

# Petroleum Systems Integrity Office



# May, 2000 Petrobras 36

## World's largest floating oil platform off the coast of Brazil



([www.rootcauselive.com/files](http://www.rootcauselive.com/files))

### Speech on the new platform design

by a Petrobras executive

“Petrobras has established new global benchmarks for the generation of exceptional shareholder wealth through an aggressive and innovative programme of cost cutting on its P36 production facility. Conventional constraints have been successfully challenged and replaced with new paradigms appropriate to the globalised corporate market place.

Through an integrated network of facilitated workshops, the project successfully rejected the established constricting and negative influences of prescriptive engineering, onerous quality requirements, and outdated concepts of inspection and client control.

Elimination of these unnecessary straitjackets has empowered the project's suppliers and contractors to propose highly economical solutions, with the win-win bonus of enhanced profitability margins for themselves. The P36 platform shows the shape of things to come in the unregulated global market economy of the 21<sup>st</sup> Century.”

# March 15, 2001 Petrobras 36



([www.rootcauselive.com/files](http://www.rootcauselive.com/files))

On March 15, 2001, the Petrobras 36 platform in the Roncador Field, Campos Basin, experienced an explosion during drainage operations. The operations were immediately suspended, and emergency trained crew attempted to put out the fire. Shortly later, a second explosion occurred, killing 11 of the 175 people onboard.

In May 2007, a federal judge ruled that Petrobras had to pay a fine of BRL100 million (\$50.8 million) for environmental damages caused when the P-36 sank.

Inadequate safety inspections and virtually no quality assurance were blamed for the incident.

# PSIO

- Established in April 2007 by Administrative Order 234
- Primary tasks:
  - Coordinate state, federal and local agencies
  - Incident investigation
  - Gap/Overlap Analysis
  - Quality Management

# Designated Liaison Agencies

- Department of Environmental Conservation
- Department of Fish and Game
- Department of Public Safety
- Department of Revenue
- Department of Transportation and Public Facilities
- Department of Labor and Workforce Development
- Department of Law
- Department of Natural Resources
- Alaska Oil and Gas Conservation Commission
- Governor's Washington, D.C. Office

# Coordinated Efforts Among Agencies

- Event notification and coordination of investigations
- Circulation of employee/public concerns
- Regular liaison interaction
- Regular contact with local, state and federal entities
- Combat the “silo effect”

# Recent Coordinated Incident Investigations/Activities

- September 2008 Y-Pad artificial lift gasline rupture
- January 2009 Pump Station 1 pigging incident

# Gap Analysis

The Goal of the Gap Analysis is to provide a **comprehensive and cost-effective approach to state oversight** of oil and natural gas facilities, equipment, infrastructure, and activities on state oil and natural gas units and leases.

# Process

In coordination with Liaison Officers:

- Identify statutory and regulatory authorities;
- Identify how these authorities are implemented;
- Identify any gaps and overlaps;
- Assess risks associated with any gaps and overlaps;
- Coordinate the review of gaps, overlaps and risks;
- Provide recommendations to DNR Commissioner and Resources Subcabinet

# Schedule

- Arcadis hired to do detailed analysis of statutory and regulatory gaps and overlaps
- Data compilation in progress – will begin meeting with PSIO liaisons soon
- Results expected August 2009

# PSIO's Gap Analysis & DEC's Alaska Risk Assessment

- The Risk Assessment and Gap Analysis documents will serve as tools in determining how best to coordinate agency efforts to provide a comprehensive and cost-effective approach to oil and gas oversight activities
- Where high risks exist in areas of little or no oversight, those gaps will likely need to be filled.
- Where low risks exist in areas of duplicative oversight, those overlaps will likely need to be removed.

# Quality Program

Designated agencies, to the extent authorized through existing legal authorities, shall require the industry businesses to provide a comprehensive description of current practices that includes the quality control, quality assurance, monitoring, inspection, and other practices the business uses to ensure the integrity and reliability of oil and natural gas facilities, equipment, infrastructure, and activities.

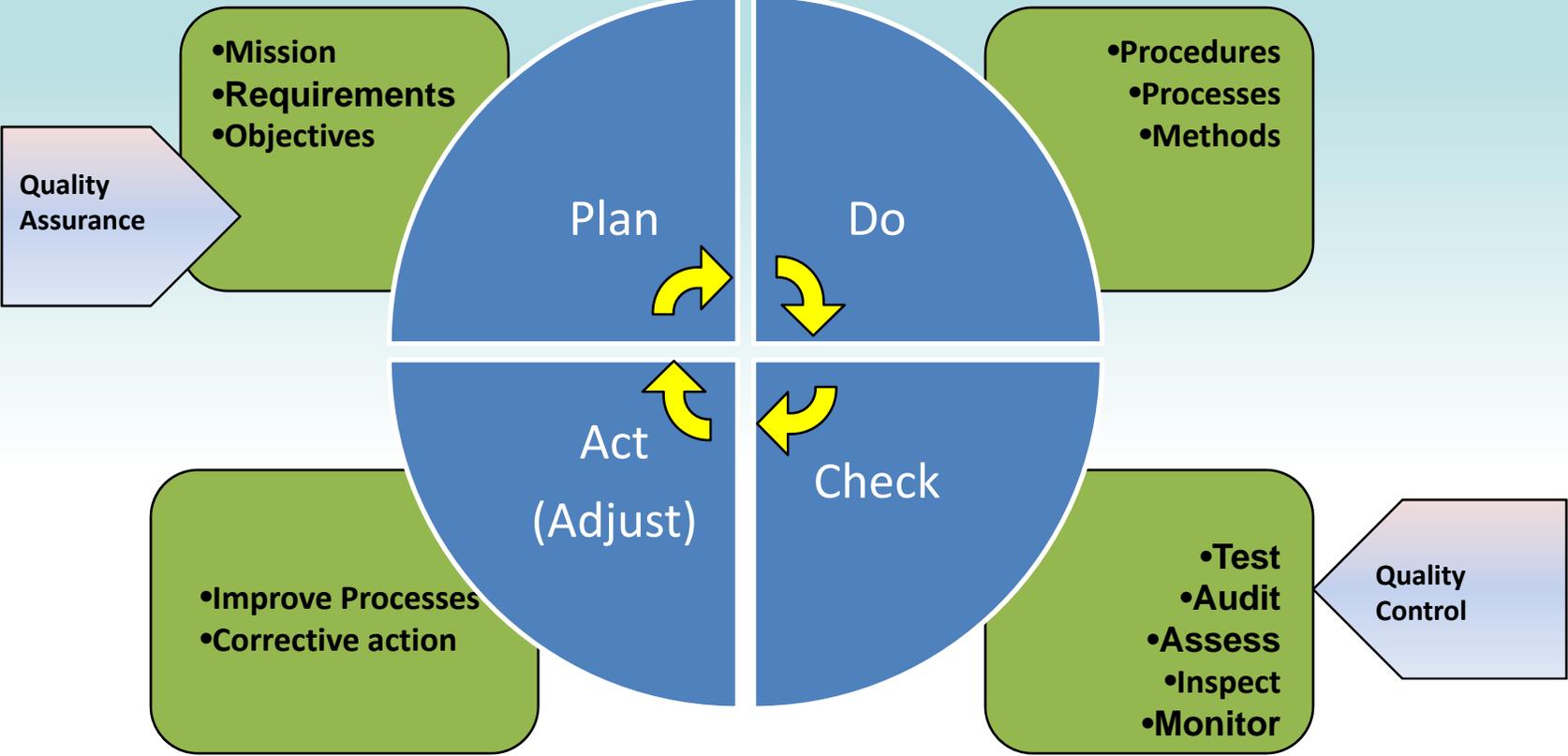
# What is Quality Assurance?

- Quality assurance is any systematic process of determining if a product or service meets the mutually agreed upon characteristics and expectations for performance
- Establishes rules and methods (the process) to achieve expected results and conformance to requirements
- The “Plan” component of a quality management system
- Often confused with quality control

# What is Quality Control?

- The process steps, procedures and activities employed to measure or test physical characteristics and performance requirements against predetermined criteria
- Is concerned with the product or service
- The “Check” element of a quality management system
- Should not, but is often confused with quality assurance

# PDCA Cycle



# Quality Management Systems

## Fundamentals:

- Quality control;
- Quality assurance;
- Monitoring;
- Inspection; and
- Other practices used to ensure the integrity and reliability of facilities, equipment and infrastructure

# Agency Expectations of PSIO

- Help agency personnel become knowledgeable of the elements of quality management systems in order to maintain the integrity and reliability of:
  - Oil and natural gas facilities
  - Equipment
  - Infrastructure
- Understand the benefits of:
  - Plan, Do, Check (Study), Act
  - Performance measurement
  - Continuous Improvement

# PSIO Expectations of Agencies

- Document evaluations of oil and gas facilities, equipment, infrastructure, work activities and where applicable in the context of quality management
- Effectively communicate results to industry
- Work with the PSIO Coordinator to coordinate review of evaluations, identify gaps, and seek remedial action.

# PSIO Expectations of Petroleum Industry

Provide evidence that management systems or processes for quality control, quality assurance, monitoring, inspection and other programs are implemented, effective, and periodically evaluated by upper management.