

OMV Petrom Suplacu de Barcau PWTP – Bihor County, Romania

EPC of
green-field PWTP



NAIAD Water Solutions has built a produced water treatment plant at the Suplacu de Barcau oilfield, for OMV Petrom, which is the largest in the country.

Due to specific oil extraction processes the produced water contains large quantities of non-biodegradable organic compound. Hence, an innovative process was tailor-made for this application.

The advanced multi-stage treatment process was tested prior to the design phase, over several months, with a pilot plant.

The implemented solution includes physical, chemical and biological process steps as well as advanced filtration and adsorption technologies, which represents a first in this specific field.

Features:

- Produced water treatment plant for Romania's largest oilfield
- Capacity: 8.000 m³/d
- Innovative process using biological treatment and activated carbon adsorption for post-treatment
- Turn-key completion



Client

OMV PETROM

Type of Contract

EPC - Turn-key Execution
Supervision of Operation:
2018 - 2019

Award Contract

November 2014

Commissioning

2017

Capacity

8.000 m³/d

Raw Water

Produced Water/ Oilfield
Extraction

Main Technology

Advanced Multi-Stage
Treatment

Main Components and Process Steps:

- Storage and equalization tanks
- Dissolved Air Flotation (DAF)
- Cooling towers
- Biological treatment
- Lamella clarifiers
- Flocculation and dual media filtration
- Activated carbon filtration for extended COD removal
- Sludge dewatering
- Service water station

On-site pilot testing: the pilot plant showed that all the required parameters could be easily reached and maintained.



Parameter	Units	Limits
COD	mg/l	≤ 125
BOD ₅	mg/l	≤ 25
TP	mg/l	≤ 5
Phenol Index	mg/l	≤ 0,3
Total N	mg/l	≤ 15