92			1,05	1,05
	Бензол	0	0			0,0034				0,0034
	Взвешенные веществ	0	0			1630			462	1630
	Винилхлорид	0	0			0,079				0,079
	Дихлорэтан	0	0			0,16				0,16
	Запах	0	0	-4						-4
	Кальций	0	0	-5	601				220	601
	Метиленхлорид	0	0			0,052				0,052
	Нефтепродукты	0	0	5,8				6		6
	Ртуть общая	0	0	0,026	0,017	0,034	0,034	0,034	0,039	0,039
	Толуол	0	0			0,0088				0,0088
	Трихлорэтилен	0	0			0,0081				0,0081
	Хлориды	0	0			2874			709	2874
	Хлороформ	0	0			0,014				0,014
ХПК	0	0	116		168			88	144	
ОАО "Каустик"	pH	0	10,5		7,28	8,55		9,51	8,36	9,51
	Бензол	0	3			0,8				0,8
	Винилхлорид	0	0,05			0,072				0,072
	Дихлорэтан	0	2			4,27				4,27
	Кальций	0	0		721			68,1		721
	Нефтепродукты	0	0	7			4,1			7
	Ртуть общая	0	0			0,0026		0,0034	0,00258	0,0034
	Толуол	0	0			0,14				0,14
	Хлориды	0	0			671			651	671
ХПК	0	0			264			184	264	
ВСПКЗ	pH	0	0	7,17	7,06					7,17
	Азот аммонийный	0	0	117,6	172,2					172,2
	Взвешенные веществ	0	0	516	910					910
	Винилхлорид	0	0			0,012				0,012
	Метиленхлорид	0	0			0,31				0,31
	Толуол	0	0			3,07				3,07
	Трихлорэтилен	0	0			0,15				0,15
	Хлороформ	0	0			0,14				0,14
	ХПК	0	0	460	680					680

The same report for printing:

Form1

высота строчек 240

1/3

ВЫБРОСЫ И ПЕРЕНОСЫ ЗАГРЯЗНИТЕЛЕЙ КРАСНОАРМЕЙСКОГО РАЙОНА ВОЛГОГРАДА 3А 2004

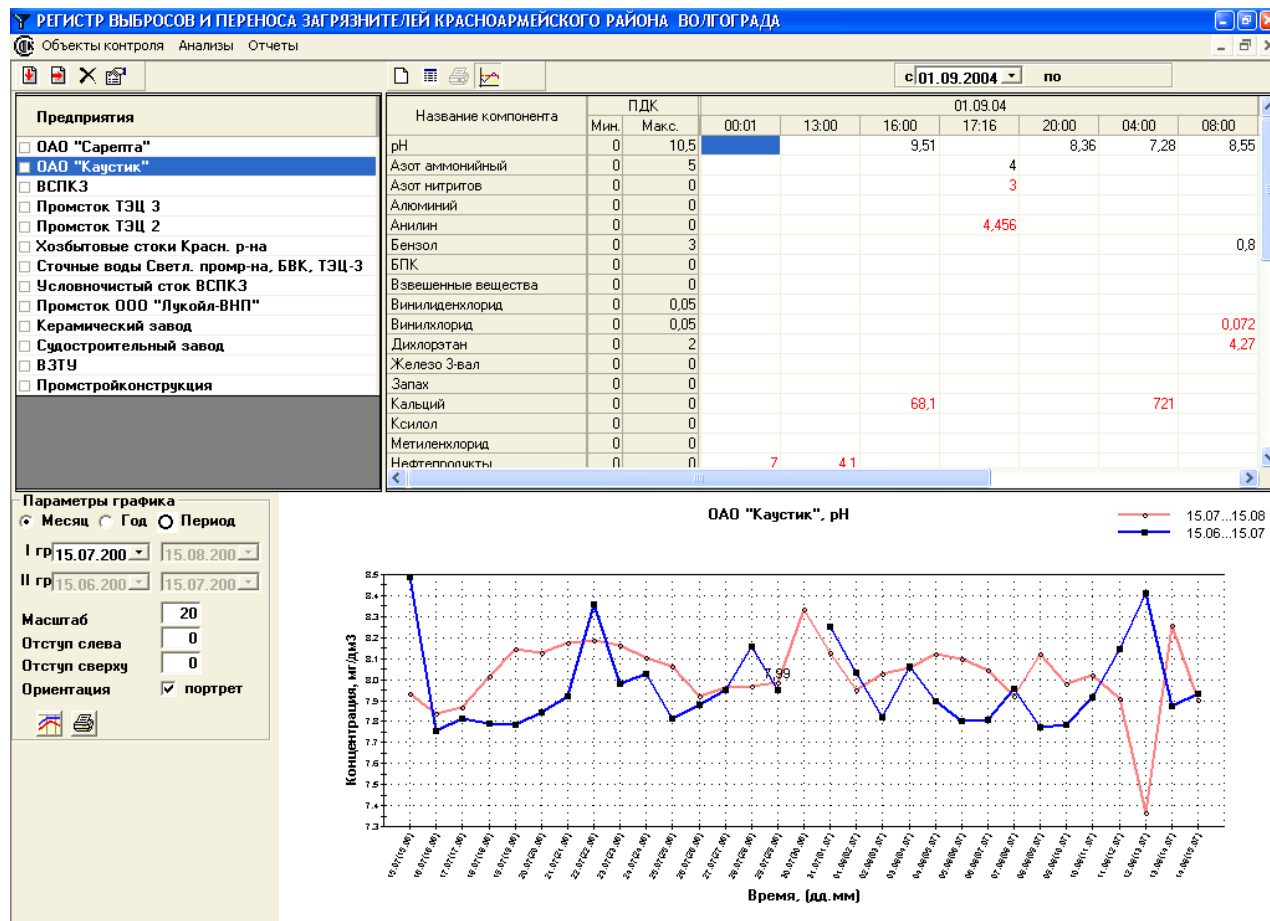
- качество усточных в од, поступающих на биологические очистные сооружения;
- биологический очистных сточных в од, осадков шлама;
- эффективности работы сооружений механической очистки;
- эффективности работы биологической очистки;
- эффективности работы установки очистки ртутьсодержащих сточных в од

Отчет выполнен на лютых.

Объекты контроля	Ингредиенты	Концентрация мг/дм ³		Концентрация, мг/дм ³							
		Душтин	ПДКстх	1 кв.	2 кв.	3 кв.	4 кв.	1/2 год	год	Меж.	
1	2	3	4	5	6	7	8	9	10	11	
ОАО "Сарепта"	рН	0	10,5	04:00	08:00	13:00	18:00	20:00			
	Азот аммонийный	0	0	0,92	7,98	7,98	7,96	7,73	7,88		8,1
	Бензол	0	0		0,0034						0,0034
	Взвешенные	0	0		1630				462		1630
	Винилхлорид	0	0		0,079						0,079
	Дихлорорган	0	0		0,16						0,16
	Запах	0	0								-4
	Кальций	0	0	601				220			601
	Метиленхлорид	0	0		0,052						0,052
	Нефтепродукты	0	0			6					6
	Ртуть общая	0	0	0,017	0,034	0,034	0,034	0,039			0,039
	Толуол	0	0		0,0088						0,0088
	Трихлорэтилен	0	0		0,0081						0,0081
	Хлориды	0	0		2874				709		2874
	Хлороформ	0	0		0,014						0,014
ХПК	0	0		168		88		144	20:00	168	
ОАО "Каустик"	рН	0	10,5	04:00	08:00	13:00	18:00	17:16	20:00		
	Азот аммонийный	0	5	7,28	8,55		9,51		4	8,36	9,51
	Азот нитрилов	0	0						3		4
	Аммиак	0	0						4,466		4,466
	Бензол	0	3		0,8						0,8

Стр. 1

Screenshot with comparative graphs for 2 periods of time (month, year or any other period of time)



Another format of the report screenshot (averages for "full" and "operational" analysis)

РЕГИСТР ВЫБРОСОВ И ПЕРЕНОСА ЗАГРЯЗИТЕЛЕЙ КРАСНОАРМЕЙСКОГО РАЙОНА ВОЛГОГРАДА										
Наименование предприятия	Ингредиенты	Концентрация, мг/дм ³								
		ПДКmin	ПДКmax	Оперативный	Сумма	Кол-во	Полный	Сумма	Кол-во	Всего
ОАО "Каустик"	Железо 3-вал	0	0	6,78	20,34	3				6,78
	Запах	0	0							
	Кальций	0	0	352,283	122242,2	347	240	240	1	351,96
	Ксилол	0	0	7,121	583,903	82				7,121
	Метиленхлорид	0	0	0,065	4,649	71				0,065
	Нефтепродукты	0	0	17,498	3464,7	198	10	10	1	17,461
	Никель	0	0				0,02	0,02	1	0,02
	Нитрат-ион	0	0				0,45	0,45	1	0,45
	Ртуть общая	0	0	0,017	12,199	706	0,002	0,002	1	0,017
	СПАВ	0	0				0,1	0,1	1	0,1
	Сульфаты	0	0	242,8	1456,8	6	73,1	73,1	1	218,557
	Сульфиды	0	0							
	Сухой остаток	0	0				2129	2129	1	2129
	Толуол	0	0	0,12	29,584	246				0,12
	Трихлорэтан	0	0	0	0	23				0
	Трихлорэтилен	0	0	0,011	0,418	39				0,011
	Фенолы	0	0				0,25	0,25	1	0,25
	Фосфаты	0	0				3	3	1	3
	Фосфор общий	0	0				3,17	3,17	1	3,17
	Фторид-ион	0	0				1,73	1,73	1	1,73
	Хлор активный	0	0	0	0	171				0
	Хлориды	0	0	1264,829	485694,2	384	691	691	1	1263,338
	Хлорметил	0	0	0	0	23				0
	Хлороформ	0	0	0,075	8,047	107				0,075
	ХПК	0	0	226,215	43207	191	110,8	110,8	1	225,614
	Цвет	0	0							
	ЧХУ	0	0	0,001	0,017	20				0,001
ВСПКЗ	pH	0	0	7,78	4955,93	637	7,815	15,63	2	7,78
	Азот аммонийный	0	0	121,047	43092,59	356	160,2	320,4	2	121,265
	Азот нитритов	0	0				0,34	0,68	2	0,34
	БПК	0	0				466,2	466,2	1	466,2
	Бутанол	0	0	0	0	5				0
	Взвешенные вещества	0	0	533,588	330824,7	620	645	1290	2	533,946
	Винилиденхлорид	0	0	0,006	0,304	50				0,006
	Винилхлорид	0	0	0,106	19,026	180				0,106
	Дихлорэтан	0	0	0,404	16,95	42				0,404
	Железо общее	0	0				3,175	6,35	2	3,175
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