

Second Training session

Application of the Checklists method for checking and assessing the technical safety of industrial plant with relevance to water pollution control

This event is part of the project financed by the UNDP/GEF

„Activities for Accident Prevention - Pilot Project - Refineries"

Introduction

A method for assessing potential dangers from environmentally relevant industrial plants was developed by the ICPDR after the disasters in Baia Mare and Baia Borsa (Romania) in 2000. Using this method it is then possible to determine the Accidental Risk Spots (ARS) on the basis of the water risk index (WRI).

The actual risk can only be determined on the basis of a thorough check and assessment of the plant in question. The developed checklists method is outstandingly suitable for this purpose. A varied number of different industrial plants can be checked and assessed in a simple, structured form with this method and in accordance with international recommendations.

The application of the checklists method was recommended to all states bordering the Danube river by the ICPDR so that the checking and assessing of industrial plants can be conducted on the same basis.

This project, initiated by ICPDR and financed by the UNDP/GEF is based on the checklists method developed under the project „Plant-related water pollution control technology - transfer to Romania, Moldavia and the Ukraine “. The main focus of the project is to develop a simple and well structured method for analyzing dangers in respect to the protection of groundwater, seas and rivers, taking the economic and technological possibilities of the countries in question into consideration. This method is based on international recommendations, e.g., of the river basin committees. According to the

- Recommendations for Functional units (e. g. storages, sealing systems, fire prevention etc.)
- Recommendations for Branches (e. g. cellulose industry)
- Recommendations for Risk areas (e. g. Contaminated surfaces),

this method deals systematically and in a structured manner with different aspects of technical safety of industrial plants in respect of their relevance to water pollution control.

The deficits in industrial plants checked with this method are taken down without leaving anything out and as objectively as possible. A catalogue of measures in form of short-, medium- and long-term recommendations to improve the safety of industrial plants are worked out on the bases of these deficits. This catalogue of measures can serve as a basis for an investment framework planning. Such simple technological and „low cost“ organizational measures that can contribute considerably to the safety level of industrial plants without unacceptable economic costs are given preference.

Application of the checklists method allows the verification of compliancy with basic safety precautions by small plants as well as the verification of compliancy of complex industrial plants with additional plant safety precautions because of the modular structure of the checklists.

The checklists are divided into three major categories.

1. The first part is the organizational and technical recommendations. This will be quoted from the original text.
2. The second part is the method of querying to ascertain if the recommendations are complied with.
3. The measures to be taken are recommended according to the problem. These are organizational and technical measures which are graded in short-, medium- and long-term. They can be used by plant operators as investment plan and by the authority as catalogue of demands.

The application of the checklists can also help in detecting those problems that have not been considered during the plant checks and this can lead to the formulation of new recommendations. Also new information and findings of the river basin committees and other international committees which are to be published as recommendations can be considered when revising the checklists.

The constant actualisation and improvement of the checklists method is thereby guaranteed.

Objective of the seminar

This educational and training measure is meant to present and demonstrate the practical application of the checklists method for checking and assessing industrial plants to a circle of chosen inspectors from the Danube member states. Beginning with the repeating of learning units the knowledge is strengthened by smaller training examples. In addition, new learning units are presented like the recommendation for refineries and the method for the determination of the real risk.

The effectiveness and the comparability of the checks with respect to the technical safety of industrial plants can be improved when the checklists method is applied by trained inspectors.

This is the basis for improving the level of industrial plant safety with respect to water protection control. The inspectors therefore serve as multipliers in their respective countries.

Possible results of the seminar

Based on the objectives of the seminar, the following results can be expected:

- Deepened understanding of the checklists method as a simple method for a systematic and structured checking and assessing of industrial plants relevant to water pollution control.
- Recognition of the method as a mean for complying with national and international regulations.
- Discussion and agreement of the draft of new recommendations and check lists for refineries
- Discussion and agreement of a draft new method for the determination of the real risk

Date and place

The Seminar and training session will be taking place from 18.07.2006 to 21.07.2006 in Constanta/Romania.

Address: Hotel CARMEN in 905504 Venus, Mangalia

Agenda

Monday, 17.07.2006

Arrival

20:30 Welcoming the participants

Tuesday, 18.07.2006

Moderator: Aurel Varduca, Institute for Environment

Objective: Motivation, introduction and presentation of the checklists method for a systematic and structured assesment of industrial plants with respect to water pollution control. The approach to plant checks and the application of each checklist for functional units is a vital point of the presentation.

09:30 - 10:00 Registration of the participants

10:00 - 10:30 Opening speech and welcoming the participants
(Refinery Constanta)

10:30 - 11:00 Short introduction of the participants

11:00 - 11:20 Basic ideas of safety policy
(Mrs. Tschiedel, Environmental office of the state of Brandenburg)

11:20 - 11:40 Overview of the checklists method
(Mr. Platkowski, R+D Industrie Consult)

11:40 - 13:10 Snacks (Lunch)

13:10 - 13:30 Splitting of factory into smaller units and determining the risk potentials
(Mr. Platkowski, R+D)

13:30 - 14:00 Storage facilities
(Mrs. Tschiedel, Environmental office of the state of Brandenburg)

14:00 - 14:30 Instrumentation of storage tanks
(Mr. Kulpok, R+D)

14:30 - 14:45 Discussion

14:45 - 15:15 Coffee break

15:15 - 17:15 Presentation and discussion of an exemplary plant check
(Storage facilities and Instrumentation of storage tanks)

Wednesday, 19.07.2006

Moderator: Jürgen Langner, PCK Raffinerie, Schwedt

Objective: In addition to the advanced training of the method by small training examples, also the developed check list for refineries is presented. Further more the refinery is introduced, which will be visited on the coming day,

10:00 - 10:30	Sealing systems (Mr. Kulpok, R+D)
10:30 - 11:00	Protection against flood (Mr. Platkowski, R+D)
11:00 - 11:30	In-plant pipeline safety (Mr. Kulpok, R+D)
11:30 - 11:45	Discussion
11:45 - 13:15	Snacks (Lunch)
13:15 - 15:15	Training based on examples – breakout in groups (Examples are sealing system of an Solid storage, Fire prevention strategy of a storage plant, In-plant pipeline safety of a storage plan)
15:15 - 15:45	Coffee break
15:45 - 16:15	Assessment of contaminated sites Mrs. Weber, Federal Environmental Office Austria)
16:15 - 16:45	Recommendation and Checklist for Refineries (Mr. Platkowski, R+D)
16:45 - 17:15	Presentation of the Refinery in Constanta
17:15 - 17:30	Final discussion

Thursday, 20.07.2006

Moderator: Group leaders

Objective: After the presentation of the checklists method in theory, the practical aspect and its application in daily practice is to be tested and discussed.

9:30 - 12:00	Factory site visit on the basis of the checklists in different groups. The groups are yet to be formed.
12:00 - 13:30	Snacks (Lunch)
13:30 - 14:45	Discussion in groups
14:45 - 15:15	Coffee break
15:15 - 17:00	Discussion in groups

Friday, 21.07.2006

Moderator: Gerd Winkelmann-Oei, Federal Environmental Agency Germ

Objective: Objective of the last day of the seminar is to evaluate and deliberate on the knowledge acquired in the last few days as well as to present the Method for the determination of the real risk

10:00 - 11:00	Presenting the work carried out in each group and discussions
11:00 - 11:30	Method for the determination of the real risk (Mr. Platkowski, R+D)
11:30 - 11:45	Discussion
11:45 - 12:45	Snacks (Lunch)
12:45 - 14:15	Training example in group discussion for the determination of the real risk of the plant which was visited on the day before
14:15 - 14:30	Assessment of the seminar
14:30 - 14:45	Closing remarks
14:45 - 15:00	Issuing of participant certificate
15:00	Departure of the participants

The revised Checklist you find here:

http://home.arcor.de/platkowski/Raffinerie/Site/html/funktional_units1.html

The new Recommendation for Refineries you find here:

<http://home.arcor.de/platkowski/Raffinerie/Site/html/refineries.html>

And the new Method for the determination of the real risk you find here:

http://home.arcor.de/platkowski/Raffinerie/Site/html/real_risk.html