

## AUDIT INCENTIVES/ EXPECTATIONS

- Overall incentives for conducting audits are:
- Increased profitability by:
- Higher on-stream production
- Improved yields
- Enhance plant personnel knowledge and performance
- Audits provide meaningful profitability results and other benefits.
- Substantial no and low cost changes are expected.
- Reasonable potential investments are identified and priorities noted.
- The cost of an Audit is normally recovered in 2-3 months.
- Our in-depth analysis evaluates potential improvements and establishes incentives for changes. Potential improvement opportunities can then be prioritized

Delayed Coker Audits  
result in saving millions of  
dollars per year.



## COKER SITE AUDITS

- A site-specific coker unit evaluation (Cold Eye Review).
- A system called Photo-Logics to record and review the collected data.
- A written report with a firm direction towards Operator Driven Reliability (ODR)



For more information contact:

Gary Pitman 360.758.3073

Paul Orlowski 360.966.7251

403.668.7467 (Canada)

[info@coking.com](mailto:info@coking.com).

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MORE PRODUCTION - LESS RISK

## COKER SITE AUDITS



## ENHANCE COKER PROFITABILITY BY CONDUCTING PERIODIC AUDITS

Historically, Pace Setter Petroleum Refineries conduct reviews/audits of their Delayed Coker units plus other major processing units every 3-5 years. These important surveys primarily address changes in processing feed stocks and production requirements as well as assessing application of new technologies to improve unit profitability.

Our highly experienced refinery expert in Coker operations, maintenance, reliability, and safety provide audits that facilitate advancement to "Pacesetter Performance." The important qualifications are:

- Analysis from an owner's perspective, as the site evaluator formerly was with major refining companies.
- Where possible, enhance plant identified potential improvements.
- Conduct an unbiased "cold eyes" evaluation, to generate new ideas.
- This site audit requires minimal but effective effort from plant technical and operations personnel.
- Obtain agreement/commitment from key plant personnel on worthwhile improvements identified by the audit.

## TECHNICAL ISSUES ADDRESSED IN AUDITS

- Important areas include:
- Current and future processing objectives and potential improvement opportunities.
- Review of key operating practices and procedures.
- Reliability assessment of key equipment performance and online maintenance.
- Incidents/near misses, their causes and corrective action taken.
- Capability of safety facilities and important reminder activities.



## EVALUATE

- Operator surveillance rounds by walking the rounds with operators and witnessing shift turnover.
- Operator depth of knowledge for equipment and up-keep.
- Depth of knowledge of the Delayed Coker process.

## INSPECT

- Safety equipment
- Auto start equipment
- Safety interlocks system (heaters, coke drum valves, un-heading)
- Fire protection
- Egress
- Housekeeping

## REVIEW

- Procedures and on-deck witness of these tasks: top and bottom drum un-heading, coke drum, switching, and coke drum drilling
- Operations routine duties (minor preventive maintenance)
- List of bad actors (reoccurring problems)
- Preventive maintenance program
  - Schedule
  - Task list
  - History
- Equipment status
  - Age
  - Up-keep