



ADMIR
GEOTECHNICAL SOLUTIONS

Cleaning a wastewater reservoir at the Haifa Chemicals North plant

Case Study



- ◆ **Client** – Haifa Chemicals Ltd.
- ◆ **Execution** – Admir Environmental Quality Ltd., 2015



The challenge:

The Haifa Chemicals North plant has 3 containment ponds designed to receive about 10,000m³ of wastewater from the plant. As per the plant's toxins permit, the containment ponds must be regulated. As part of this regulation, the significant sludge buildup within these ponds must be removed.



Results:

- As per project requirements, the job was carried out during the facility's normal operations.
- About 7,000m³ of sludge were pumped out from the bottom of the reservoir.
- The sludge volume in the Geotubes was reduced due to dewatering.
- Post-dewatering solid concentration in the Geotubes reached 60% solids within two weeks.



The solution:

Pumping out the sludge from the bottom of the reservoir. Sludge removal was made possible by combining the two technologies proposed by Admir:

1. Pumping out the sludge using a dredger:

- Using a dredger enables to pump out sludge at high flowrates (150-200 m³/h), while protecting the ponds' waterproof lining.
- Sludge extraction is carried out during normal activities, without having to halt the facility's operation.
- The procedure doesn't cause any particle levitation.

2. Dewatering the sludge using Geotube® geotechnical sleeves:

- Using Geotubes allows for gravitational dewatering and energy savings.
- Using several Geotubes simultaneously enables to dewater at high flowrates (>150 m³/h) and to obtain sludge at a high solid concentration (>60%) in a short matter of time.
- Removing over 99% of solids.
- Preventing noxious odors and environmental hazards.

Combining the two technologies allows for effective reservoir cleanup in a short time while significantly saving on sludge cleanup and removal costs.





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