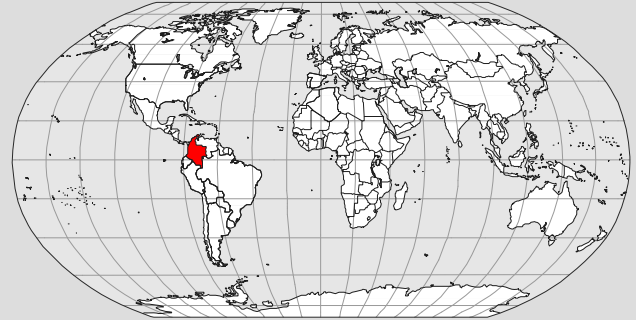


CONSOLIDATED OPERATIONS CENTER – BARRANCABERMEJA REFINERY Barrancabermeja, Colombia



Project Description

- The main objective is to have an unified control room for the whole refinery.
- The tasks for every plant includes:
 - Upgrade the DCS, ESD and F&G
 - Upgrade the subsystems, i.e.:
 - Telemetry Systems, Compressor Controllers, Vibration Systems, etc.
 - Upgrade the CCTV and communication systems

Location

- Barrancabermeja, Colombia.

General Scope

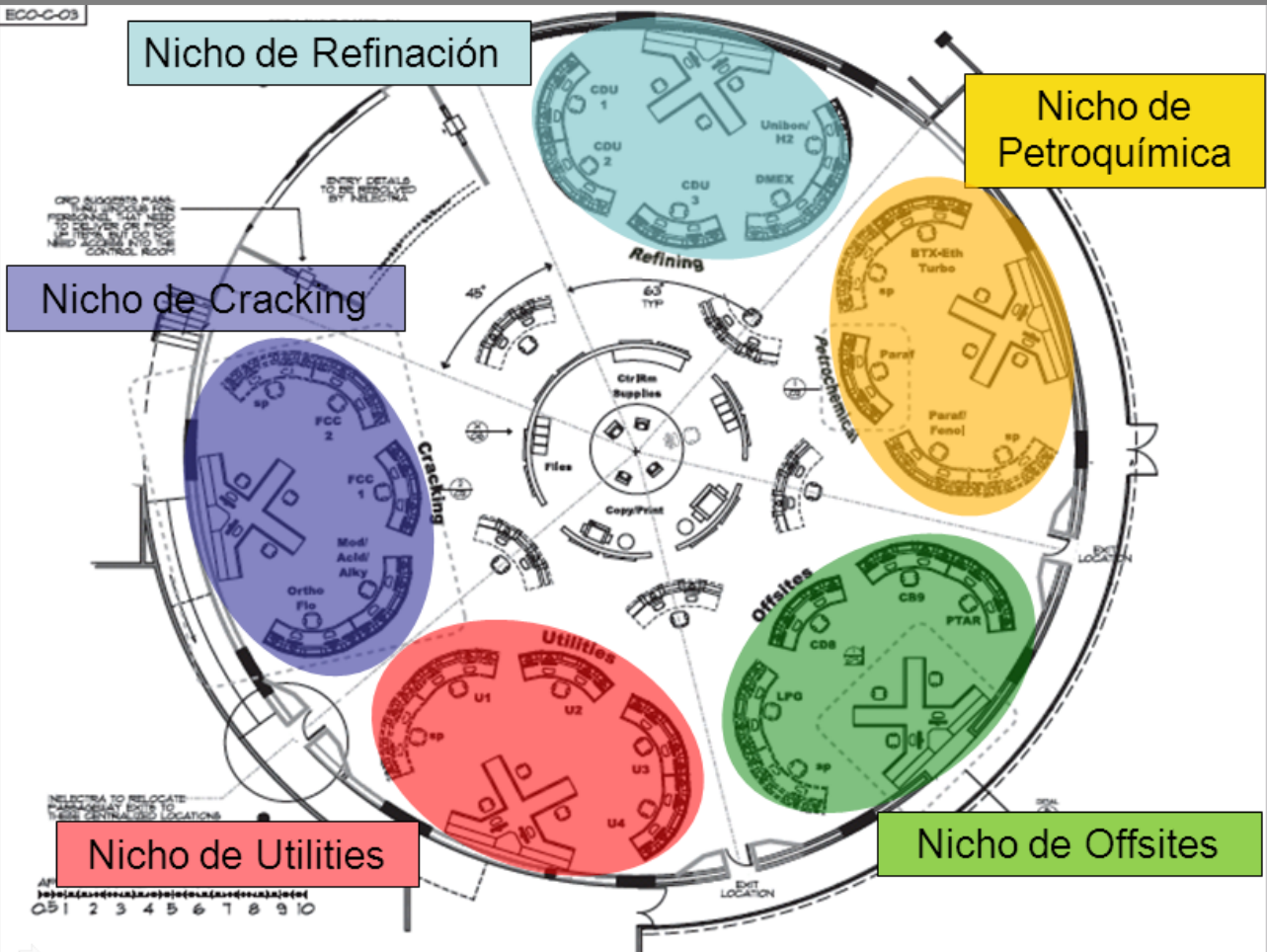
- EPC contract
 - Detail engineering
 - Procurement
 - Construction
 - Commissioning and start up

Highlights

- Many different systems and technologies to be upgraded and integrated.
- The job has to be done with the plants in operation
- Complex logistics to develop different plants at the same time

Facilities to be Upgraded

- Cracking
 - Orthoflow
 - UOP I
 - UOP II
 - Modelo IV
 - Alkilacion
- Refining
 - Topping U2000 / U4600
 - Topping U150 / U200
 - Topping U250
 - Topping U2100
 - Demex - Unibon
- Petrochemical
 - Polyethylene
 - Aromatic
 - Paraffin
- Offsites
 - Truck Loading (Nueva GLP)
 - Blending System
 - Pumping Systems
 - Water Treatment Plant



CONSOLIDATED OPERATIONS CENTER – BARRANCABERMEJA REFINERY - BARRANCABERMEJA, COLOMBIA

ARGENTINA

Encarnación Ezcurra 365
C1107CLA Buenos Aires
Ph.: +54 (11) 4347 0300

BOLIVIA

Torres CAINCO
Av. Las Américas 7 - Piso 10
Santa Cruz de la Sierra
Ph.: +591 (3) 336 2263

BRAZIL

Rio Office Park - Av. Victor Civita 77
Bloco 1, Edif. 6.2, 6° andar
22775-044 Barra da Tijuca
Rio de Janeiro (RJ)
Ph.: +55 (21) 3535-9855
Fax: +55 (21) 3535-9887

COLOMBIA

Calle 99 No. 9A - 45 Oficina 303 A
Barrio Chicó, Bogotá DC
Ph.: +57 (1) 745 8069
Fax: +57 (1) 745 8077

ECUADOR

Av. República de El Salvador 780
Edificio Twin Towers - Piso 6 - Quito
Ph.: +593 (2) 292 3943

MEXICO

Paseo de la Reforma 373 - Piso 14
Col. Cuauhtemoc, México D.F
Ph.: +52 (555) 207 2625

PERU

Av. Canaval y Moreyra N° 452,
Oficina 1401, San Isidro, Lima 27
Ph.: +(511) 705 3070

SAUDI ARABIA

P.O.Box 3865
Al Falak Towers, 5th.Floor
King Abdulaziz Road
Al Khobar 31952- KSA
Ph.: +966 (3) 887 5339

SPAIN

Av. del General Perón 38,
Edificio MASTER's 1 - Planta 13
28020, Madrid
Ph.: +34 (91) 556 6359 / 6751

USA

2500 City West Boulevard,
Suite 300
Houston, Texas
Ph.: +1 (713) 405 1836

VENEZUELA

Quinta Zamira, Sede EPSA,
Urbanización Chuao, Municipio Baruta,
Caracas, Venezuela
Ph.: +58 (212) 993 2215 / 3588