REPUBLIC OF MOLDOVA
Maritime Danube Mile 72,2 (km 133,8)

Actions for the Protection of the Environment at Giurgiulesti International Free Port

Workshop on the Follow-up of the Joint Statement of Inland Navigation and Environmental Sustainability in the Danube River Basin

Danube Commission, Budapest
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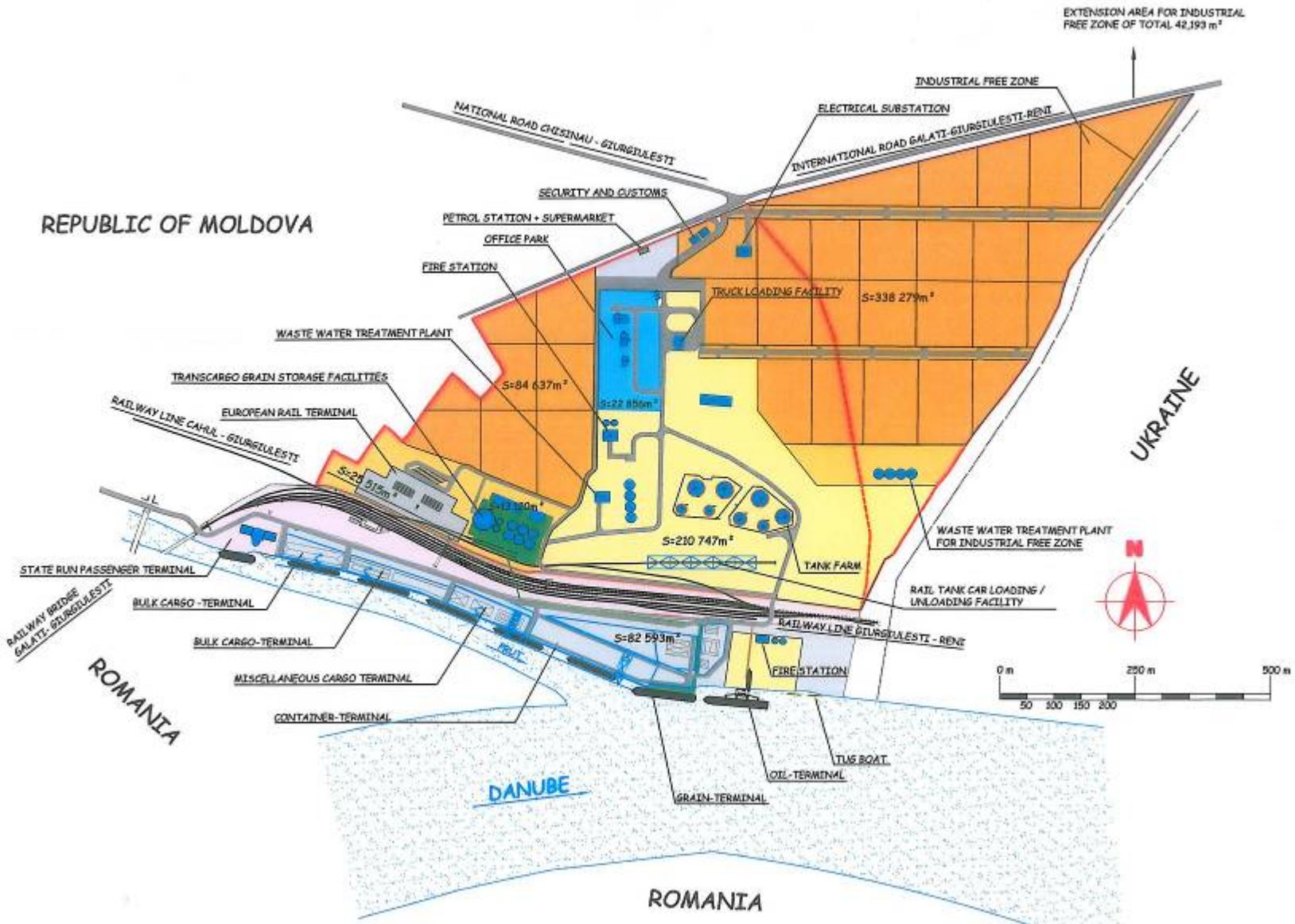
Edgar Martin
Port Director

DANUBE LOGISTICS

Giurgiulesti International Free Port



ENVIRONMENTAL IMPACT ASSESSMENTS

- EIAs for both the Oil Terminal and future Dry Cargo Terminals have been undertaken under the terms of the Espoo Convention and other applicable Moldovan and international laws and conventions.
- Dry Cargo Terminals EIA completed September 2007, undertaken by Witeveen + Bos (NL) and Bureau Waardenburg (NL) with Acvaproiect (MD).

ENVIRONMENTAL SAFETY ACTIVITY SYSTEM AT GIFP

includes the following elements:

1. CONSTRUCTIVE SOLUTIONS, ensuring:
   a. Prevention of oil spills and oil spill response in case of potential spills (OSR);
   b. Fire Protection (FP).

2. OPERATIONAL SOLUTIONS, including:
   a. Using specialised equipment;
   b. elaborating policies and procedures;
   c. Staff training

Constructive Solution

Jetty – OSR

- The oil-products un/loading arms (made in Germany) ensure hermiticity to the whole pipelines and armatures connection system;

- The platform/deck of the jetty is designed to collect accidental spills and rain waters from its platform and from the pipe trough and direct them to a dedicated tank to be carried to the Waste Water Treatment Plant.

Constructive Solution

JETTY – OSR

- A special platform has been built near the jetty for the removal of the oil-spill equipment in case there was a spill during the oil-product transshipment.
- The platform is made of reinforced-concrete, covered with special polyethylene layer of 2mm (HDPE) which protects the ground against potential contamination.
- Waste waters flow from this platform via a pipeline to a dedicated 6 m3 tank, then tank trucks take them to the waste water treatment plant.

Constructive Solution
Jetty - fire protection

<u>The jetty is equipped with</u>

- Four foam generators – GPS-600 (ГПС-600) placed on its perimeter, having a capacity of 42 l/s;
- A system to create a water curtain between the tanker and the jetty, length 36m, height 9m;
- a cooling system for the platform.

Constructive Solution
Jetty - fire protection

for the correct functioning of the firefighting outfits, the following were built:

- Two water reservoirs with a capacity of 500m3 each;
- Pumping station;
- Reservoir for the foam maker.

Constructive Solution
Jetty - fire protection

Besides the existent automatic fire protection system, the jetty is equipped with two types of mechanical equipment for fire extinguishing, type „Angus AF”:

- Mobile, with a capacity of 120 l of foam maker; and
- mobile, with a capacity of 900 l of foam maker.

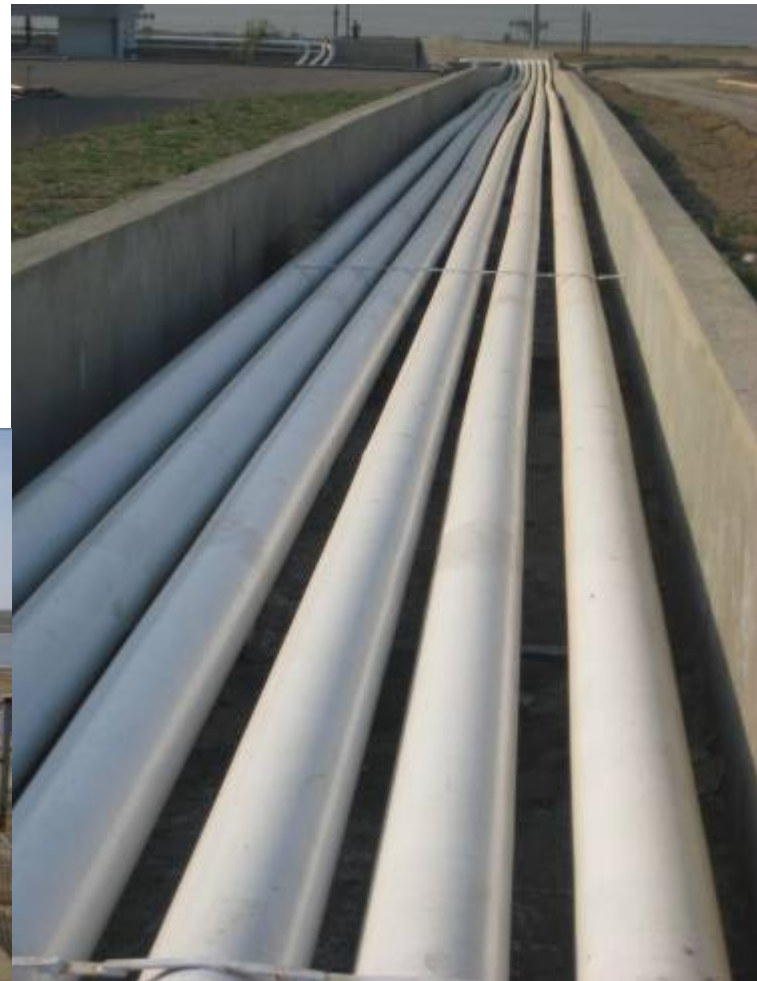
Constructive Solution

Technological Pipeline – OSR

Technological pipeline (TPL) are laid on the ground and elevated (TPL)

The pipelines laid on the ground are placed into special reinforced concrete trays/troughs

The TPL placed on supports are provided with metallic troughs/trays in case of leaks.



Constructive Solution

Technological Pipeline – OSR

Any potential leak from pipe troughs is directed into collection wells;

As per the system of the troughs and pipelines, every spill is collected into a reservoir aimed at collecting leaks;

After separation, the oil-product is pumped into special truck cars and used, but the water is sent to the oil-product treatment plant

Constructive Solution

Tank Farm – OSR

- If there was to be a spill in the tank farm, the protection of underground waters is ensured by the two concrete retention walls of 1.6 m and 2.0 m height, located at a distance of 15-30 m between them.

- In order to prevent the infiltration of oil-products into earth, there is a high density (2mm) polyethylene underlay throughout the tank farm.

Constructive Solution

Tank Farm – OSR

- Rain waters are collected by the drainage system

- In case of an accidental oil spill, inside the first retention wall there have been built drainage wells. These wells, when closed, would stop the penetration of oil products into the drainage system and into the waste water treatment plant.

Constructive Solution

Tank Farm - FP

The tank farm is endowed with a complex fire protection system, which consists of the following:

- Circular network for water and foam solution delivery
- Stationary foam generator;
- Pumping station for solution delivery/spreading;
- Water cooling system for tank cooling.

Constructive Solution

Truck loading station – OSR

- On the perimeter of the truck loading station a concrete channel was built to collect rain waters, accidental oil spills as well as other substances after extinguishing a fire.

- Additionally a drainage system has been built, through which the aforementioned waters are collected into a dedicated 50 m3 collection tank, from which tank cars can carry them to the waste water treatment plant.

Constructive Solution

Truck loading station - FP

- The truck loading station is provided with an automatic drench installation as well as with fire-fighting cannons and hand fire extinguishers.

Constructive Solution

Waste Treatment System

The waste treatment system consists of:

•Collecting system;

•Tanks for waste accumulation;

•Treatment plants for oily wastes (INSTAB Russia) as well as for domestic wastes (TOPAS Czech Republic)

Operational Solution

- Danube Logistics SRL has invested heavily in oil spill prevention and oil spill response (OSR) equipment. The majority of our equipment is from Elastec from the USA, one of the world's leading suppliers of OSR equipment.
- The principal components of GIFP's OSR equipment and systems of OSR procedures are outlined on the following slides.

Operational Solution
EQUIPMENT

- **“OPTIMAX II” – Oil Containment Boom – 240m in 30m sections**

- Consists of a flexible skirt type oil and debris barrier for protected water and fast current use; 18 cm diameter flotation and 30 cm skirt; urethane fabric (military grade) with sheathed 6 mm stainless steel top tension cable and 8mm hot dipped galvanized ballast chain

Operational Solution
EQUIPMENT

- **COLLECTING (SKIMMER) SYSTEM 118/E -150Y**

- consists of 2 selective drums and a hydraulic motor, placed on a anodized marine grade aluminium frame

- The skimmer can be placed on the water after an oil spill and collect the spilt oil products which are piped to a safe landside storage tank

Operational Solution
EQUIPMENT

- **COLLECTING (SKIMMER) SYSTEM 118/E -150Y**

- Powered by a diesel engine, including:
- Centrifugal Transfer Pump
- 50mm Hose Kit with Camlock Fittings;
- 15m hydraulic hoses,
- skimmer power unit.

Operational Solution
EQUIPMENT

- **STOCK OF OIL ABSORBENT PADS**

- Absorbent oil boom and multipurpose absorbent pads for use both in the aquatorium water and around the oil terminal in the event of an oil product spill.

Operational Solution

Policy and Procedures

At GIFP there have been elaborated and approved:

Oil Spill Response Plan
The plan outlines the chain of responsibility and command for dealing with and managing the incident, both within the port and with the Moldovan authorities. The plan also contains contact details of relevant authorities in Ukraine and Romania. GIFP's OSR plan was approved by the Emergency Department of the Republic of Moldova

Emergency Response Plan outlines actions, procedures and lines of responsibility in the event of an emergency in the port and is based on International Safety Guide for Oil Tankers and Terminals (ISGOTT) guidelines.

Operational Solution

Policy and procedures

At GIFP there have been elaborated and approved:

Port Facility Security Plan.
Elaborated in compliance with IMO's **International Ship and Port Facility Security (ISPS) Code** and approved by the Ministry of Transport of Republic of the Moldova..

GIFP Port Rules
ensure only vessels meeting strict IMO standards can moor in the port, meeting international maritime legislation is compulsory; for example the anti-pollution MARPOL Convention, International Safety Management Code and ISPS Code.
Mooring at GIFP is not permitted at night.
All maritime vessels have both the Danube Logistics and Romanian River Administration pilots on board when berthing at GIFP.

Operational Solution
Mutual Emergency Assistance

GIFP has signed a contract with Seacor Environmental Services of the USA to provide **“Tier 3” oil spill response services**. In the exceptionally unlikely event of a major oil spill, Seacor will respond from their Black Sea base rapidly on behalf of Danube Logistics. Seacor is one of three such companies worldwide and has similar contracts with several oil majors.

GIFP is discussing with neighbouring port administrations issues of potential **mutual emergency assistance**.

Operational Solution

Staff Training

Port workers have received comprehensive training with the oil boom and other oil spill response equipment, provided by an independent Danish Oil Spill Response Equipment training company on behalf of the manufacturer.

Beside oil terminal operation training undertaken by international experts, there are regular training sessions for safety, fire fighting and first aid.

In addition, at least two International Maritime Organisation (IMO) recognised Oil Spill prevention and response training courses are provided to staff annually.

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DANUBE LOGISTICS

Giurgiulesti International Free Port

GIURGIULESTI INTERNATIONAL FREE PORT

- PROUD TO BE THE MOST MODERN AND ENVIRONMENTALLY RESPONSIBLE PORT FACILITY ON THE LOWER DANUBE

THE 21st CENTURY GATEWAY TO THE REPUBLIC OF MOLDOVA

www.gifp.md

martin@danlog.md