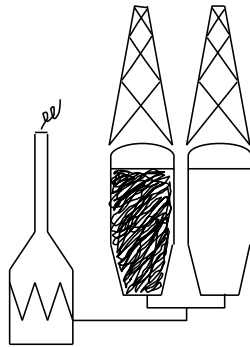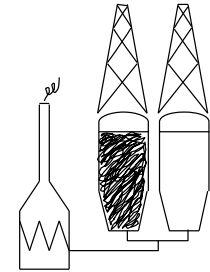# Delayed Coker Industry
Safety Data Base
Status Update
April 2005

Presented by Mitch Moloney of **ExxonMobil**

@ coking.com April-2005

Delayed Coker Industry Safety Database

Objective:

=> Track and steward delayed coker safety statistics as an industry

How ?

Use Coking.com to receive and compile the data
=> No evergreen responsibility

Paul Orlowski would put the data in the database
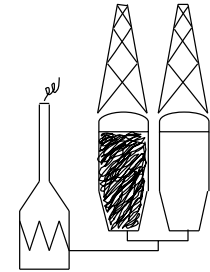=> Example on the coking.com website

Coking.com:

=> Maintains anonymity of data
=> After entry in database, the data would be destroyed
=> Eliminates legal encumbrances for all

All participants would pay a one-time sliding scale fee

Delayed Coker Industry Safety Database

Status:

      YES => Shell

      YES => Conoco-Phillips

      YES => Flint Hills

      YES => ExxonMobil

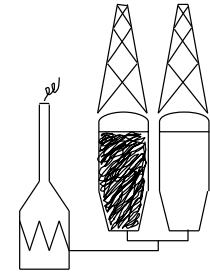We have not received any NO's

 => Waiting on YOUR reply

Next Steps

 => Coking.com to send out forms for data and payment by June 30, 2005

 => Submit fees and data by October 31, 2005

Delayed Coker Industry Safety Database

Proposal Consistent with Coking.com Feedback

Anonymous

Keeper - third party

Keep it Simple
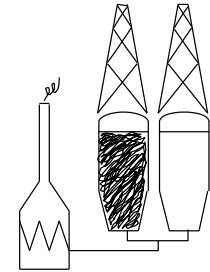
Eliminates Concern over loss of Contractor in Future

Legal concerns eliminated for participants and contractor

Specific Safety Event Sharing
  continues to be voluntary, at the discretion of the company or site

Delayed Coker Industry Safety Database

Benefits of Database

Compare Safety Performance to Industry

Identify High Risk Safety Areas for Participants

Provide data to allow
   accurate and effective Coker Risk Assessments
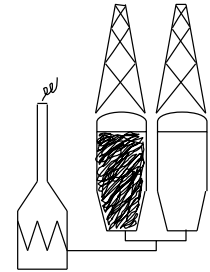
   => Allows justification of Safety Facilities Investments

Most Importantly!!!
      => Prevent Injuries & Fatalities

Delayed Coker Industry Safety Database

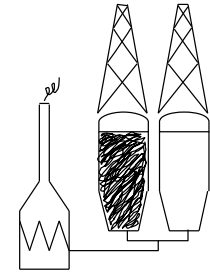## Proposal Addresses Concerns Raised by ExxonMobil Legal Counsel

Participant company liability issues

Third party approval (licensors)

Anti-trust implications

Contractor liability

Delayed Coker Industry Safety Database

Reporting Details

Each company/site sends the safety information to the contractor on an annual basis

Information to Provide for each Coker:

- Near Miss, First Aid, Medical Treatment, LTW Injury or Fatality (Must be related to work on the coker)

- Number of Coke Drums

- Where
    + Resid Pumps
    + Furnace
    + Resid Piping
    + Structure Valve Movement
    + Coke Drums
    + Vapor Transfer Piping
    + Top Deheading
    + Bottom Deheading
    + Coke Cutting
    + Coke Handling
    + Blowdown System
    + Warm-up System
    + Main Frac
    + Wet Gas Compressor
    + Gas Plant

Delayed Coker Industry Safety Database
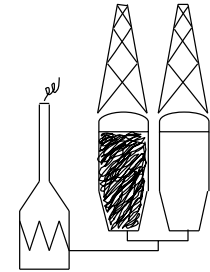
Reporting Details (cont'd)

Provide data from 1999 to 2004 is the goal
   - Option exists to provide data for earlier years as well

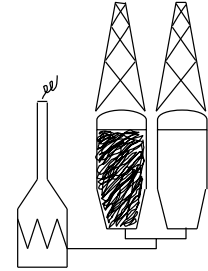Access to the database requires two things

   (1) Provision of safety data for the years required

   (2) Payment of paid-up fee

The database becomes the property of each participant

However, the database should not be provided to non-participants

Delayed Coker Industry Safety Database

Data to be Provided on a Coker-by-Coker Basis

- Number of coke drums
  - Structure Valve Lock-out or Permissive Procedure (yes or no)
  - MOV interlocks (yes or no)

- Nominal Coker Capacity in thousands of barrels per stream day (stating Solomon basis or other)

- Age of Coker

- Number of Incidents per year (employees or contractors, no distinction needed):
  - near misses
  - injuries (from first aid to disabling)
  - fatalities

- Where the incident took place and when (normal operations, startup/shutdown or turnaround):
  - resid pumps
  - fired heater
  - resid piping
  - structure valve movement
  - bottom deheading
  - coke drums
  - top deheading
  - coke cutting
  - coke handling system
  - blowdown system
  - warm-up system
  - main fractionator
  - wet gas compressor
  - gas plant

Optional:
- Total number of fatal incidents since start-up of the coker by year
- Total number of disabling injuries since start-up of the coker by year

Delayed Coker Industry Safety Database
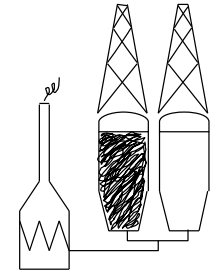
Proposed Pricing Arrangement for the Delayed Coker Safety Database

- Pricing for coker owners is based on a per company and per coker basis:

  First coker = $195
  Each additional coker for that company = $95

  Examples:

  ExxonMobil has 8 delayed coker sites and five sites have 1 coker, two sites have 2 cokers, one site has three cokers. The cost would be calculated as follows, if data were provided coker-by-coker:

Sum of six single coker sites	= $195 + (4 * $95)	= $575
First site with two cokers	= 2 * $95	= $190
Second site with two cokers	= 2 * $95	= $190
Site with three cokers	= 3 * $95	= $285
		$1240

  Should one site with multiple cokers decide to provide safety data for the entire coker complex and not differentiate which coker, the cost would be:

Sum of six single coker sites	= $195 + (4 * $95)	= $575
First site with two cokers	= 2 * $95	= $190
Second site with two cokers	= 1 * $95	= $95
Site with three cokers	= 3 * $95	= $285
		$1145

- Contractors wishing to purchase the data would pay $495 for the data on an annual basis.

  The contractor monies would be split 50/50 between the coker participants and coking.com. The coker participants would receive their money in the following year in the form of reduced costs.

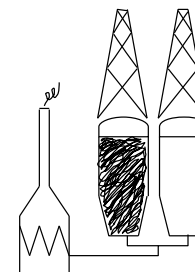# Delayed Coker Industry Safety Database

Contractor Function

Contractor performs the following:

- Enters the data in a spreadsheet

- Posts the data & spreadsheet on a log-in protected web page

- Destroys the raw company data

- Maintains the web-page

Delayed Coker Industry Safety Database

Coking.com Example

On home page, left menu, there's a link to the Safety Statistics page,
which will take you to the sample/demo page at http://www.coking.com/safety/se/se_sample.asp.

Select Equipment Location in the coker:

Select number of coke drums:

Location	Drums	Capacity(Tons)	Near Misses	Injuries	Fatalities
blowdown system	4	2000	1	0	0
blowdown system	2	1500	1	0	0
bottom deheading	2	1500	2	1	0
bottom deheading	8	10000	8	4	1
bottom deheading	4	3000	10	4	5
bottom deheading	4	2000	10	2	0
coke drums	2	1500	2	1	1
coke handling	2	1500	1	0	0
fired heater	4	2000	2	0	0
main fractionator	4	3000	1	0	0
resid pumps	4	3000	0	1	0
resid pumps	4	3000	1	0	0
structure valve movement	4	3000	1	0	0
top deheading	4	2000	2	0	0
wet gas compressor	4	3000	1	0	0
totals			43	13	7

Delayed Coker Industry Safety Database
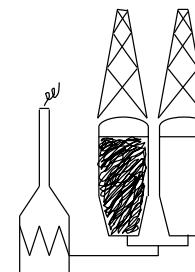
Background

Solomon has no interest in tracking detailed Safety Events
- Potential exposure to litigation events and subpoenas
- Would consume time and resources at the company

AIChE Safety event database called PSID
(Process Safety Incident Database)

- The CCPS (Center for Chemical Process Safety) group of AIChE facilitated its development to collect and share incident information and experiences among participating companies

- Participants provide detailed event data

- Gives each participant the benefit of the collected experiences

- Members include BP, ConocoPhillips, Dupont, ExxonMobil, FMC, Shell Chemical LP, and Syncrude Canada.