



ThyssenKrupp CSA Steel Plant

Port Access Channel and Harbour Dredging and Reclamation Works

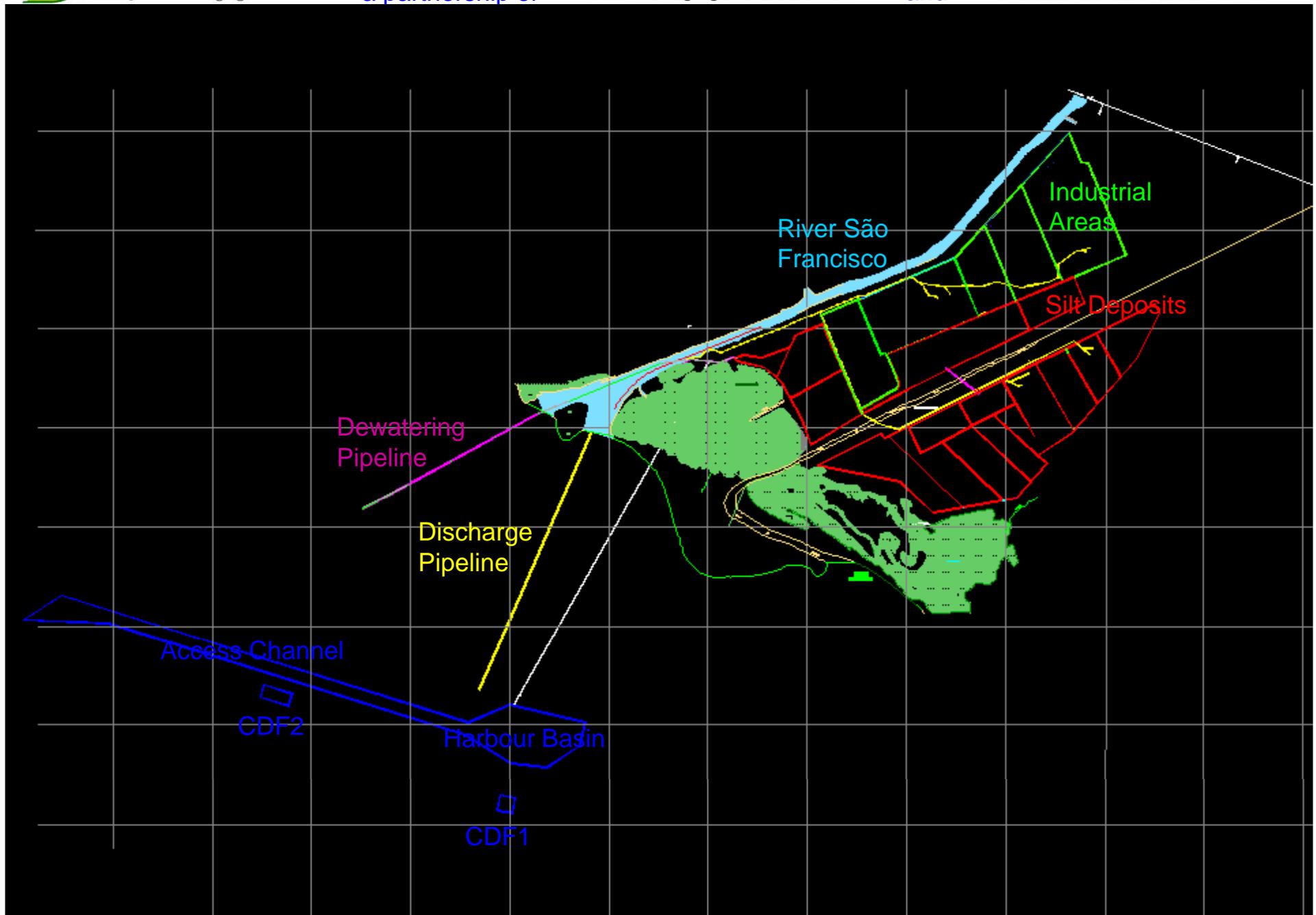


Geographical Location



General Info on Project

- CLIENT:
ThyssenKrupp CSA Companhia Siderúrgica
- CONTRACTOR:
Consortium Dredging International nv – Boskalis International bv
- INITIAL CONTRACT VALUE:
146.800.000 €
- Master TIMING
 - Sept 06 to Mid Feb 07: Mobilisation and Installation
 - Mid Feb 07 to Apr 08: Dredging and Reclamation
 - May 08 to Jul 08: Dismantling and Demobilisation



Dredging Scope (1)

- Access to River São Francisco
 - Environmental Mechanical Dredge + Barges
 - 87.000 m³ to Onshore Disposal

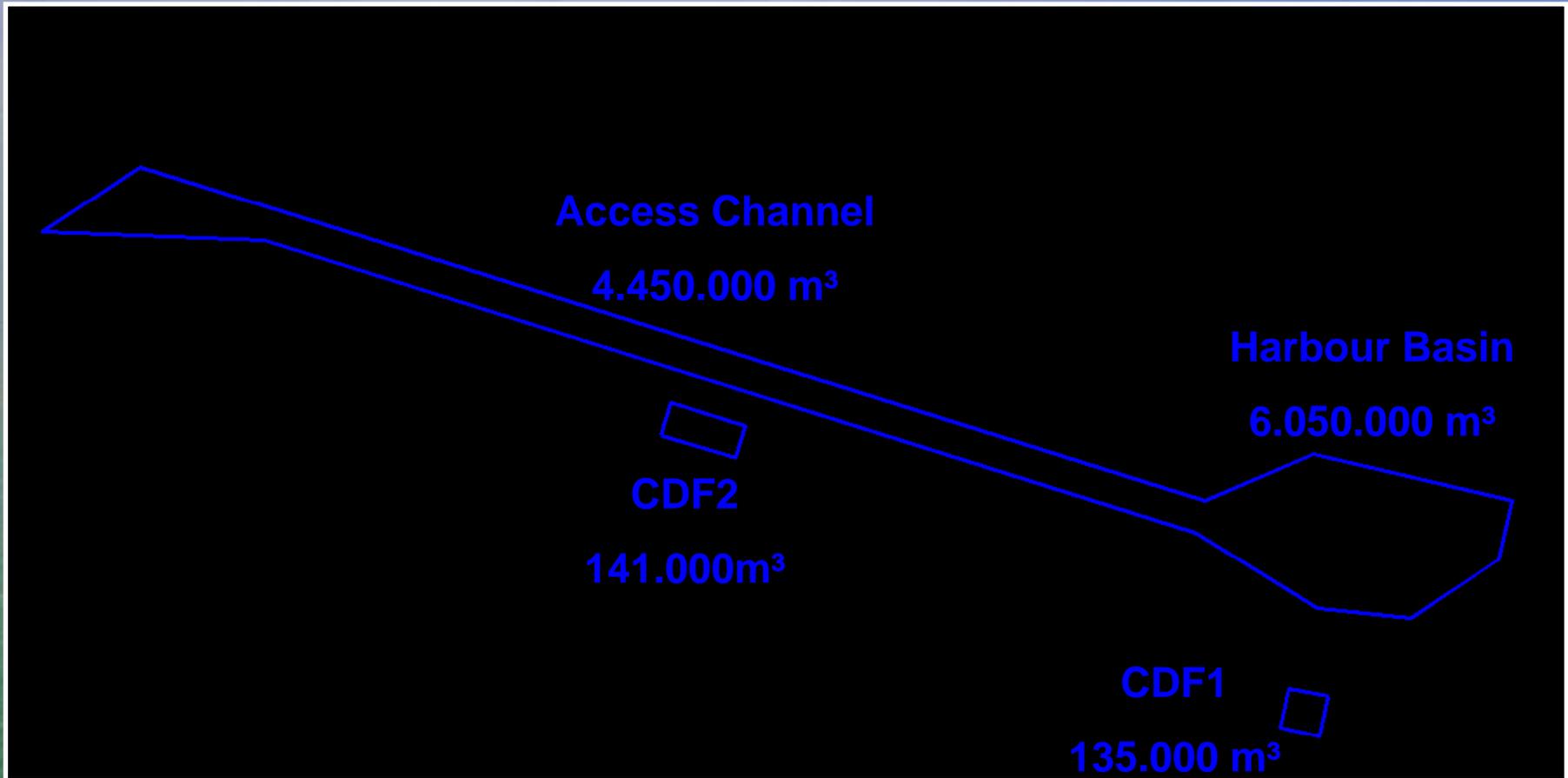


Dredging Scope (2)

- Dredging Harbour Basin / Access Channel / CDF1
 - Large Cutter Suction Dredger plus Boosters
 - Harbour Basin: 6.050.000m³
 - Access Channel: 4.450.000 m³
 - CDF1: 135.000m³
 - Dredging depth: -14,5m CD / -18,0m CD
 - Sandy materials: disposal in industrial areas
 - Silty / Clayey materials: disposal in silt deposits
- Dredging CDF2
 - Small Cutter Suction Dredger
 - CDF2: 141.000m³
 - Dredging depth: -11m CD
 - Disposal in the Access Channel



Dredging Scope (3)

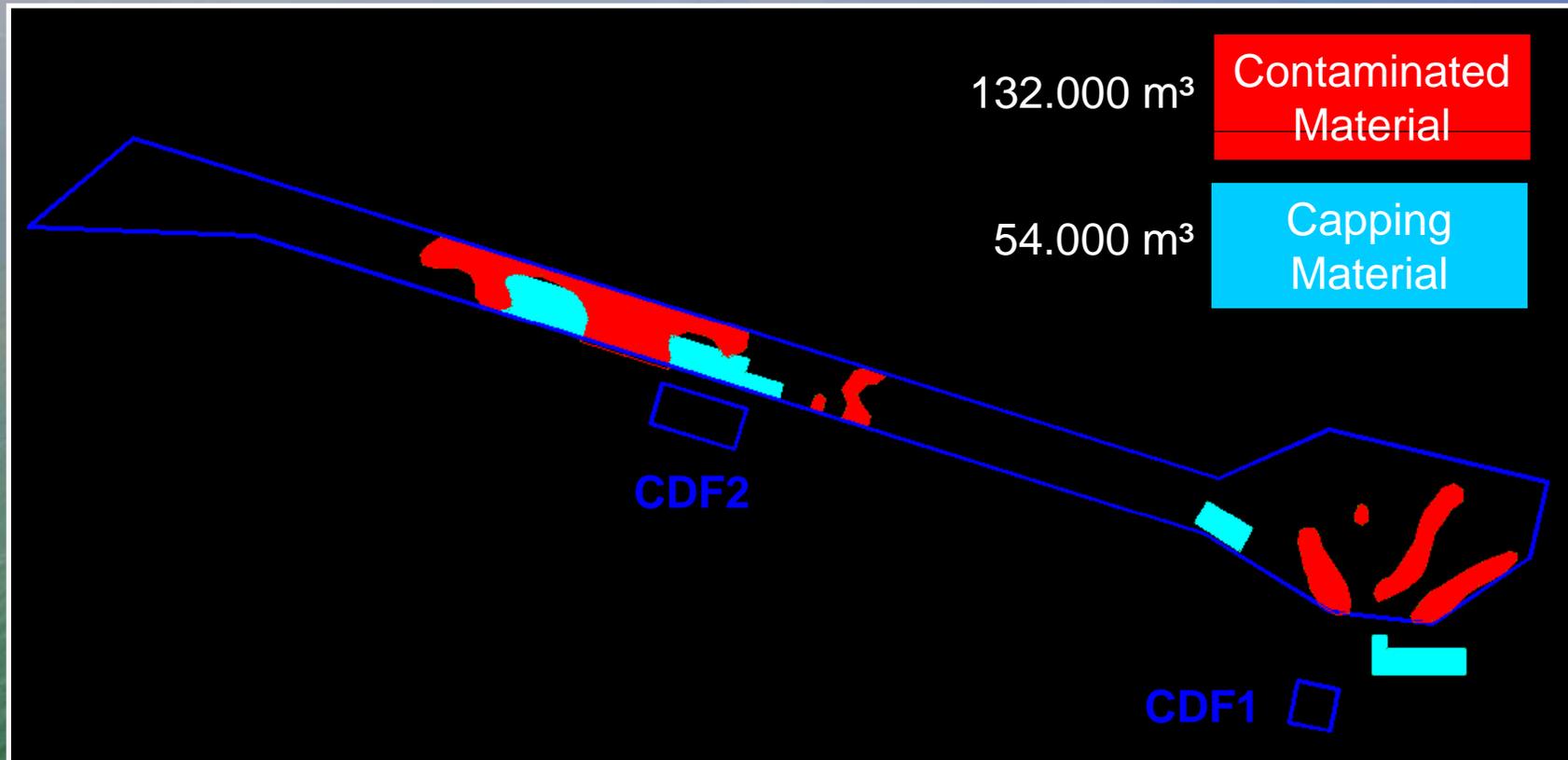


Dredging Scope (4)

- Dredging Contaminated Material + Capping
 - Environmental Cutter Suction Dredger
 - Top layer of 50cm
 - 132.000 m³ contaminated material
 - Disposal in CDF's by spreader pontoon and diffuser
 - 54.000 m³ capping material

Dredging Scope (5)

- Dredging Contaminated Material + Capping



Project Challenges

- Pumping distances (6 km to 11 km)
- Bund wall construction (\pm 28 km)
- Environmental restrictions
 - Dredging access to the river São Francisco
 - Dredging Contaminated Materials
 - Suspended loads in the dewatering
 - Turbidity of the operations
- Strict Time Schedule
- Interfacing with other contractors on land and offshore



Equipment (1)

- Large CSD Vlaanderen XIX



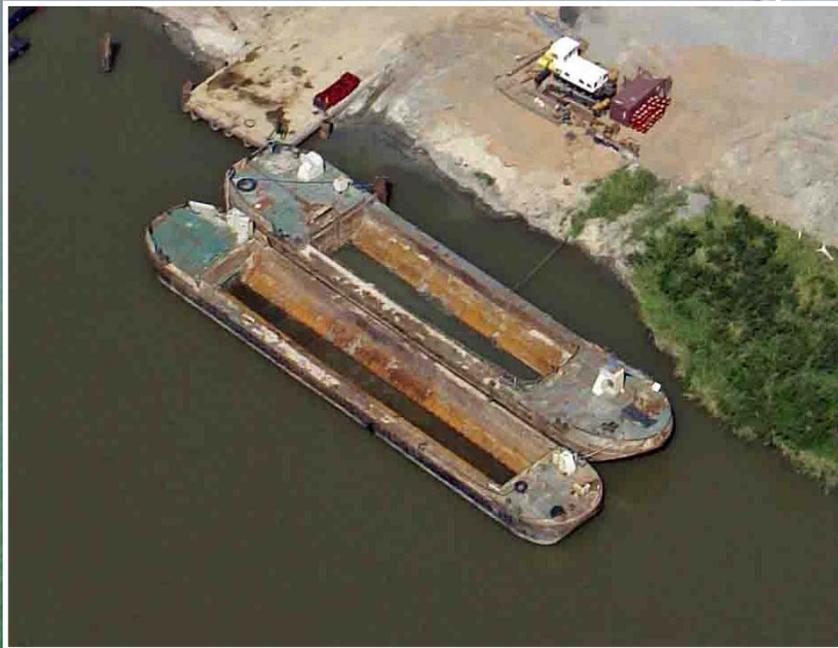
Equipment (2)

- Boosters
 - Cosel: 5.500 kW
 - DI 509: 4.475 kW
 - Nieuwe Merwede: 2.984 kW



Equipment (3)

- Environmental Mechanical Dredge Elisa
- Barges Henares / Alcatraz



Equipment (4)

- Environmental CSD Beaver St. Lawrence
 - Cutter Power: 171 kW
 - Pump Power: 839 kW





Equipment (5)

- 6,5 km sinker line
- 11 km land line
- 1 km floating line
- 10 km dewatering line





Equipment (6)

- Multicat Aramis / Tugboats / Survey Vessel / Crew vessels
- Various Dewatering Pumps (10 x HK700)



Equipment (7)

- Dry Earthmoving Equipment





Personnel on site

- Expatriate staff: 20
- Expatriate crew: 55
- Brazilian staff: 20
- Brazilian workers: 230

