



Federal Ministry for the  
Environment, Nature Conservation  
and Nuclear Safety

**Umwelt  
Bundes  
Amt**   
Für Mensch und Umwelt

UNECE Co-  
Transbound  
Industrial A  
**Assi  
Prog**

UNECE Convention on the Transboundary  
Effects of Industrial Accidents

Project under the Assistance Programme



# WORKSHOP REPORT

## Project on hazard and crisis management in the Danube Delta

*Workshop on Safety Guidelines for Oil Terminals*

Odessa, Ukraine  
23-25 September 2013

UNECE 2013

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## **A BACKGROUND INFORMATION**

### **Convention on the Transboundary Effects of Industrial Accidents**

The 1992 Convention on the Transboundary Effects of Industrial Accidents is designed to protect people and the environment against industrial accidents. The Convention aims to prevent accidents from occurring, or to reduce their frequency and severity and to mitigate their effects if required. The Convention also promotes active international cooperation between countries, before, during and after an industrial accident.

The Convention helps its Parties to prevent industrial accidents that can have transboundary effects and to prepare for, and respond to, accidents if they occur. The Convention also encourages its Parties to help each other in the event of an accident, to cooperate on research and development, and to share information and technology.

The Convention was adopted in Helsinki on 17 March 1992 and entered into force on 19 April 2000. There are currently 41 UNECE member states that are Parties to the Convention.

Countries with economies in transition, in particular, need further assistance in order to be able to implement the requirements under the Convention. Recognising that, at its 3rd meeting, the Conference of the Parties adopted an Assistance Programme to support the countries from Eastern Europe, Caucasus and Central Asia and South Eastern Europe in implementing the Convention.

The Assistance Programme has been developed to support Parties and UNECE countries with economies in transition to improve their industrial safety and to enhance the capacities of countries of Eastern Europe, the Caucasus and Central Asia and South-Eastern Europe in acceding to and implementing the Convention. The Programme is based on the principle that assistance can be effective only if a recipient country is capable of receiving the assistance and is willing to take advantage of it.

### **Danube Delta Project**

The Danube flows for 2,872 km, passing through four Central European capitals before it flows into the Black Sea where it forms one of the largest and most preserved river deltas in Europe. The area stretches over more than 600'000 ha and is famous for its unique ecosystems that host over 5,000 animal and plant species. Since 1991, the core of this nature reserve is a designated UNESCO World Natural Heritage Site. While the entire Danube basin encompasses thirteen countries of Central and Eastern Europe, making it the most international river basin in the world, Romania, Ukraine and Moldova are the most relevant countries for the Danube Delta. The outstanding environmental value and sensitivity of the region requires particular efforts for its protection. Having recognised the strong nexus between industrial accidents and water pollution, riparian countries in the Delta have proposed a project under the Assistance Programme aimed at protecting the Danube Delta from the industrial accidents and improving cooperation on industrial accidents between the Republic of Moldova, Ukraine and Romania. The project on hazard and crisis management in the Danube Delta was reported on the Sixth Meeting of the Conference of the Parties in 2010.

The Danube Delta project seeks to enhance and where possible harmonize the mechanisms and approaches for efficient and effective hazard and crisis management. Another goal is to improve the understanding between authorities and industrial operators and strengthen their cooperation. The project is funded by the German Federal Ministry for the Environment, Nature Conservation and

Nuclear Safety and by the German Federal Environment Agency with means of the Advisory Assistance Programme for Environmental Protection in the Countries of Central and Eastern Europe, the Caucasus and Central Asia. Additional support is provided by other donors and by the beneficiary countries.

In terms of hazard sources, the project is focused in especially on the oil terminals, which are located in the Republic of Moldova, Romania and Ukraine directly above the Delta: Giurgiulesti (Republic of Moldova), Galati (Romania) und Reni/Izmail (Ukraine). These terminals generate an increased hazard potential for the ecosystem and natural heritage of the Delta. One of the main project outputs is therefore the elaboration of safety guidelines for oil terminals which should help to improve understanding, among the authorities and the operators in the project countries and other ECE countries, of the necessary safety standards at the oil facilities with the aim to ensure incident free operation.

#### **Establishment of an expert group for the elaboration of the elaboration of safety guidelines**

Failures and incidents at oil terminal facilities may have far-reaching consequences for the environment and human health. Since the 1970s, 40 per cent of small- and medium-sized oil spills and 29 per cent of the large oil spills occurred during loading or discharging – which are typical operations at ports and oil terminals – and they have caused severe environmental damage to fisheries, social and economic activities and the marine environment.

In order to assist operators and authorities in the ECE region to ensure an adequate safety level at OT facilities, the secretariat to the Convention on the Transboundary Effects of Industrial Accidents established in March 2012 an international expert group to elaborate safety guidelines for oil terminals. Expert group members are Gerhard Winkelmann-Oei (Chair, German Federal Environment Agency), Eddy de Rademaeker (European Federation of Chemical Engineers), Richard Gowland (European Process and Safety Centre), Frank Candreva (DNV Oil and Gas, DNV Belgium ), Alexander Moskalenko and Alexey Isakov (GCE Group, Russian Federation). Although a number of guiding materials in this area are already available internationally, they are often too complex for effective use by many operators and authorities or too focused on particular technical elements. The ECE safety guidelines and good industry practices for oil terminals aim at overcoming these and other drawbacks by providing a practical overview of the safety precautions needed for those running such a facility.

#### **Organization of a workshop on safety guidelines for oil terminal**

At its third meeting, the project management group (PMG) decided to organise in Odessa (Ukraine) a workshop on the safety guidelines and good industry practices for oil terminals and a site visit to the oil terminal to the Odessa port. The goal of the workshop and the site visit were to discuss safety standards and major past accidents at oil terminals and to further improve the content and applicability of the ECE safety guidelines and good industry practices for oil terminals, including via a site visit to the Odessa port. For this purpose, a short checklist on the ECE safety guidelines and good industry practices for oil terminals was developed. The main output from the workshop would be a report from the workshop that will reflect the discussions and findings and recommendations for the finalization of the draft safety guidelines for oil terminals.

The workshop was held in hotel Victoria in Odessa on 23–25 September 2013. 47 representatives of the competent and enforcement authorities responsible for environment, civil protection, transport of dangerous goods, port authorities and oil terminal operators from Republic of Moldova, Romania and Ukraine participated in the workshop. It was also attended by Mr. Chris Dijkens (Netherlands, Chair of the Conference of the Parties), Mr. Gerhard Winkelmann-Oei (Germany, member of the Convention's Bureau), members of the international expert group (Mr. Eddy de Rademaeker, European Federation of

Chemical Engineers, EFCE; Mr. Richard Gowland, European Process and Safety Centre, EPSC; Mr. Alexey Isakov, GCE Group; Mr. Frank Candreva, DNV Oil and Gas Belgium), oil terminal safety experts from the project countries and the European industry (Mr. Andy Roberts, UK Petroleum Industry Association).<sup>1</sup> The workshop was serviced by the Convention secretariat.

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<sup>1</sup> Please see annex for the final list of participants.

## **B WORKSHOP PROCEEDINGS**

### **B.1 Setting the Scene**

During the first workshop session, general information about the ECE-Strategy for Risk-Reduction, the Convention and the project was shared as well as information about past accidents, their environmental impact and lessons learnt. All presentations made at the workshop can be found on the ECE homepage (<http://www.unece.org/index.php?id=33965>).

#### **B.1.1 UNECE strategy on prevention of, preparedness for and response to industrial accidents**

Ms. Claudia Kamke from the ECE Convention secretariat presented general information about the Convention, the Assistance Programme and its activities and the main publications and outputs (Safety guidelines and good practices for pipelines (2008), Safety guidelines and good practices for TMF (2008), Sectoral Checklist for Preparation and Inspection of a Safety Report (2012), On-line training course on Introduction to Industrial Accidents (2013)). Ms Kamke also offered the participants some insight into the Danube Delta Project (goals, objectives, activities, outputs), the progress of the ECE safety guidelines and good industry practices for oil terminals and the workshop (objectives, working methods and expected outcome).

#### **B.1.2 Safety guidelines and checklists**

Mr. Gerhard Winkelmann-Oei reported about the development and use of Safety Guidelines and Checklists as a part of the UNECE-Strategy for Risk-Reduction. He also presented the purpose, scope, applicability and legal status of the ECE Safety guidelines and good practices for tailing management facilities and pipelines. Mr. Winkelmann-Oei informed the participants about some past, present and future projects in the area of accidental water pollution under the Convention and presented the general layout and content of the ECE safety guidelines and good industry practices for oil terminals.

#### **B.1.3 Buncefield accident: environmental impact and lessons learnt**

Mr. Richard Gowland presented a major accident that occurred at the oil terminal in Buncefield, the United Kingdom in 2005. He gave insight into the sequence of the events that led to the accident, the emergency response measures and the negative environmental consequences of the accident. Mr Gowland also presented a brief analysis of the immediate and underlying causes for the accident, main lessons learnt and risk reduction measures taken.

#### **B.1.4 Accident at vertical steel tanks of oil terminal Konda (OAO Sibnefteprovod), August of 2009: environmental impact and lessons learnt**

Mr. Alexey Isakov presented a major accident that occurred in the Konda Oil Terminal in the Russian Federation in 2009. He gave details about the equipment used at the oil terminal, the technical standards applicable and the technical risk reduction measures applied. Mr. Isakov also described the chain of events that lead to severe environmental pollution and shared information about the findings of the investigation of the competent authorities.

## **B.2 Safety standards for oil terminals**

During the workshop session, industry representatives shared information about safety standards and good industry practices applied by the European oil industry and the Odessa port Oil Terminal.

### **B.2.1 Safety standards and good industry practices applied by the European oil industry**

Mr. Andy Roberts presented the EU Legislative and regulatory framework, safety standards and good industry practices for Oil Terminals. He gave details about the EU major accident policy and legislation (e.g. Community approach on the prevention of natural and man-made disasters, the Seveso II Directive, etc.), implementing national legislation and underlying EU, national and industry Safety standards and guidance. Mr Roberts' presentation also discussed some practical issues such as Risk assessment and mitigation, Process safety leadership, Hazard awareness, technical standards and requirements and Competency management systems.

### **B.2.2 Safety standards applied by the Odessa port terminal**

Mr. Denis Karpov presented the Odessa port and the Oil Terminals at it. He described the main facilities, legal requirements and technical and organizational risk reduction and environmental protection measures implemented. Mr Karpov also gave some details about the upcoming site visit to the Odessa port and the Oil Terminals.

## **B.3 Introduction to the Safety Guidelines and Good Industry Practices for Oil Terminals and the checklist**

This session was dedicated to the Safety Guidelines and Good Industry Practices for Oil Terminals and the checklist. Members of the international expert group and representatives of the ECE Convention secretariat presented the main aspects of the Safety Guidelines and the checklist designed for the site visit. After each presentation a Questions and Answers session was held.

The Members of the international expert group introduced the participants to the Safety Guidelines and Good Industry Practices for Oil Terminals. They gave details about the scope and objectives of Guidelines and their current status and explained the rationale and the structure of the Guidelines – the Principles & General Recommendations main text and Technical & Organisational Aspects.

A detailed presentation gave additional information about the Principles and General Recommendations of the Guidelines.

The following principles were outlined:

- Proper design, construction, operation and closure of an oil terminal should be a high priority both for the operator and for the Competent Authorities:
- The oil terminal operator has primary responsibility for ensuring safety and taking measures to prevent accidents and limit their consequences for human health and the environment
- Competent Authorities should introduce and enforce adequate measures to ensure that the operators are committed to safety

- Governments should provide leadership and create minimum administrative frameworks to facilitate the development and safe design/planning, construction, operation/management and closure/decommissioning of oil terminals.
- The operators of oil terminals have the primary responsibility for ensuring operational and process safety of oil terminals and the personal health of the operating staff.
- The oil terminal Operator will ensure that an appropriate level of competence is available throughout the lifecycle phases of an oil terminal and only competent personnel is allowed to perform high-risk tasks.
- Appropriate measures should be taken in case of accidents
- Emergency plans should be established by oil terminal operators (internal emergency plans) and by authorities (external emergency plans) and should be tested and regularly updated.
- Land-use planning considerations should be taken into account in view of oil terminal siting and intended post-operational use.
- For oil terminals which pose a potential risk to neighbouring countries, communities and land-users due to their size or presence of hazardous substances, information to and involvement of these countries, communities and individuals should be ensured for the purpose of drawing up an off-site emergency plan. For proposed new major storage facilities for petroleum, petrochemical and chemical products, and for large-diameter oil and gas pipelines and modifications of existing ones that are likely to cause a significant adverse transboundary impact during normal operation and occurrence of major accidents, the provisions of the ECE Convention on Environmental Impact Assessment (EIA) in a Transboundary Context (Espoo, 1991) should be followed
- The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus, 1998) applies with respect to access to environmental information, public participation and access to justice.

During the presentations, the following recommendations were outlined and discussed:

- These guidelines should be read also in the context of existing international guidelines, recommendations and standards concerning oil terminals.
- These guidelines constitute a minimum set of Good Industry Practices (GIP) to ensure a basic level of safety for oil terminals.
- National standards must be applied where they are stricter than the recommendations in this document.
- ECE member countries should adopt policies for the Safety of oil terminals,
- National legislation should be clear, enforceable and consistent between different countries in order to facilitate international cooperation in, for example, the development and implementation of external emergency plans.
- ECE member countries should establish a system of controls and land-use planning procedures with involvement of the public.
- CAs should be designated at the national, regional or local level that, alone or together with other authorities, have the necessary competences to ensure adequate monitoring and control of oil terminals.
- CAs should maintain within their organisations expertise relating to:
  - o Safe handling of hazardous substances;
  - o Inspection and audit;
  - o Permitting requirements.
- CAs should ensure that the objectives of preventing and limiting the effects of accidents are taken into account in their land-use policies
- CAs should set up a system of inspections or other control measures in order to ensure that oil terminal Operators meet the legal requirements.



- The inspection regime of oil terminals as defined by the CAs should reflect the:
  - o Hazard Potential of the oil terminal;
  - o Proximity to sensitive environments or communities;
  - o Age of the installation;
  - o “Ageing” of the equipment.
- CAs should ensure that oil terminal operators:
  - o Draw up internal emergency plans and put them into effect without delay when an accident occurs ; and
  - o Supply the authorities designated for that purpose with the necessary information to enable them to draw up external emergency plans.
- CAs should draw up and implement external emergency plans with measures to be taken in the vicinity of the oil terminal where the effects of accidents might be noticeable.
- CAs should ensure that internal emergency plans are drawn up in consultation with the personnel working inside the establishment, including long-term relevant subcontracted personnel, and that the public is consulted on external emergency plans when they are established or updated.
- CAs should ensure that external and internal emergency plans are reviewed, tested and, where necessary, revised and updated at suitable intervals.

During the session, the technical and organizational aspects of safety of oil terminals throughout the whole life cycle were outlined and discussed:

- Design and Construction (Environmental Impact Assessment (EIA), Facility Siting and Land Use Planning, Safe Design, Quality Assurance during procurement, fabrication, installation and commissioning and Hazards Management)
- Operations and Management (Process safety, Organisation and Personnel, Operating Manual, Operating Procedures and Safe Work Practices, Management of Change, Good Industry Practice for transport and storage of hazardous materials, Management of abnormal situations, Investigation of incidents, Performance monitoring and compliance assurance, Records management, Audit and management review and Learning from experience)
- Asset Integrity & Reliability (Asset Integrity, Inspection, Testing and Preventive Maintenance)
- Emergency Planning and Response (Internal Emergency Plans, External Emergency Plans, Warning and alert Systems, Emergency Response Equipment, Emergency Teams)
- Aftercare Management (Lifetime assessment and lifetime extension, Decommissioning and management of abandoned sites)

## **B.4 Site visit and breakout session**

For security, safety and logistic reasons, the number of participants in the site visit to the Odessa port was limited to 15 persons. Therefore, the workshop participants were divided in three groups – one site visit group and two breakout session groups. The goal of the two breakout session groups was to examine in detail the Safety Guidelines and Good Industry Practices for Oil Terminals regarding the applicability of the Principles & General Recommendations and Technical & Organisational Aspects and to identify further areas of improvement, using the short checklist on the ECE safety guidelines and good industry practices for oil terminals as a tool. The two groups consisted of representatives of Romania, Ukraine and the Republic of Moldova. The work of the groups was facilitated by members of the international expert group and representatives of the ECE Convention secretariat.

The site visit group consisted of representatives of Romania, Ukraine and the Republic of Moldova, mostly enforcement authorities, civil protection officers and oil terminal operators. Its main goal was to examine the applicability of the ECE safety guidelines and good industry practices for oil terminals vis-a-vis real oil terminal facilities and to check whether the short checklist would be also appropriate for checking and verifying compliance.

The site visit group and two breakout session groups have prepared for their work based on input from the members of the international expert group and representatives of the ECE Convention secretariat. The main questions identified were:

- Is the content of the ECE safety guidelines and good industry practices for oil terminals clear and correct?
- How could be the text edited in order to reflect national practices?
- Are there any gaps or should further recommendations/aspects be added?
- Are there any inconsistencies?
- Are there any recommendations in the ECE safety guidelines and good industry practices for oil terminals that are considered as inappropriate?
- Are there any recommendations in the ECE safety guidelines and good industry practices for oil terminals that are considered as unrealistic to achieve?
- Are there any further sources to be included?

### **B.4.1 Site visit**

During the site visit of the Odessa port, the oil and gas terminal loading facility and the Prista Oil base oil terminal facility were visited. The group met with the facilities' managers, technical staff and loading operators and was able to ask questions regarding the Hazard and Risk assessment, Emergency planning, Inspection & maintenance of mechanical integrity, Applicable design standards, Competence assurance for the personnel, Auditing procedures, Management of operations and the management systems introduced. The questions were based on the short checklist on the ECE safety guidelines and good industry practices for oil terminals. The group was able to receive access to technical documentation such as emergency plans, national standards, internal standards and operating procedures and to verify the statements of the operators.

### **B.4.2 Breakout session**

During the breakout session, the two breakout groups discussed in detail the ECE safety guidelines and good industry practices for oil terminals based on the short checklist. The groups confirmed the

usefulness of the Safety Guidelines and identified several areas of improvement. The checklist was also found to be helpful towards assessing the compliance with the international good industry practices and with the requirements of the Convention.

## **B.5 Report on and discussion on the findings from the site visit and the break-out sessions**

During this part of the workshop, participants were able to receive information about the outcome of the site visit and the work of the breakout groups and to discuss the findings.

### **B.5.1 Report on findings from the site visit**

The main conclusions of the discussion on the findings from the site visit and from the break-out sessions were:

- The ECE safety guidelines and good industry practices for oil terminals seem to be applicable to the site visited
- The ECE safety guidelines and good industry practices for oil terminals are useful and should be presented to the Conference of the Parties to the Convention for approval
- The checklist is workable and useful
- Using the checklist requires some training and preparation
- The checklist is not intended to be used as an enforcement tool
- The scope of the checklist needs to be clarified in order to distinguish between recommendations for UNECE member states, CAs, oil terminal operators
- The checklist could be a good tool for operators to assess their compliance with international good industry practices and to identify areas for further improvement of the safety of the establishments
- The checklist could be further refined to be more user friendly

### **B.5.2 Moderated plenary discussion on the way forward**

Participants discussed the applicability of the ECE safety guidelines and good industry practices for oil terminals on national level and how the short checklist could be used by competent authorities, enforcement agencies and operators. There were discussions on the applicability of some of the general recommendations, especially those related to the requirements of the EU legislation. The participants agreed that references should be changed in order to point out to applicable international agreements and references to EU Directives should be limited.

The Participants agreed that the ECE safety guidelines and good industry practices for oil terminals are useful and needed and that after some improvement they should be presented to the Conference of the Parties to the Convention for approval.

Members of the international expert group and representatives of the ECE Convention secretariat explained the way forward for the finalisation of the safety guidelines, including tentative timelines of the future work. For more detailed information about the way forward, please consult the minutes of

the fourth meeting of the expert group for the elaboration of safety guidelines for oil terminals which were held back-to-back with the workshop.<sup>2</sup>

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<sup>2</sup> The link to the meeting can be found here: <http://www.unece.org/index.php?id=33965>

## **C CONCLUSIONS AND RECOMMENDATIONS**

### Conclusions from the Workshop

- The ECE safety guidelines and good industry practices for oil terminals are applicable, useful and needed;
- The scope of the ECE safety guidelines and good industry practices for oil terminals needs to be further clarified;
- Some additional definitions should be added in order to avoid misinterpretations of some of the terminology used;
- The ECE safety guidelines and good industry practices for oil terminals should also accommodate good industry practices from non-EU UNECE countries, especially countries from the CIS;
- The short checklist should be a living document that could be adapted to national conditions;
- The checklist is not intended to be used as an enforcement tool, but could be a good tool for operators to assess their compliance with international good industry practices and to identify areas for further improvement of the safety of the establishments;

### Recommendation from the Workshop

- The international expert group and the ECE Convention secretariat should continue to work on the ECE safety guidelines and good industry practices for oil terminals;
- The ECE safety guidelines and good industry practices for oil terminals should also be sent for feedback to relevant international organisations and industry associations;
- The international expert group and the ECE Convention secretariat should identify and add definitions in order to avoid misinterpretations;
- The ECE safety guidelines and good industry practices for oil terminals should be submitted for approval to the Conference of the Parties to the Convention;
- The short checklist could be further developed as a living document after the approval of the Conference of the Parties to the Convention;

After the workshop, the expert group for the elaboration of the safety guidelines met to discuss the findings and recommendations from the workshop, including their inclusion into the draft safety guidelines as well as responsibilities and deadlines for their revision. For more detailed information about the outcome of the meeting, please consult the minutes of the fourth meeting of the expert group for the elaboration of safety guidelines for oil terminals.

## ANNEX I FINAL AGENDA



Federal Ministry for the  
Environment, Nature Conservation  
and Nuclear Safety

**Umwelt  
Bundes  
Amt**   
Für Mensch und Umwelt

UNECE Convention on the  
Transboundary Effects of  
Industrial Accidents

**Assistance  
Programme**



### UNECE Convention on the Transboundary Effects of Industrial Accidents

Project under the Assistance Programme

### Workshop on Safety Guidelines and Good Industry Practices for Oil Terminals,

**including a joint visit to the Odessa port oil terminal**

within the project on hazard and crisis management in the Danube Delta

**on 23-25 September 2013**

**Viktoria Hotel, Genuezskaya Street 24A, 65009 Odessa, Ukraine**

#### Draft Agenda

<b>DAY 1</b>	<b>23 September (08.45 – 18.00)</b>
08.45 – 9.15	<b>Registration</b>
	<b>1. Opening</b>
9.15 – 09.30	Co-Chairs for the workshop: Ms. Iryna Boltenko (Leading expert at the Ministry of Ecology and Natural Resources, tbc) and Mr. Chris Dijkens (Chair of the Conference of the Parties to the UNECE Convention on the Transboundary Effects of Industrial Accidents)

	Welcoming statement by Mr. Dijkens, Ms. Boltenko and Mr. Winkelmann-Oei
	<b>2. Setting the scene</b>
09.30 – 09.50	Safety guidelines and checklists – Mr. Gerhard Winkelmann – Oei (German Federal Environment Agency, UBA)
09.50 – 10.10	UNECE strategy on prevention of, preparedness for and response to industrial accidents – UNECE secretariat (Ms. Claudia Kamke)
10.10 – 10.35	Buncefield accident: environmental impact and lessons learnt – Mr. Richard Gowland (European Process and Safety Centre, EPSC)
10.35 – 11.00	<i>Coffee break</i>
11.00 – 11.25	Accident at vertical steel tanks of oil terminal Konda (OAO Sibnefteprovod), August of 2009: environmental impact and lessons learnt – Mr. Alexey Isakov (GCE Group)
	<b>3. Safety standards for oil terminals</b>
11.25 – 11.50	Safety standards and good industry practices applied by the European oil industry – Mr. Andy Roberts (UKPIA)
11.50 – 12.15	Safety standards applied by the Odessa port terminal – representative from the Odessa port oil terminal (Mr. Denis Karpov, State Enterprise “Odessa Sea Commercial Port”/ Head of the Oil terminal)
12.15 – 13.15	<i>Lunch</i>
	<b>4. Introduction to the Safety Guidelines and Good Industry Practices for Oil Terminals and the checklist</b>
13.15 – 13.45	Introduction to the Safety Guidelines and Good Industry Practices for Oil Terminals – Mr. Frank Candreva (DNV Oil and Gas Belgium)
13.45 – 15.05	Moderated discussion based on participants’ comments and questions on: - Part 1: Principles and general recommendations: Q & A - Part 2: Technical and organizational safety aspects: Q & A Moderators: Mr. Frank Candreva, Mr. Nikolay Savov
15.05 – 15.30	Introduction to the checklist to the Safety Guidelines and Good Industry Practices for Oil Terminals – Mr. Richard Gowland
15.30 – 16.00	<i>Coffee break</i>
16.00 – 16.20	Moderated discussion based on participants’ comments and questions on: - Design and Planning: Q & A – Mr. Gerhard Winkelmann-Oei (UBA)
16.20 – 16.40	Moderated discussion based on participants’ comments and questions on: - Construction and Commissioning: Q & A – Mr. Richard Gowland (EPSC)
16.40 – 17.00	Moderated discussion based on participants’ comments and questions on: - Operation and Lifetime Extension: Q & A – Mr. Eddy de Rademaeker (European Federation of Chemical Engineers, EFCE)
17.00 – 17.20	Moderated discussion based on participants’ comments and questions on: - Closure and Decommissioning: Q & A – Mr. Frank Candreva (DNV Belgium)

17.20 – 18.00	Wrap up of Day 1 and practical information for the organization of day 2 (Ms. Claudia Kamke, Mr. Nikolay Savov)
19.00	<i>Outside dinner in Arkadia</i>

DAY 2	24 September (09.00 – 18.00)
	<p><b>5. Site visit and breakout session</b></p> <p><i>The number of foreign visitors to the oil terminal is limited, so that there will be a smaller group visiting the oil terminal and another bigger group discussing the safety guidelines and checklist in breakout sessions in the afternoon of the second workshop day.</i></p>
09:00	<p><u>Group A (site-visit)</u>: departure from hotel at 09.00, visit from 09.30 – 12.00; arrival at the hotel 12.30</p> <p>Group A – 1: Dock arrangements (facilitator: Mr. Frank Candreva)</p> <p>Group A – 2: Storage (facilitator: Mr. Aleksey Isakov)</p> <p><u>Group B (workshop)</u>: 09.00 – 12.30 discussion in groups on chapters of the safety guidelines:</p> <p>Group B – 1: General Part, Design and Construction, Sources</p> <p>Group B – 2: Operations and Management, Sources</p> <p>Group B – 3: General Part, Asset Integrity &amp; Reliability, Emergency Planning and Response, Managing Lifetime &amp; Decommissioning, Sources</p>
12.30 – 13.30	<i>Lunch break</i>
13.30 – 15.30	<p><u>For Group A</u>: Discussion of findings during the on-site visit</p> <p><u>For Group B</u>: Continuation of discussion in groups during break-out session</p>
15.30-16.00	<i>Coffee Break</i>
16.00 – 16.30	<p><u>For Group A and B</u>:</p> <p>Plenary session to summarize the findings of the day</p>
16.30 – 17.30	<p><u>For Group A and B</u>:</p> <p>Preparation of findings (e.g. through a PowerPoint presentation) to be presented on the last workshop day</p>
19:00	<i>Dinner in the city centre</i>



<b>DAY 3</b>	<b>25 September (09.00 – 12.30)</b>
	<b>6. Presentation of findings from the visit to the oil terminal and break-out sessions</b>
09.00 – 9.45	Report on findings from the site visit by group – Group A – 1 and A – 2 10 min presentation on findings per group, 25 min discussion
09.45 – 10.30	Report on findings from the break-out session by group – Group B – 1, B – 2, B – 3 15 min presentation on findings per group, including discussion
10.30 – 10.40	Summary of findings (UNECE secretariat)
<i>10.40 – 11.00</i>	<i>Coffee break</i>
	<b>7. Plenary discussion on the way forward</b>
11.00 – 12.00	Moderated plenary discussion on the way forward – Secretariat
12.00 – 12.15	Wrap-up and conclusions
12.15 – 12.30	Closure of the workshop

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## ANNEX II LIST OF PARTICIPANTS

### LIST OF PARTICIPANTS SEMINAR "GUIDELINES AND PRACTICAL ASPECTS OF OIL TERMINALS "

The project on hazard and crisis management in the Danube Delta, involving the Republic of Moldova, Romania and Ukraine, that is conducted under the auspices of the United Nations Economic Commission for Europe (UNECE) Convention on the Transboundary Effects of Industrial Accidents.

Odessa,  
23-25 September 2013

Ukraine

№	Name	Name of organization / Function	Contact Information
MOLDOVA			
	Gilca Gavril	State Hydromet Service/ chief Env. Quality Monitoring Department	Chisinau , Grenoble str, 134, tel: + 373 22 766855 Fax +373 22 766855 e-mail: <a href="mailto:gabrielg@mail.ru">gabrielg@mail.ru</a>
	Stirbu Svetlana	State Hydromet Service/ Deputy chief Env. Quality Monitoring Department	Chisinau , Grenoble str, 134, tel: + 373 22 5616 30 Fax +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a>
	David Liudmila	Civil Protection an Emergency Situations Service/ Civil Protection Department	Chisinau, str. Gh. Asachi 69 tel: + 373 22 73-85-16 fax: + 373 22 73-85-01 e-mail: <a href="mailto:dse@dse.md">dse@dse.md</a>
	Mutaf Vitalie	Civil Protection an Emergency Situations Service/ Deputy head Civil Protection Department	Chisinau, str. Gh. Asachi 69 tel: + 373 22 73-85-16 fax: + 373 22 73-85-01 e-mail: <a href="mailto:vmutaf@mail.ru">vmutaf@mail.ru</a> , <a href="mailto:dse@dse.md">dse@dse.md</a>

№	Name	Name of organization / Function	Contact Information
	Popa Ghenadie	Civil Protection an Emergency Situations Service/ Civil Protection Department, local	tel: + 373 22 73-85-16 fax: + 373 22 73-85-01 e-mail: <a href="mailto:dse@dse.md">dse@dse.md</a>
	Serenco Liudmila	Civil Protection an Emergency Situations Service/ Civil Protection Department	Chisinau, str. Gh. Asachi 69 tel: + 373 22 73-85-16 fax: + 373 22 73-85-01 e-mail: <a href="mailto:dse@dse.md">dse@dse.md</a>
	Moscalov Oleg	Civil Protection an Emergency Situations Service/ Civil Protection Department, local	tel: + 373 22 73-85-16 fax: + 373 22 73-85-01 e-mail: <a href="mailto:dse@dse.md">dse@dse.md</a>
	Mustea Mihail	Regional Environmental Center/ consultant	tel: + 373 22 766855 fax: +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a>
	Capatina Nelian	State Environmental Inspectorate/ Chief -inspector	Chisinau , Cosmonautilor 9, tel: + 373 22 766855 fax: +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a>
	Girnet Vladimir	State Environmental Inspectorate, region/ Chief inspector	tel: + 373 22 766855 fax: +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a>
	Andreescu Ionel	Giurgiulesti Port oil terminal / Oil Terminal Director ICS DANUBE LOGISTICS	tel: +37379702100 fax: +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a> , <a href="mailto:i.andreescu@danlog.md">i.andreescu@danlog.md</a>
	Croitor Sergiu	IPSSTOIP/ Head of Chemical Technology Direction	Chisinau, bvd. Stefan cel 162 ap.12 tel: + 373 22 -222204 fax: +373 22 211594 e-mail: <a href="mailto:ipsstoip@mail.ru">ipsstoip@mail.ru</a>
	Jitari Victor	IPSSTOIP/ Deputy Chief Chemical Technology Direction	Chisinau, bvd. Stefan cel 162 ap.12 tel: + 373 22 -222204

№	Name	Name of organization / Function	Contact Information
			fax: +373 22 211594 e-mail: <a href="mailto:ipsstoip@mail.ru">ipsstoip@mail.ru</a>
	Maruseac Svetlana	State Environmental Inspectorate/ inspector	Chisinau , Cosmonautilor 9, tel: + 373 22 766855 fax: +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a>
	Scripliuk Vecheslav	Giurgiulesti Port oil terminal/ Oil Terminal , CS DANUBE LOGISTICS	тел: +373 22 561630 факс: +373 22 766855 e-mail: <a href="mailto:stirbus@mail.ru">stirbus@mail.ru</a> , <a href="mailto:scripliuc@danlog.md">scripliuc@danlog.md</a>
Romania			
	Ghiu Marilena	Ministry of Environment and Climate Change / Senior Adviser	12 Libertatii Blvd, Bucharest, Romania tel: +40754231243 fax: (+40)213160421 <a href="mailto:marilena.ghiu@mmediu.ro">marilena.ghiu@mmediu.ro</a>
	Mara Septimius	Ministry of Environment and Climate Change/ Senior Adviser	Bld Libertatii no. 12, sect. 5, Bucharest tel: (+40)754231137 fax: +40213160282 <a href="mailto:maraseptimius@yahoo.com">maraseptimius@yahoo.com</a>
	Mocanu Mariana	National Environmental Guard Generale Commissariat Commissioner	Bucharest, District 3, Unirii Blvd, NO 78, Bi J2 (+40)213268970 <a href="mailto:marina.mocanu@gnm.ro">marina.mocanu@gnm.ro</a>
	Geanina Vanghele	General Inspectorate for Emergency Situations Specialist for prevention of major industrial accidents (Seveso)	46 Banu Dumitrache Street, Bucharest (+40)212084844 <a href="mailto:vangheleg@mai.gov.ro">vangheleg@mai.gov.ro</a>
	Verdesi Gabriel	General Inspectorate for Emergency Situations	Bucharest, Banu Dumitrache Str., 46 (+40)212084844 <a href="mailto:verdesi.gabriel@yahoo.com">verdesi.gabriel@yahoo.com</a>

№	Name	Name of organization / Function	Contact Information
	Bobocea Ruxandra	National Administration Romanian Waters/ engineer	Bucharest, 6 Edgar Quinet St., 010018, 1st District (+40)213110146 ruxandra.bobocea@rowater.ro
	Balaban Vasile	General Inspectorate for Emergency Situations/ Specialist for prevention of emergency situations	Galati, Eroilor Str., 20 bis (+40)236311199 adj.isugl@gmail.com
	Toma Ion	General Inspectorate for Emergency Situations/ Specialist for prevention of emergency situations	Galati, Eroilor Str., 20 bis (+40)236311199 adj.isugl@gmail.com
	Ouatu Eugen	EPA GALATI / COUNCILLOR	Galati, Brailei Str., Nr 82, bloc BR4C, sc 1, et.10, ap 44 (+40)236460049 eugen.ouatu@apmgl.anpm.ro
	Bodnaras Norvina-Elena	ENVIRONMENTAL PROTECTION AGENCY CONSTANTA/	Costanta, Unirii St. , 23 (+40)241546696 norvina.bodnaras@apmct.anpm.ro
	Ardean Ionel	National Administration Romanian Waters (Galati)/	Galati, Drumul de Centura, 39B (+40)236417963 <a href="mailto:ionel.ardean@sgagl.ro">ionel.ardean@sgagl.ro</a>
	Gatei Marioara	national Environmental Guard, Galati County Commissariat / Chief-commissioner	Galati, Logofat Tautu Str., 24 (+40)751307636 <a href="mailto:cjgalati@gnm.ro">cjgalati@gnm.ro</a>
	Mircea Sarbu	Port Authority Harbour Master Galati	Galata, Portului Str., Nr 30 (+40)722269311 <a href="mailto:msarbu@rna.ro">msarbu@rna.ro</a>
	Mocanu Marian-Daniel	National Enviromental Guard, Galati County Commisariat / commissioner	Str.Logofal Tautu, 24, Galati (+40)751136400 <a href="mailto:cjgalati@gnm.ro">cjgalati@gnm.ro</a>
	Valentin Hahuie	Romsilva Galati/Director	Galata, Stiintei Str.,95

№	Name	Name of organization Function	Contact Information
			(+40)748270885 valiforest@yahoo.com
UKRAINE			
	Viacheslav Didkivskiy	Ministry of Infrastructure of Ukraine/ Head of Social Security, Occupation Safety and Health Division	14, Peremohy ave., Kyiv, Ukraine +38 044 351 49 29 +38 044 351 49 07 dvn@mtu.gov.ua
	Natalia Zavyalova	State Enterprise "Sea Commercial Port of Izmail" / Engineer of Protection of Environment Service of Labor Protection and Environment	4 emb. L.Kapikrayana, Izmail, Odessa region, Ukraine +38 093 752 51 50 +38 099 412 93 05 izmampu@izmport.com.ua
	Svitlana Povoroznyuk	State Enterprise "Reni Sea Commercial Port" / Engineer of Protection of Environment	188 Dunaiska St., Reni, Ukraine +38 048 404 49 77 ovsport@portreni.com.ua
	Sergii Perfiliev	State enterprise "Ukrainian Sea Port Authority" / Head of Environmental Safety Department	1 Lanzheronovskaya St., Odessa, Ukraine +38 067 556 90 28 sergey.perfilev@uspa.gov.ua
	Denis Karpov	State Enterprise "Odessa Sea Commercial Port" / Head of the Oil terminal	1-a Nikolaya Gefta, Odessa, Ukraine +38 048 729 33 48 +38 048 729 38 39 kdv@port.odessa.ua
	Mykola Horbakha	Ministry of Infrastructure of Ukraine/ Director of the Department of Safety and Security	14, Peremohy ave., Kyiv, Ukraine +38 044 351 40 58 +38 044 351 41 99 MGorbakha@mtu.gov.ua
	Iurii Gerzhod	State Enterprise "Administration seaports" / Deputy Head of Safety Division	14, Peremohy ave., Kyiv, Ukraine +38 044 351 49 29 +38 044 351 49 07 dvn@mtu.gov.ua

№	Name	Name of organization / Function	Contact Information
	Tetiana Konovalenko	Ministry of Ecology and Natural Resources of Ukraine/ specialist	35, Urits'koho str., Kyiv, Ukraine 03035 +38 044 206-31-11 +38 044 206-31-11 Awesome3@yandex.ru
	Iryna Boltenko	Ministry of ecology and natural resources/ Leading expert	Urytskogo Str.35, Kyiv, 03035 +38 044 206 31 36 +38 044 206 31 36 I.Boltenko@menr.gov.ua
	Iliia Karakash	National University of Odesa Law Academy/ head of the agrarian law, land law and environmental law department	65009, Odessa (Ukraine), Fontanska doroga, 23 +38 048 719 88 32 karakashdom@mail.ru
	Viktoriiia Yureskul	National University "Odesa Law Academy», Department of the Agrarian Law, Land Law and Environmental Law, assistant professor	65009, Odessa (Ukraine), Fontanska doroga, 23 v_i_c_k_a@ukr.net +380951678607
	Volodymyr Kompaniiets	State Inspectorate of Ukraine for Maritime and Inland Water Transport Safety/ Head of the Odesa branch of the State Inspectorate of Ukraine for Maritime and Inland Water Transport Safety	1, Lanzheronivska st., Odesa, Ukraine +38 048 785 44 09 +38 048 785 44 79 sismit_odessa@ukr.net
<b>INTERNATIONAL ORGANIZATIONS</b>			
	Andy Roberts	UK Petroleum Industry Association/ Director Environment, Health and Safety	Quality House, 5-9 Quality Court, Chancery Lane, London WC2A 1HP 020 7269 7602 020 7269 7600 07795 631 206 <a href="mailto:andy.roberts@ukpia.com">andy.roberts@ukpia.com</a>
	Claudia Kamke	Convention on the Transboundary Effects of	Office 429-2, S-Building

№	Name	Name of organization / Function	Contact Information
		Industrial Accidents UN Economic Commission for Europe/ Associate Expert	+41 22 917 1211 +41 22 917 01 07 <a href="mailto:claudia.kamke@unece.org">claudia.kamke@unece.org</a>
	Nikolay Savov	United Nations Economic Commission for Europe/ Environment Division	Bureau 428 Palais des Nations 1211 Geneva 10 - Switzerland +41 22 917 1980 +41 22 917 0107 <a href="mailto:nikolay.savov@unece.org">nikolay.savov@unece.org</a>
	Gerhard Winkelmann-Oei	German Federal Environment Agency	+49 340 2103 3298 <a href="mailto:gerhard.winkelmann-oei@uba.de">gerhard.winkelmann-oei@uba.de</a>
	Eddy de Rademaeker	European Federation of Chemical Engineers (EFCE)	+32-474-961258 <a href="mailto:pmi.edr@skynet.be">pmi.edr@skynet.be</a>
	Richard Gowland	European Process and Safety Centre	+ 44 1485572384 +44 7817713732 <a href="mailto:Rtgowland@aol.com">Rtgowland@aol.com</a>
	Frank Candreva	DNV Oil and Gas, DNV Belgium	+32 473 99 35 55 <a href="mailto:Frank.Candreva@DNV.COM">Frank.Candreva@DNV.COM</a>
	Alexey Isakov	GCE Group	<a href="mailto:gce@gce.ru">gce@gce.ru</a> <a href="mailto:mukaeva@gce.ru">mukaeva@gce.ru</a>
	Christian DIJKENS	Director International Enforcement Cooperation, Chairperson of the Conference under the Convention on the Transboundary Effects of Industrial Accidents  Human Environment and Transport Inspectorate  Ministry of Infrastructure and the Environment	3500 BM Utrecht, Box 1511 Utrecht, Netherlands +31 6 150 936 79 <a href="mailto:chris.dijkens@ILenT.nl">chris.dijkens@ILenT.nl</a>