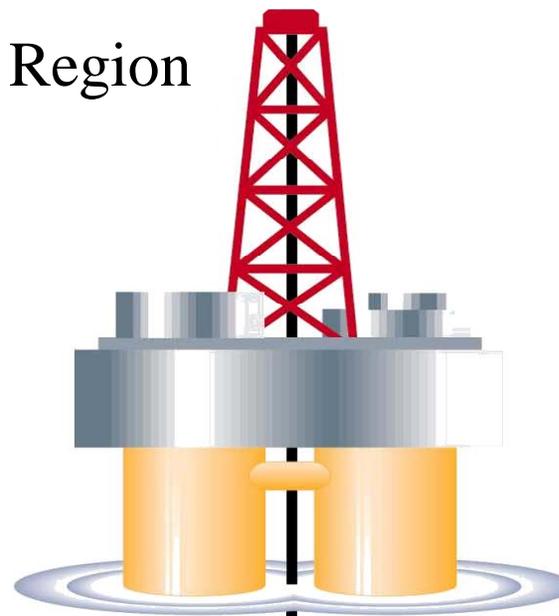
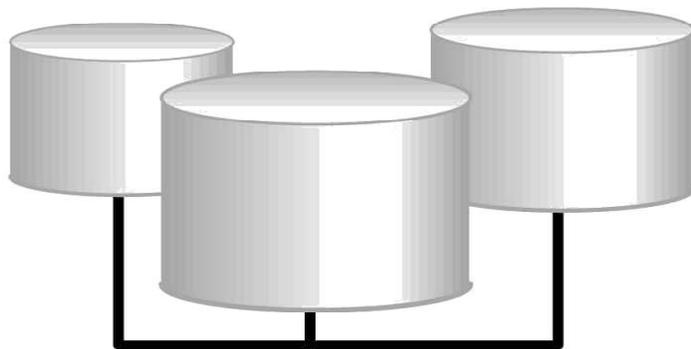


US EPA ARCHIVE DOCUMENT



Shell Pipeline Company LP

Gulf of Mexico Region



Making the Connection

- Release Prevention -

For a Clean, Safe Environment

Release Prevention Is a Key Element of System Reliability and Safety

Consequences of a release...

- Employee and public safety
- Environmental impact
- System downtime and missed delivery schedules
- Impact on producers/ customers
- Costs of clean up and government fines
- Shell's corporate image with the industry, public, and regulators



Releases Are Costly to SPLC and To Our Customers

Example: Offshore Release

El 331 Cracked Weld 1 gallon release

•Release Costs Analysis

–Material and labor	\$7.5M
–Helicopter costs	\$7.2M
–Lost Tariff	\$7.0M
–Lost oil production	\$111.7M
–Lost gas production	\$99.4M
–Other costs and fines	\$5.0M
–Total	\$237.82M

Example: Onshore Releases

- Release Cost Analysis for 7 releases (to date)
*note: only cost of cleanup, no fines, downtime, repair cost, or administrative cost

Total Amount Released: 11.75 bbls

Total Cost of Releases: \$124.04M

Total Cost per Barrel: \$10.6M

Total Contract Labor: \$68.24M

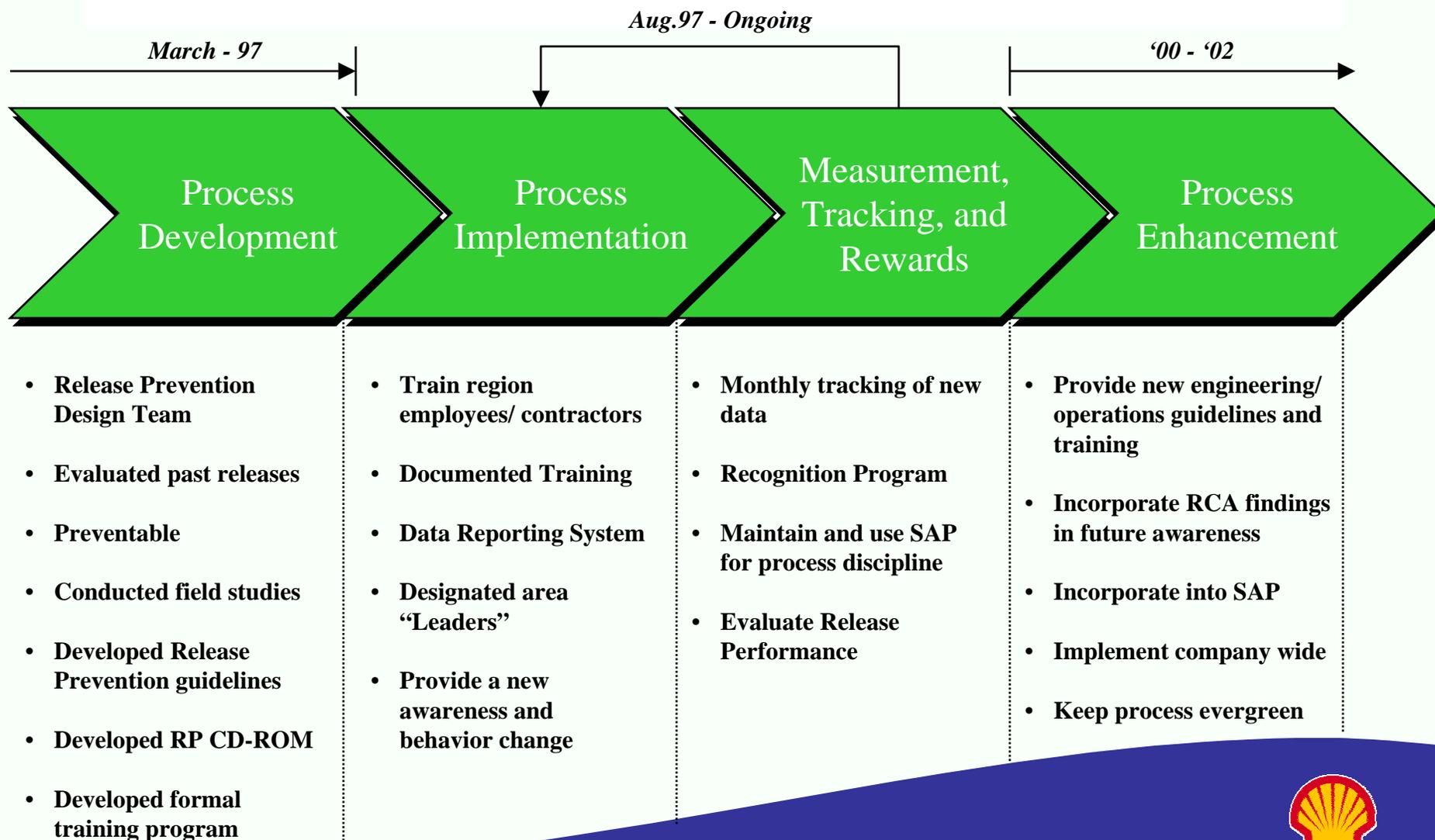
Total Equilon Labor: \$4.8M

Total Cleanup Equipment: \$51M

* These are actual cost incurred +/- 5%



Development and Implementation of the Gulf of Mexico Release Prevention Process









Release Prevention

3

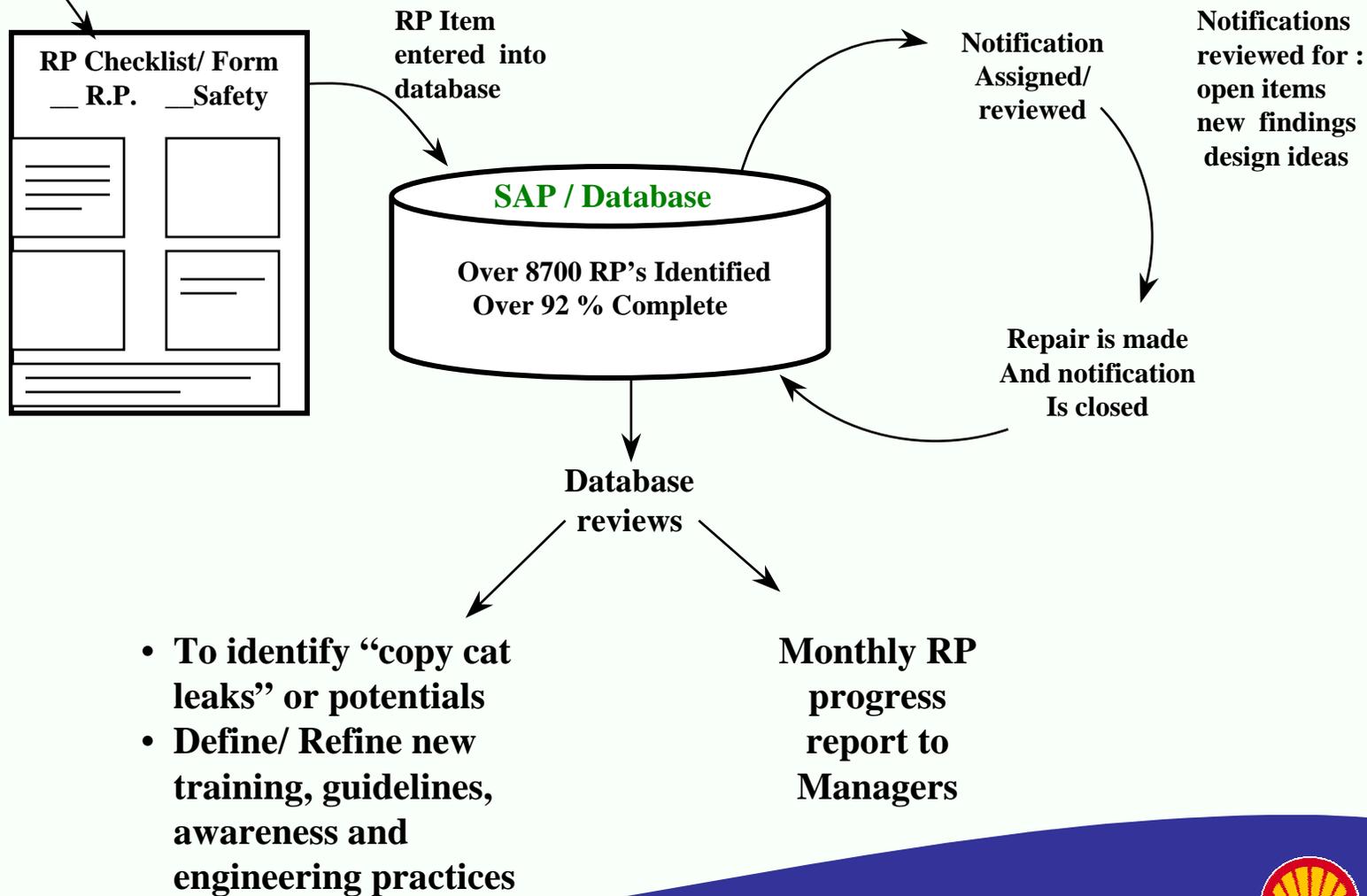


Measurement, Tracking, and Reporting



Personnel/
Inspection
Team -

Captures opportunity on RP checklist/field form



Release Prevention Requires a Mindset Change

Traditional Approach

- “Pipelines leak”
- Best “Responders”
- Reactive Mode
- If it ain’t broke don’t fix it
- More is better

Release Prevention Mindset

- “Leaks can be Prevented”
- Best “Preventers”
- Proactive Mode
- If it ain’t broke, figure out how it can break, then correct it
- “Less is more”

- **Creates a sense of Ownership, Pride, and Empowerment**

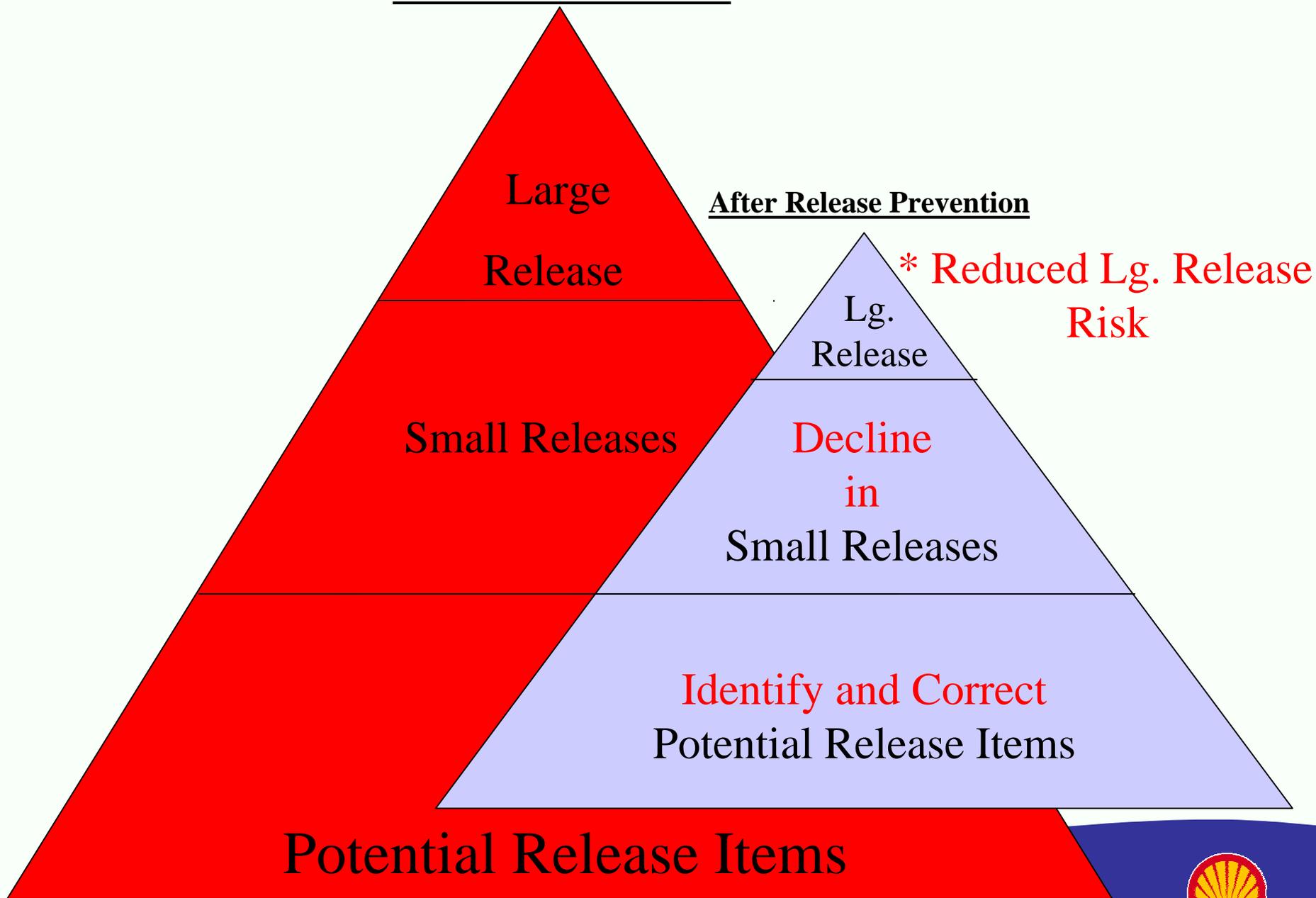


Key Elements of Release Prevention Success



Before Release Prevention

After Release Prevention



Basic Release Prevention Techniques...

How to prevent a release before it happens.

- Evaluate your spill record and categorize each release
- Gather as much past data as possible pertaining to the cause or circumstance of each release
- Group and trend that data
- Form a checklist from that data, and perform a random field inspection looking for similar: installations, equipment, operation, etc.
- Perform Training: Review the Past... Evaluate in the Present... Apply it to the Future...



Other Tips and Facts...

- The 3 major causes of releases:

Equipment Failure

Operator Error

3rd Party Damage

- Remember the 3 P's every release comes from
Product + Pressure + Path = Release....Eliminate all possible paths

Environmental Performance Results –

- Since 1997 - Avg. 15% reduction in Releases
- 2002 Results – GOM Shipped 848,974,728 bbls.
Released – 86.79 bbls. = .102 ppm
Recovered – est. 78 bbls.
- Promote “Call Before You Dig” and educate the community in which you operate



The Future of Release Prevention

- Provide awareness of RP to regulators and public
- Incorporate release prevention concepts into design of all new facilities
- Apply new technologies to release prevention opportunities
- Incorporate release prevention guidelines into management of change
- Enhance the SPLC/ Shell Leadership Team for release prevention – Community of practice
- Release prevention must be implemented through the pipeline/ hydrocarbon industry
- Keep process evergreen and RP Awareness High



Our Goal: By being the industry standard setter, our name will become Synonymous with Release Prevention, in the eyes of the Public, the Government, and the Industry!

**Shell Pipeline
Company LP**



**Release
Prevention**



Gulf of Mexico Region

~~GOALS EXPECTATIONS~~

- 
- ***NO*** Spills
 - ***NO*** Injuries
 - ***NO*** Downtime



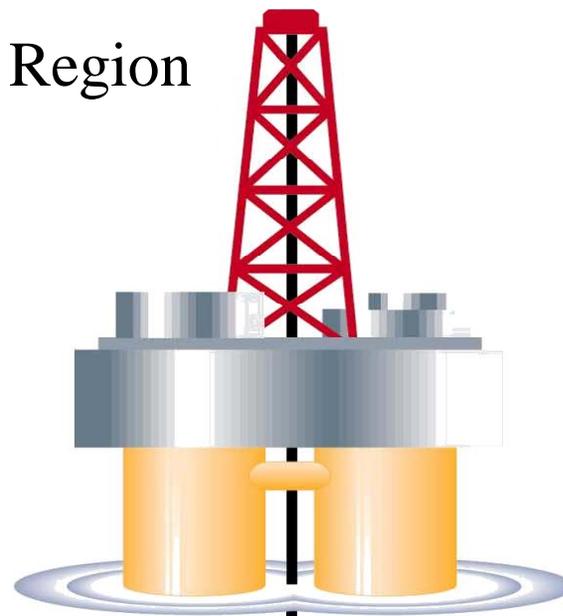
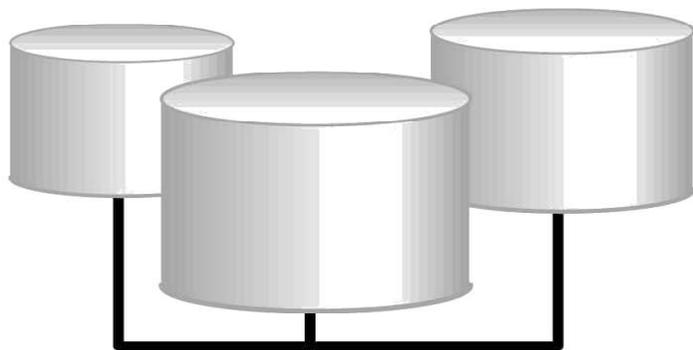
Release Prevention CD.lnk





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Gulf of Mexico Region



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