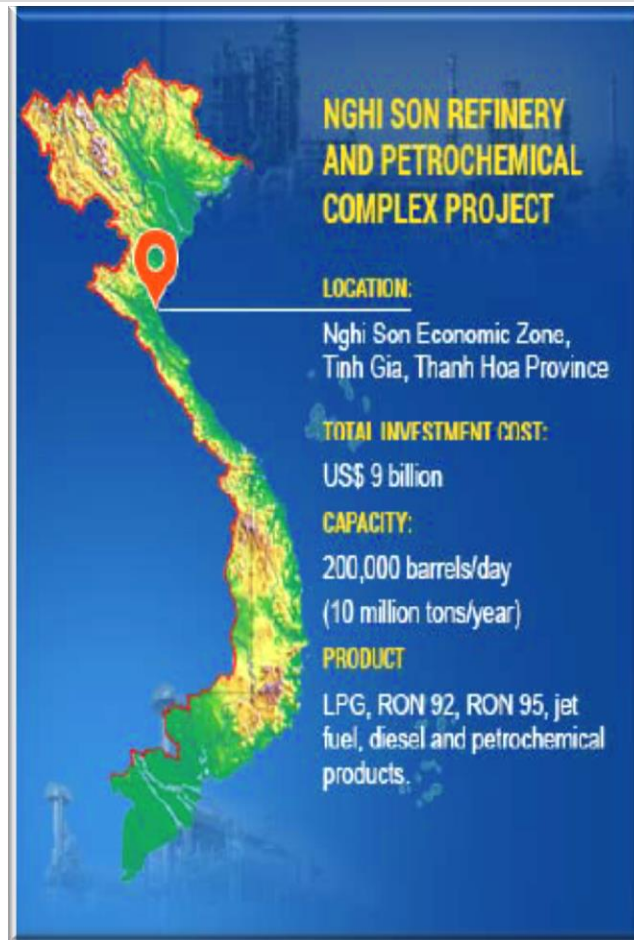
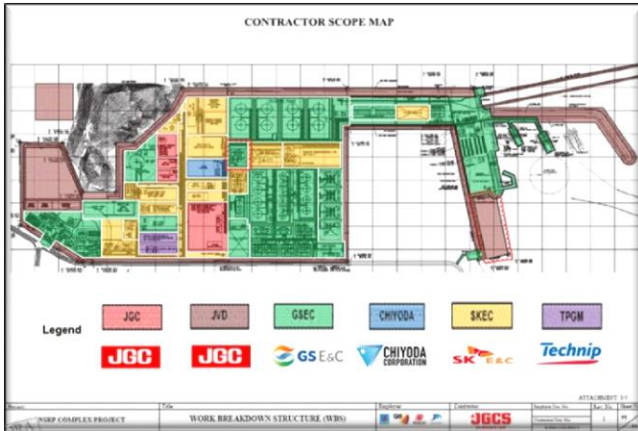


NSRP Nghi Son Refinery Commissioning



Operator/ Client: NSRP JV (Petrovietnam -Idemitsu Kosan- Mitsui- Q8)/
JGCS Consortium (JGC- CHIYODA-SK-GS- TECHNIP)
Project/ Location: Nghi Son Refinery/ Thanh Hoa Province, Vietnam
Scope of Services: Commissioning Services



Nghi Son Refinery at a glance:

NSRP Complex is located 260km away from Hanoi capital in Nghi Son Economic Zone, Tinh Gia District, Thanh Hoa Province, one of the biggest provinces in Vietnam. Estimated total investment cost of NSRP Project is approximately \$9 billion. The refinery has capacity to process 200,000 barrels of crude oil imported from Kuwait per day.

NSRP Project is a joint-venture project sponsored by 4 corporations: Vietnam Oil and Gas Group (PetroVietnam), Kuwait Petroleum International Ltd from Kuwait, Idemitsu Kosan Co., Ltd and Mitsui Chemical, Inc.



The EPC Consortium is comprised of JGC Corporation (Japan) as the leader and other members: Chiyoda (Japan), GS E&C (Korea), SK E&C (Korea), Technip France (France) and Technip Geoproduction (Malaysia).

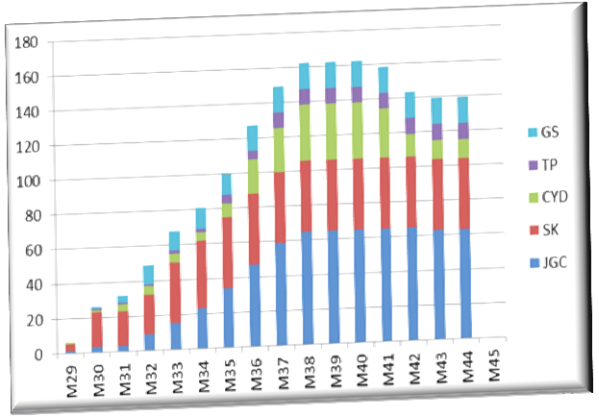


Commissioning Services

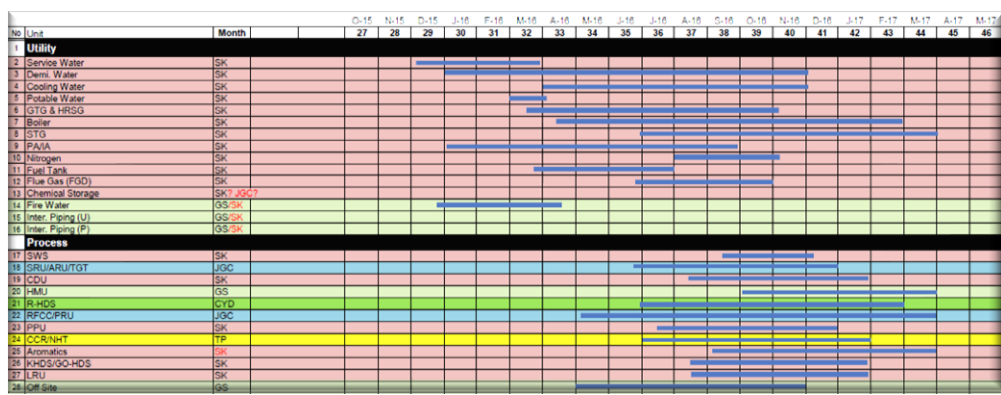


ARAMIS Scope of Work:

- Pre-commissioning
- Commissioning
- 300,000 Man-hours
- Dec 15 to Mar-17
- Integrated Team
 - Operation Leaders
 - Shift Leaders
 - Supervisors
 - Panel Operators
 - Field Operators



Pre-Commissioning Schedule:



Utility	Process	Contractor
Service Water	SWS	SK
Demi. Water	SRU/ARU/TGT	JGC
Cooling Water	CDU	SK
Potable Water	HMU	GS
GTG & HRSG	R-HDS	CYD
Boiler	RFCC/PRU	JGC
STG	PPU	SK
PA/IA	CCR/NHT	TP
Nitrogen	Aromatics	SK
Fuel Tank	KHDS/GO-HDS	SK
Flue Gas (FGD)	LRU	SK
Chemical Storage		SK/JGC
Fire Water		GS/SK
Inter. Piping (U/P)		GS/SK
Off Site		GS

