

**Organisation of awareness-raising events  
concerning the implementation of Directive  
1999/31 EC on the landfill of waste**

REFERENCE: ENV.G.4/SER/2006/0049

**MINUTES CZECH REPUBLIC**

30 May 2007

**BIPRO**

Beratungsgesellschaft für integrierte Problemlösungen

# 1 Description and results of specific events

## 1.1 Czech Republic: Minutes and outcome

Date	Czech Republic
18.-19.01.2007	<b>Venue:</b> Prague / Ministry of Environment <b>Participants:</b> 39 (14 from national authorities, 14 from regional authorities, 4 from organisations/NGOs, 6 from enterprises) <b>Agenda:</b> 16 presentations (including EC and BiPRO) <b>Excursion:</b> Benátky landfill for hazardous waste

The information exchange and awareness raising event in Prague has been organised with support of the Ministry of the Environment. Beside representatives from the Ministry of Environment, the 39 **participants** comprised especially representatives from the Czech Environmental Inspectorates and the Regional Offices. NGOs, associations, companies and landfill operators were also attending the workshop (participant list see chapter 1.2).

The workshop in Prague was planned as a two days event. In total, 16 **presentations** were held (including BiPRO and EC). An excursion to the Benátky landfill for hazardous waste was realized the second day.

Presentations held addressed legal provisions and requirements both on European and national level as well as the current situation of waste management in the Czech Republic stressing aspects such as statistical data, administrative infrastructure, cooperation and permitting. In addition practical experiences with landfilling, acceptance criteria and control were presented from waste operators, regional authorities and the Environmental Inspectorate. The specific issue of organic waste management including examples for good practice in the field of separation at source and home composting has been addressed by an NGO speaker. The Ministry of Environment contributed to the event with 5 presentations, showing the strong dedication of the Ministry to the workshop.

For the second day an excursion to Dablicka landfill for municipal waste in Prague was planned which had to be cancelled due to bad weather condition (extra strong wind) and the operating instructions of the Dablicka landfill. Instead an excursion to the Benátky landfill for hazardous waste was undertaken. The excursion provided valuable insight into technical standards and the state of landfill for hazardous waste in the Czech Republic (agenda see chapter 1.3).

As a result of discussions and presentations the following topics could be identified as priority issues and conclusions concerning the landfilling of waste in the Czech Republic:

### ***Legal framework of the Czech Republic***

The European legal requirements of Directive 2006/12/EC, 1999/31/EC and Decision 2003/33/EC have been well transposed into national legislation (most recently *Decree No. 294/2005* to implement 2003/33/EC). Slight variations such as three different landfill types under the landfill category “non-hazardous waste landfill” have been established in

accordance with the EU legal framework. Technical specification as concerns design, sealing, degassing, leachate management, closure and monitoring are compiled in the *Czech State Standards*.

For testing the leachate limit values standards EN12457-4 was chosen, requiring the testing of the leachate performance out of 10L/s.

### **Facts and Figures of the Czech Republic**

In the last years about 37 Mt of wastes have been generated annually in the Czech Republic with slightly increasing trend. As concerns MSW approximately 4.5 Mt have been landfilled in 2005. For separate collection of packaging, glass and paper rates of 19-25% have been reached within one year. The rate of landfilling of both for MSW and for hazardous waste is decreasing. However, it still accounts for up to 69%. With respect to the amount of biowaste, the share in 2005 was 19% above the 2010 target, which means that additional efforts have to be taken to meet the deadline.

In 2005 in total 237 landfills with an overall capacity of 93 million m<sup>3</sup>, out of which 33 were hazardous waste landfills, were in operation in the Czech Republic. The majority has been built after 1996. Due to beneficial hydrogeological conditions landfilling is cheap in the Czech Republic.

Figure 1-1 and Figure 1-2 shows the distribution of non-hazardous and hazardous waste.

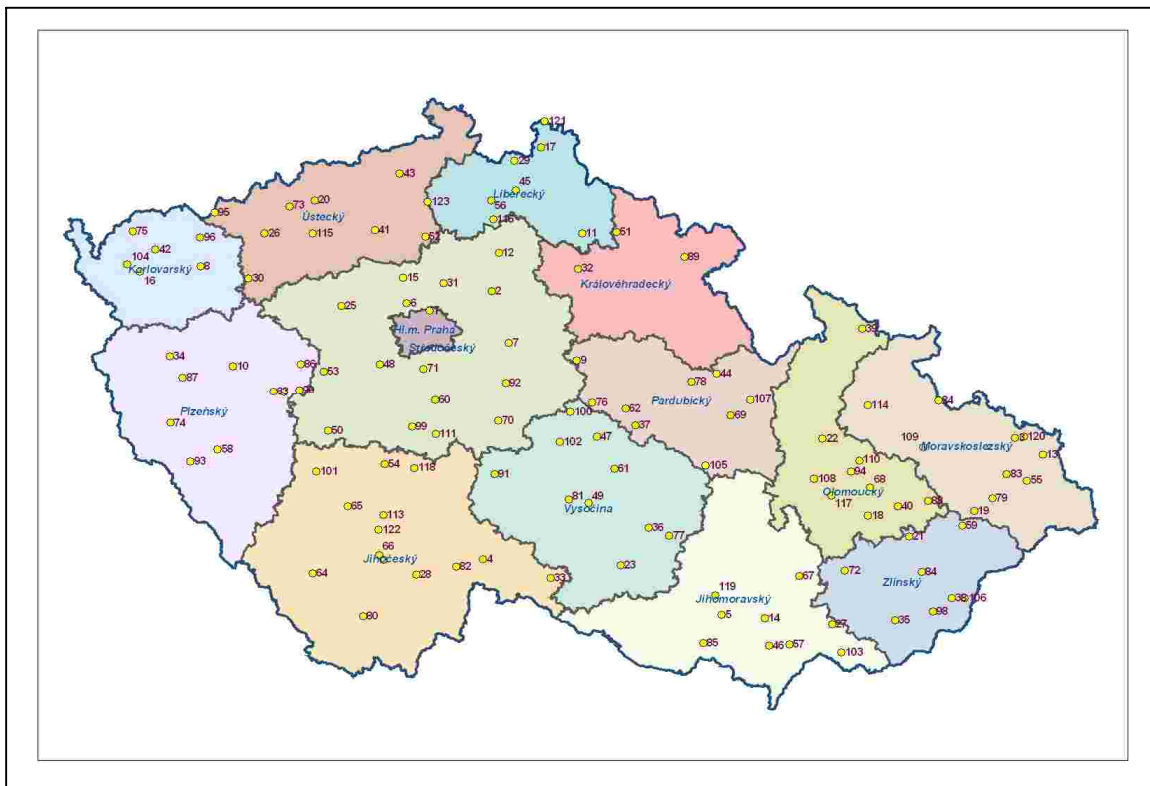


Figure 1-1: Distribution of landfills for non-hazardous waste in the Czech Republic with total planned capacity higher than 25000 m<sup>3</sup> (VÚV-CeHO, 2005)



Figure 1-2: Distribution of all hazardous waste landfills in the Czech Republic (VÚV-CeHO, 2005)

Information on closed landfills and contaminated sites is centrally stored in a national database. Information on illegal landfills however, is not available at national level.

The height of waste fees has been specified in *Act 185/2001*. There is a stepwise increase until 2011. Part of the fee is directed into Environmental Funds in order to promote the development of the waste management system as well as the development of new technologies. Environmental funding is seen as important instrument and a large number of projects has been supported or is planned by the *State Environmental Fund*.<sup>1</sup>

### ***Future Planning of the Czech Republic***

Primary selection and pre-processing are major priorities in Czech waste management with a strong focus on biowaste.

### ***Description of landfill visited***

The excursion during the event in the Czech Republic had to be changed at short notice due to a heavy storm the night before. So the visit was realized to the Benátky landfill, a hazardous waste landfill opened in 1999 on the territory of a former military camp. The site covers 40 ha and has a total capacity of 4 million m<sup>3</sup> divided into 24 sections. Currently one third of the landfill is under exploitation. Annually 150 to 200 kt of waste is disposed off.

<sup>1</sup> Presentation Jan Plavec, Ministry of Environment, Department of Waste; for additional information see presentations of Mr Leos Krenek, Director of Waste Management Department, Ministry of Environment and Věra Havránková, Waste Management Department, Ministry of Environment

Exploitation is planned until 2021. The site is used for MSW (S-OO3) and industrial waste (S-NO). However, the whole installation is designed for hazardous waste management. Leachate water is collected separately for MSW and industrial waste sections. It is recycled into the landfill body. Excessive water is treated with reverse osmosis (2 m<sup>3</sup>/h for 24h/d). Gas is not yet used for energy recovery. A section for treatment of biodegradable waste (biodegradation and composting) is in place in the industrial waste area. Compost and C&D waste is used for engineering purposes within the landfill site.

The technical standard of the site seemed to correspond to EU requirements. The following possible deficits of the landfill could be identified:

- Deficits in on-site control of incoming waste;
- Waste tyres are used for the drainage layer for purposes of its protection. It is forbidden to put any waste tyre to the landfill in the Czech Republic, these obligations are met by the operator of the landfill.

***Major problems and deficits identified by the workshop participants of the Czech Republic***

- (1) The rate of landfilling is still too high (around 70%).
- (2) The ratio of landfill of organic waste (agriculture, forestry) and the biodegradable fraction in landfilled waste (e.g. mixed MSW) is still high from the point of view of landfill type S-OO3, and it seems difficult to achieve the targets given in the Landfill Directive by the deadlines set.
- (3) No data compilation exists about illegal dumpsites at national level, as illegal dumpsites are currently managed under responsibility of municipalities.
- (4) Energy recovery from landfill gases is not economically viable in case of smaller landfills.
- (5) The “treatment prior landfilling” principle is not implemented and there are open questions concerning the interpretation of this provision.
- (6) The requirement for separate cells for gypsum and biodegradable waste is discussed.
- (7) Waste tyres are used for engineering measures within landfills to a high extend.
- (8) Representativity of samples, qualification and independency of analysing laboratory may be difficult to achieve and further specification in legal document might be needed.
- (9) Alternative treatment and recovery methods has to be further investigated and promoted as waste incineration still has a low acceptance, MBT seems to be economically not interesting and the quality of compost is still a problem.
- (10) DOC limit values set in Decision 2003/33/EC are regularly exceeded significantly by

a number of wastes including inert, non-hazardous and hazardous waste fractions. In this context alternative analysis methods as listed in the Decision (at wastes own pH, at a pH of 7,5-8) do not consistently provide different results, but result in either higher or lower levels depending on the type of waste investigated.

- (11) Leaching limits values for heavy metals in landfills according to CZ waste legislation are stricter than leaching limits set to classify waste as hazardous according to H13 criterion.

***Examples of good practice identified as potential tools to improve the implementation and enforcement the Czech Republic***

- (1) A low DOC limit has been transposed in Czech legislation although transposition period could have been used until 2020.
- (2) Standardised documents and guideline for basic characterisation were established at national level.
- (3) Training of regional authorities has been performed and regular meetings with central authorities has been realised.
- (4) Evaluation of waste management on a yearly basis by means of indicators (enables quick reaction)
- (5) The number of landfills has been continuously decreased since 2001.
- (6) Combined control activities of environmental inspectorates and polices are planned in near future.
- (7) Fines in case of violation of the waste management legislation and illegal dumping are planned to be reviewed.
- (8) Records on landfilled waste have to be kept for 30 years.

***Priority activities for implementation of landfill directive requirements in the Czech Republic***

- (1) Further efforts to reduce landfill of waste and organic fractions with priority on improved separation at source and expansion of alternative treatment methods have to be made.
- (2) Permit requirements have to be applied thoroughly by regional and local authorities.
- (3) Rated weight dependent waste management fees have to be implemented for citizens.

***Suggestions addressing the European Commission for supporting the implementation***

- (1) Guidance on what is meant exactly by treatment prior to landfill is needed and should be prepared on a European basis commonly for all MS.
- (2) The Decision on acceptance criteria should be revised to enable the implementation of the Decision, e.g. as regards the requirements on basic characterisation.
- (3) Clarification has to be made with specific waste streams not meeting the DOC and TOC (including stabilised waste by the solidification process), limit values and requirements for separate cells e.g. for gypsum and biodegradable wastes.

## 1.2 Participation List Czech Republic / Prague // 18.-19.01.2007

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### 1.3 Agenda Czech Republic / Prague // 18.-19.01.2007

Thursday, 18. January 2007

9:00	Registration, Come together, including Coffee Chairperson: Karel Bláha/Leoš Křenek, Ministry of the Environment, Czech Republic
10:00	Karel Bláha / Leoš Křenek (Deputy Minister Head of Section TOZP/ Director of Waste Management Dpt, MoE) <i>Opening of the Workshop</i>
10:05	Anke Joas (BiPRO GmbH, Munich) <i>Welcoming of participants and introduction of the EU Project</i>
I. RELEVANT LEGISLATION AND STATUS QUO	
10:15	Anke Joas (BiPRO GmbH, Munich) <i>Overview on relevant European legislation – The Landfill Directive</i>
10:50	Helmut Maurer (EU Commission, DG Environment, Brussels) <i>Status and problems with the implementation of European legislation for landfills - An European perspective</i>
11:25	Leoš Křenek (Director of Waste Management Department, MoE, Prague) <i>Current situation of the waste management in the Czech Republic</i>
11:45	Věra Havránková (Waste Management Department, MoE, Prague) <i>Waste Management Plan of the Czech Republic connected with the landfilling and the Operational Programme - Environment</i>
12:00	Viktor Škarda (Waste Management Department, MoE, Prague) <i>Cooperation between organisations of the Ministry of the Environment and their responsibility</i>
12:15	Petr Stejskal (State Environmental Fund, Prague) <i>The role of State Environmental Fund of the Czech Republic and Landfilling of Waste</i>
12:30	Jan Plavec (Waste Management Department, MoE, Prague) <i>Landfilling of Waste according to the Act on Waste</i>
12:45	Questions and Discussions
13:00	LUNCH BREAK
Chairperson: Anke Joas / Elisabeth Müller, BiPRO GmbH, Munich, Germany	
II. SPECIFIC ASPECTS OF IMPLEMENTATION	
14:30	Karel Kovařík (EIA and IPPC Department., MoE, Prague) <i>Procedures for permitting of landfills according to the IPPC process</i>
14:45	Elisabeth Müller (BiPRO GmbH, Munich) <i>Legal requirements for acceptance and control during operation of landfills</i>
15:05	Milena Veverková (Univerza SoP, s.r.o., Praha) <i>Practical aspects of acceptance criteria and operation of landfills in the Czech Republic</i>
15:20	Petr Havelka (Czech Environmental Inspection, Prague) <i>Czech Environmental Inspection and landfilling in the Czech Republic</i>
15:50	Questions and Discussions
16:00	COFFEE BREAK
16:15	Jan Buda (Center for Waste Management, Prague) <i>Statistical data and operators in the field of landfilling</i>
16:30	Hana Pacáková (Jihočeský Regional Office) <i>Landfilling experience in the Jihočeský Region</i>
16:45	Questions and Discussion
18:00	END OF THE FIRST WORKSHOP DAY

Friday, 19. January 2007

III. EXCURSION	
8:30	Excursion to the AVE CZ, a.s., Praha , Benatky nad Jizerou landfill
11:30	LUNCH BREAK
Chairperson: Anke Joas, BiPRO GmbH, Munich / Leoš Křenek, Ministry of the Environment, Czech Republic	
IV. SPECIFIC LANDFILLING PROBLEMS AND CONCLUSIONS OF THE WORKSHOP	
13:00	Dagmar Sirotková (Center for Waste Management, Prague) <i>Waste acceptance criteria for landfilling – determination of acid- and base-neutralizing capacities and the DOC</i>
13:20	Jiří Čenský (AVE CZ, a.s., Praha) <i>Practical experience with landfilling in AVE CZ</i>
13:40	Ivo Kropáček (Friends of the Earth, Olomouc) <i>Biowaste management – a crucial problem for EU countries</i>
14:00	Questions, open discussion, final conclusions
15:00	END OF THE WORKSHOP