

Case Summary**El Nasr for Coke and Essential Chemicals Manufacturing****Company Information:**

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Sector:	Public
Project Title:	Supplying and Installation of 180 Coke oven doors (zero-leakage)
Type of Project:	Work Environment Improvement

1. Basic Information:**1.1 Main Product:**

No.	Product	Average Annual production
1	Metallurgical coke	1,400,000
2	Tar distillation products	Treated coal tar
3		Electrodes
4	Pure ammonium nitrate	35,000
5	Nitric Acid (98.5%)	558
6	Benzol	9,656
7	Naphthalene	Flakes
		Balls

1.2 Raw Material & Utilities :

No.	Material	Average Annual Consumption
1	Coking Coal	1,693,042
2	Liquid Solar	943.2
3	Conc. Sulphuric Acid (95%)	10,500
4	Caustic Soda (45%)	476.8
5	Soda Ash, (98%)	94
6	Coke Oven Gas (for boilers)	18,000
7	NaCl for boilers	131
8	Ammonia	24,377
Utilities		Consumption
Coke Oven Gas (for boilers), m ³ /h		18,000
Coke oven gas for batteries, m ³ /h		30,000
Self Generated Electricity, MWh		3
Grid Electricity, MWh		4
Water, m ³ /h		600

1.3 Project Location:

Helwan – Cairo

1.4 Project Objectives:

- Improving work environment and surrounding area.

- Improving the Labor health condition.

1.5 Project Description:

- The project includes complete replacement of 180 lateral oven doors for coke batteries to reduce fugitive emissions of raw coke oven gas from the furnace doors. Such gases are continuously leaking into the ambient air surrounding the coke ovens. This pollution problem is to be remedied through the installation of leak proof doors instead of the existing doors. The fugitive gases contain poisonous components such as ammonia, H₂S, aromatics, and tar.. The new oven doors will be well sealed to prevent Workplace emissions from exceeding the Egyptian limits.

1.6 Project Components:

180 Coke oven doors (Zero leakage) with all control system

1.7 Actual Project Cost:

Total project cost US\$ 2.14 M. EPAP finance is US\$ 1.945 M.

Item	Cost In U\$ Dollars
180 coke oven doors	1.886.421,05
Spare parts	34.916
Supervision	24,300
Total EPAP Finance	1.945.637
Taxes, Customs(Self Finance)	194.363
Total Project Cost	2.140.000

1.8 EPAP Technical Support:

A Local consultant was hired through Finnish Technical Assistance to assist the company in preparing the environmental audit. EPAP II TA Prepared the Environmental audit and CAP and PMU assisted the Company in tendering procedures ,bid evaluation report and contracting.

2. Eligibility Criteria

2.1 Environmental:

- Door, lid and off take leaks represent a continuous source of emissions whereas charging and pushing emissions are transient. It is clear from table 2 that door leaks are responsible for 73% of the continuous releases and 22% of total PM₁₀ releases.
- Current Expected emission reduction as follows:

Pollutant	Conc., ppm	% reduction	Expected Conc.	Permissible Limits
Benzene	0.53	46.9	0.248	0.5
Toluene	47.22	46.9	22.146	50
Xylene	1.01	46.9	0.473	100
Ammonia	2.11	46.9	0.989	5.5
Hydrogen Sulphide	5	46.9	2.345	10
Hydrogen Cyanide	1	46.9	0.469	4.7
Carbon Monoxide	17	46.9	7.973	25
PM (carbon particles) , mg/m³	6.12	39.75	2.43	3.5

2.2 Financial:

- The doors replacement project is not associated with tangible economic returns. However indirect economic benefits occur through improvement in workers health.

3.Current status of project procedures

3.1 Steering committee approval: approved

3.2 Co-financers approval: N.A

3.3 Technical Procedures:

Technical Document	submitted	Approved	Date
Environmental Assessment	Y	Y	Aug 2008
Compliance Action Plan (CAP)	Y	Y	Feb2009
Environmental Impact Assessment (EIA)	Y	Y	15/9/2009
Technical Agreement	Y	Y	28/12/2009

3.4 Implementation Procedures:

3.4.1 Procurement Procedures:

The company followed its commercial practice to issue tender for Supply and Installation of the project equipment. The Company used EPAPII proposed one stage bidding document.

3.4.2 Status of Implementation:

Technical Document	submitted	Date	
		Achieved	Planned
Credit worthiness certificate	Y	15/8/2008	
Sub-loan Agreement	Y	3/12/2009	
Bidding document(B.D)	Y	20/1/2009	
Technical and financial Evaluation	Y	2/8/2009	
Awarding and Contracting	Y	24/12/2009	Oct 2009
Installation and Commissioning	N	Dec 2010(60 Doors) Dec 2011(20 Doors) Dec 2012(40 Doors)	Dec 2010(60 Doors) Dec 2011(60 Doors) Dec 2012(60 Doors)
Monitoring: Q1:	N		Jan 2013
Q2:	N		Apr 2013
Q3:	N		Jul 2013
Q4:	N		Oct 2013