HSE Vocational training in Azerbaidjan

The French Association of Consultants in Petroleum ACP www.acp-france.org proposes to help for the implementation of HSE vocatioanal training module for the oil & gas industry in Azerbaidjan with the assistance of its partner members www.pro-educ-consultants.com, www.gec-management.com, www.apave.com including the training center in Lacq for international operators training transfered from TOTAL to Apave.

Analysis of the training potential in HSE for petroleum technician in Azerbaidjan

100.000 employees in the industry (70.000 employees by Socar), Technical Population to be trained in HSE 40% soit 40.000 people, Operation/maintenance Population 10.000

-HSE fundamental (40.000)

½ week every 5 years ie 4.000 manxweek per year	4.000	mw/y

-Operation/maintenance (10.000)

2 weeks every 5 year	4.000	mw/y
Replacement (retirement: 7,5%), 750 hiring per year, 4 weeks trn	3.000	mw/y

Total : 11.000 mw/y which represents a business level around 15M€ per year

Return of experience on a similar training for the Iranian Ministry of Petroleum:

N°	Code	Code fiche/Titre
	Chapter 1, Petroleum core knowledge.	
	Sub chapter 1-1 Fundamentals of physics and chemistry	
1	1-1-0	Physical variables measurements systems
2	1-1-a	Material composition
3	1-1-b	Generalities and classifications of HC
4	1-1-c	Gas and liquid equilibrium
5	1-1-d	Oil & gas components Specifications
	Sub chapter 1-2, Materials behaviour.	
6	1-2-a	Metal behaviour. Oxidation, corrosion, specifics exposures
7	1-2-b	HC burning, explosions, specifics phenomenon
8	1-2-c	Resistance to fire of metallic structure-Chain of events
	Sub chapter 1-3, Processing notions	
9	1-3-a	Process and process control representations
	Subchapter 1-4, Process safety & Safety Systems	
10	1-4-a	Utilities integrated process protections and safety systems
11	1-4-b	Fire & gas and water firefighting systems requirements.
12	1-4-c	Access from/to Sites, Escape Evacuation and Rescue (E.E.R)
	Chapter 2, underpinning knowledge	
13	2-1	Remembering of working rules for job cooperative groups.
14	2-2	HSE Standards organisation and ICS standard.
15	2-3	Oil & Gas best practices: -Material behaviour & spec. phen. -Resist. To fire of metal. Struct.
16	2-5	-Fire & Gas detection: -Firefighting equipment:
	Chapter 3, Specific cases study and methodology:	
17	3-1	Hazardous intervention on wells.
18	3-2	Offshore and Onshore pipeline accidents (Oil and Gas leakages).
19	3-3	Offshore emergency: Oil spill
20	3-4	Offshore emergency: E.E.R
21	3-5	Hazmat
22	3-6	Specific downstream case

This typical 2 weeks training program has been developped and delivered to selected On Scene Commanders of the Ministry of Petroleum in Iran. It can be easily adapted to the Azerbaidjan specific needs with inclusion of specific case studies such as last fatal accidents in offshore platforms.

Proposed approach for technology transfer

-training based on one 2 weeks standard module (see content above) for 25 trainees, sold at 3.000 Euro per trainee. Invoice 25x3000= 75 K€

-cost of 1st session, External 55 K€ (reengineering, 2 expat trainers w/o living expense)
Local 20 K€ (living, 2 local trainers on training)

-cost of 2nd session, External 40 K€ (tuning, 2 expat trainers w/o living expense)
Local 20 K€ (living, 2 local trainers on training)

-cost of 3rd session and following External 35 K€ (tuning, 1 expat trainer w/o living expense)
Local 15 K€ (living, 1 local trainer)

Balance for the first year with 4 sessions (100 trainees):
Invoice to petroleum companies : 4x75 = 300 K€
External cost : 55+40+35+35 = 165 K€
Internal cost : 20+20+15+15 = 70 K€
Profit for the center 65 K€

Balance for the second year 4 sessions
Ext cost 4x35 = 140 K€
Int cost 4x15 = 60 K€
Profit for the center 100 K€ (33%)