

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

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

Furthermore, the level of the safety technology in a modern refinery is a topic on the agenda. Ideas for the formulation of recommendations for refineries are supposed to be developed as a result of this presentation.

Possible results of the seminar

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

- Acceptance and introduction of the presented 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 an aid for complying with several national and international regulations.
- Recommendations for the amendment of each checklist can only be made if the checklists method is applied and discussed in such a forum as this and if these amendments are considered when revising and improving the checklists method.
- New ideas for the formulation of recommendation for the refineries.

Date and place

The Seminar and training session will be taking place from 19.09.2005 to 22.09.2005 in Schwedt/Oder.

Address: Deutsch-Polnisches Umweltbildungs- und Begegnungszentrum
"Brandenburgische Akademie Schloss Criewen".

Agenda

Sunday, 18.09.2005

Arrival

20:30

Welcoming the participants

Monday, 19.09.2005

Moderator:

Gerd Winkelmann-Oei, Federal Environmental Agency Germany

Objective:

Motivation, introduction and presentation of the checklists method for a systematic and structured checking and assessing of industrial plants in 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.

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| 09:30 - 10:00 | Registration of the participants |
| 10:00 - 10:30 | Opening speech and welcoming the participants |
| 10:30 - 11:00 | Introduction of the participants |
| 11:00 - 11:20 | Basic ideas of safety policy
(Mrs. Tschiedel, Environmental office of the state of Brandenburg) |
| 11:20 - 12:00 | Overview of the checklists method
(Mr. Platkowski, R+D Industrie Consult) |
| 12:00 - 13:30 | Snacks (Lunch) |
| 13:30 - 13:50 | Splitting of factory into smaller units and determining the risk potentials
(Mr. Platkowski, R+D) |
| 13:50 - 14:20 | In-plant pipeline safety
(Mr. Kulpok, R+D) |
| 14:20 - 14:50 | Storage facilities
(Mrs. Tschiedel, Environmental office of the state of Brandenburg) |
| 14:50 - 15:05 | Discussion |
| 15:05 - 15:35 | Coffee break |
| 15:35 - 16:05 | Instrumentation of storage tanks
(Mr. Kulpok, R+D) |
| 16:05 - 16:35 | Transshipment of substances hazardous to water
(Mr. Platkowski, R+D) |
| 16:35 - 17:05 | Overfill safety systems
(Mr. Kulpok, R+D) |
| 17:05 - 17:35 | Final discussion |

18:30 Cruise with the boat on the river Oder

Tuesday, 20.09.2005

Moderator: Gerd Winkelmann-Oei, Federal Environmental Agency Germany

Objective: Beside the checklists for each relevant functional unit, organizational concepts for the whole factory will be described and the PCK refinery with its safety concept will be presented.

- 09:30 - 09:55 Sealing systems
(Mr. Kulpok, R+D)
- 09:55 - 10:20 Protection against flood
(Mr. Platkowski, R+D)
- 10:20 - 10:45 Split-flows wastewater
(Mr. Kulpok, R+D)
- 10:45 - 11:10 Internal alarm and hazard control planning
(Mrs. Tschiedel, Environmental office of the state of Brandenburg)
- 11:10 - 11:40 Fire prevention strategy
(Mr. Platkowski, R+D)
- 11:40 - 12:00 Discussion
- 12:00 - 13:00 Snacks (Lunch)**
- 13:00 - 14:00 A visit to the national park center "Unteres Odertal"
- 14:00 - 14:30 Plant monitoring
(Mrs. Tschiedel, Environmental office of the state of Brandenburg)
- 14:30 - 15:00 The history of the PCK refinery LTD. and its development into an environmental conscious company
(Mr. Matthey, Head of environmental protection and safety department at PCK)
- 15:00 - 15:15 Discussion
- 15:15 - 15:45 Coffee break**
- 15:45 - 16:25 Emissions and Product development
(Mr. Langner, head of the environmental protection department at PCK)
- 16:25 - 17:05 Safety precaution technology in the PCK
(Mr. Matthey, Head of environmental protection and safety department at PCK)
- 17:05 - 17:45 Wastewater and substances hazardous to water in PCK
(Mr. Langner, head of the environmental protection department at PCK)
- 17:45 - 18:00 Final discussion

18:30 Dinner and Big Band

Wednesday, 21.09.2005

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

20:00 barbecue

Thursday, 22.09.2005

Moderator: Gerd Winkelmann-Oei, Federal Environmental Agency Germany

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 developing ideas for drawing up recommendations in regard to the technical safety of refineries.

10:00 - 12:00 Presenting the work carried out in each group and discussions

12:00 - 12:30 Presenting the approach and the first outlines of recommendations for the refineries

12:30 - 13:00 Discussion

13:00 - 13:30 Assessment of the seminar

13:30 - 13:45 Closing remarks
(Mr. Reimer, Federal ministry of environment Germany)

13:45 - 14:15 Issuing of participant certificate

14:15 - 15:00 Snacks (Lunch)

from 15:00 Departure of the participants