

## **PHOTO ESSAY: TYPICAL OILFIELD WASTE SITES**

**Found Worldwide in Countries lacking Environmental Regulatory Authorities**

The PHOTO Essay that follows is repeated all over the world. In this case the National Oil Company, encouraged by the Government and its Environmental Authority, after 70 years of oily waste dumping, decided to **STOP** Polluting and Clean-up its waste. G-force Consulting Engineers BV of The Netherlands was contracted to design & supply the required Process Equipment. This is a PHOTO overview of that supply and the mess it is required to recover, clean, recycle and declassify.

See: <http://www.g-forcebv.com/sign.html>

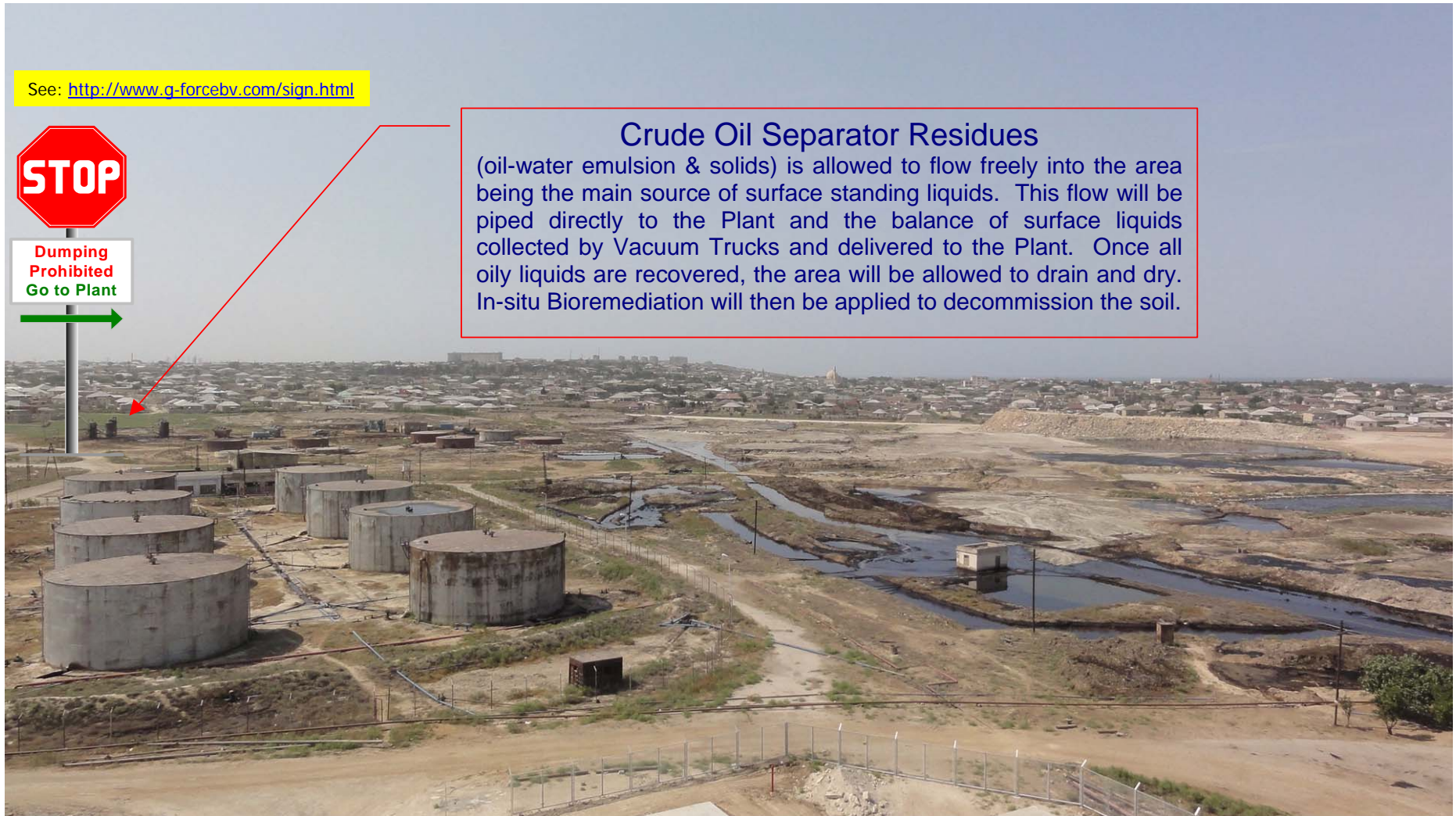


Dumping  
Prohibited  
Go to Plant



### Crude Oil Separator Residues

(oil-water emulsion & solids) is allowed to flow freely into the area being the main source of surface standing liquids. This flow will be piped directly to the Plant and the balance of surface liquids collected by Vacuum Trucks and delivered to the Plant. Once all oily liquids are recovered, the area will be allowed to drain and dry. In-situ Bioremediation will then be applied to decommission the soil.



Oil Polluted Area Starting from the Top of Location



Underlying these sand/soil encrusted areas is weathered high viscosity oily waste. These will be excavated and transported to the plant for oil recovery and soil washing.

Oil Polluted Area in the Center of the Location





Indiscriminate Dumping  
of both liquid & solids waste  
is allowed virtually everywhere

Oil Polluted Area at the End of the Location



Dumping of Tank Bottoms and all other Oily "Solids" Type Waste





Dumping of Municipal Waste into Liquid Oily Waste = "Ecological Disaster"



## Overview



Waste Reception Pit with Oily Water Treatment Plant & Site Laboratory



Overview



Primary Soil Washing & Oil Purification Plant with beginning of Building Erection





Overview

Tank  
Cradles

Hot Water Boiler for Process Heat & Gen-Set for Site Electrical Supply

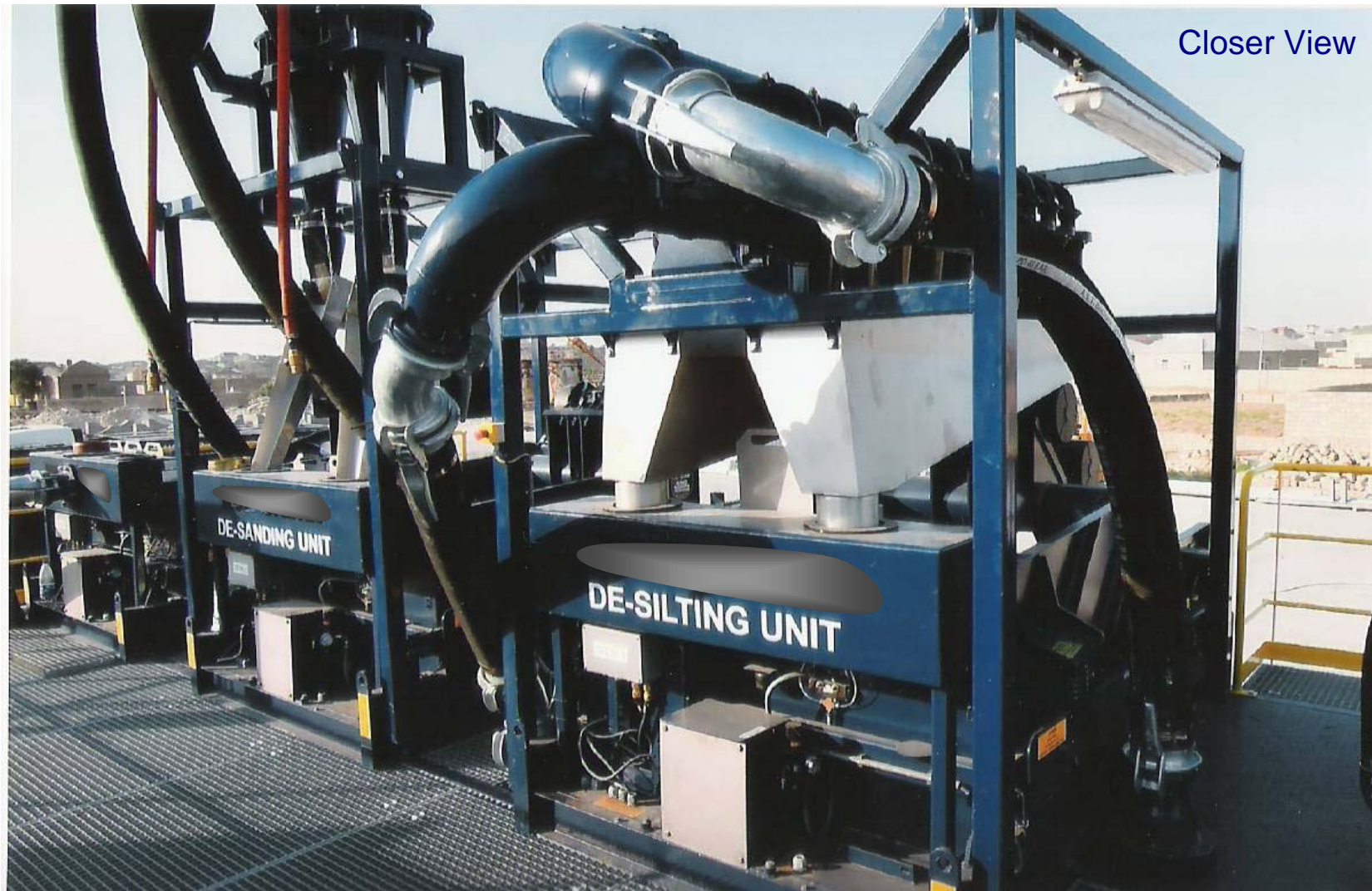


Closer View of the Plants

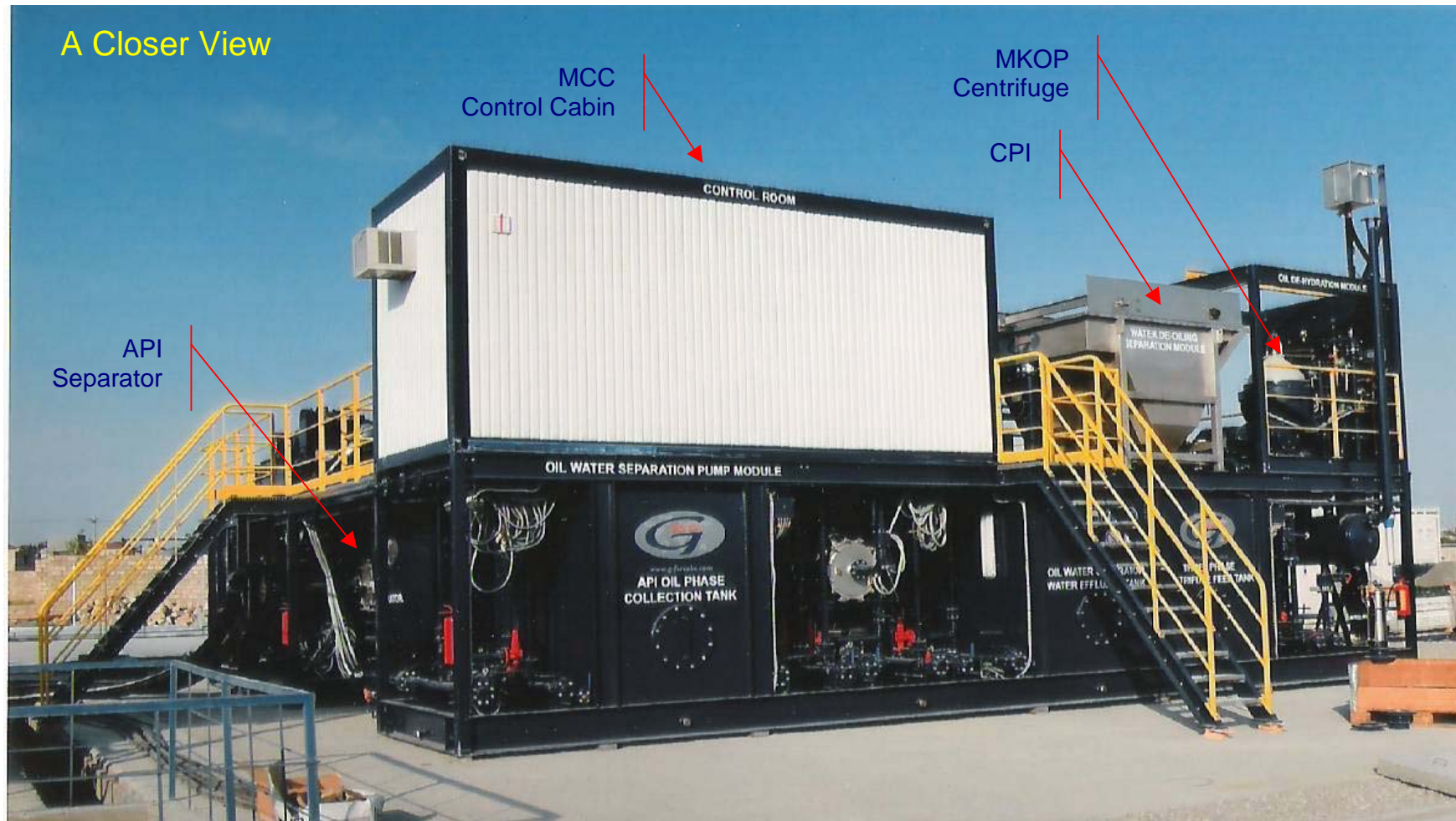


Oil Polluted Soil Washing Unit to Recover, Recycle Oil & Declassify Solids





Soil-Solids Fluidization Path: Coarse to Micron Particle Separation from Wash Media



Oil Purification Section  
API Separator, Lamella CIP & 6,000-g MKOP Oil Purifying Centrifuge





Water Treatment Plant  
for Produced Water, Site Polluted Water and Re-condition Wash Water



## Site Laboratory

Fully Equipped for Analytical Testing according to ASTM Test Methods  
Complete with G-force Engineers Manual of Field Test Methods  
Manual is designed to Maintain Plant Capacity & Meet Performance Standards





*Consulting Engineers BV*

## CLEAN-UP PROJECTS

Contact: [www.g-forcebv.com](http://www.g-forcebv.com)

### **G-force MK Series Plants\***

for the provision of

Waste Excavation  
Oil Recovery  
Water Treatment  
Soil/Solids Remediation  
Environmental Closure

### **G-force SCOPE of SUPPLY\***

Oily Water Treatment  
Oil Purification  
Sand & Soil Washing  
Bioremediation  
Hazardous Waste Declassification  
Site Electrical Supply  
Plant Process Heat  
Site Excavation Equipment  
Vacuum & Oil Tanker Trucks  
Laboratory & Work Shop  
Buildings to House Plants

The Plants\* and primary Scope of Supply\* shown in this PHOTO Essay were designed, manufactured, delivered, installed and commissioned by G-force Consulting Engineers BV of the Netherlands. Remaining works, at the time of these photos, is to complete the site Tank Batteries and interconnecting pipeworks. Following this G-force Process Engineers will start-up the operations, optimize the equipment for maximum plant capacity and performance, establish the parameters of daily reports and train the Buyer's local engineers to competent handover. This was a complete Turn-Key contract.