



California State Lands Commission

Safety and Pollution Prevention Program 10/7/14

**Mineral Resources
Management Division**



Responsibility

◆ 18 Drilling and Production Facilities

- ◆ 4 offshore platforms
- ◆ 5 man-made islands
- ◆ 9 shoreline well sites
- ◆ About 2000 active wells
(45,000 - 47,000 bopd est.)

◆ 4 Onshore Processing Facilities

◆ 36 Offshore Pipelines

- ◆ 18 Federal pipelines –
- ◆ 10 State pipelines



Ventura / Santa Barbara Channel



◆ Platform Holly



◆ Ellwood Onshore Processing Facility



◆ Rincon Island

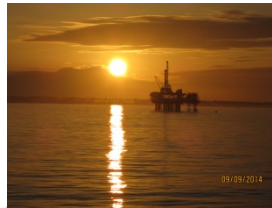


◆ Rincon onshore wells & onshore facility



◆ McGrath Montalvo onshore well areas

Long Beach / Huntington Beach



◆ Platform Esther

◆ Platform Eva

◆ Platform Emmy

◆ Huntington Beach Onshore



MRMD Operations & Compliance

◆ Inspection Program

- ◆ Pollution Surveillance
- ◆ Regulatory compliance
- ◆ Monthly testing verify reliability of safety systems



◆ Safety Audit Program

- ◆ Condition & maintenance
- ◆ Design compliance
- ◆ Safety Management Programs
- ◆ Spill Plans & Operating Manuals
- ◆ Safety Assessment of Management Systems (SAMS)

Safety & Spill Prevention Audit Features

- ◆ Comprehensive on-site evaluation
- ◆ A progressive type inspection
- ◆ Provide comprehensive report
 - ◆ written recommendations
 - ◆ detailed list of action items
- ◆ Monitor correction of items

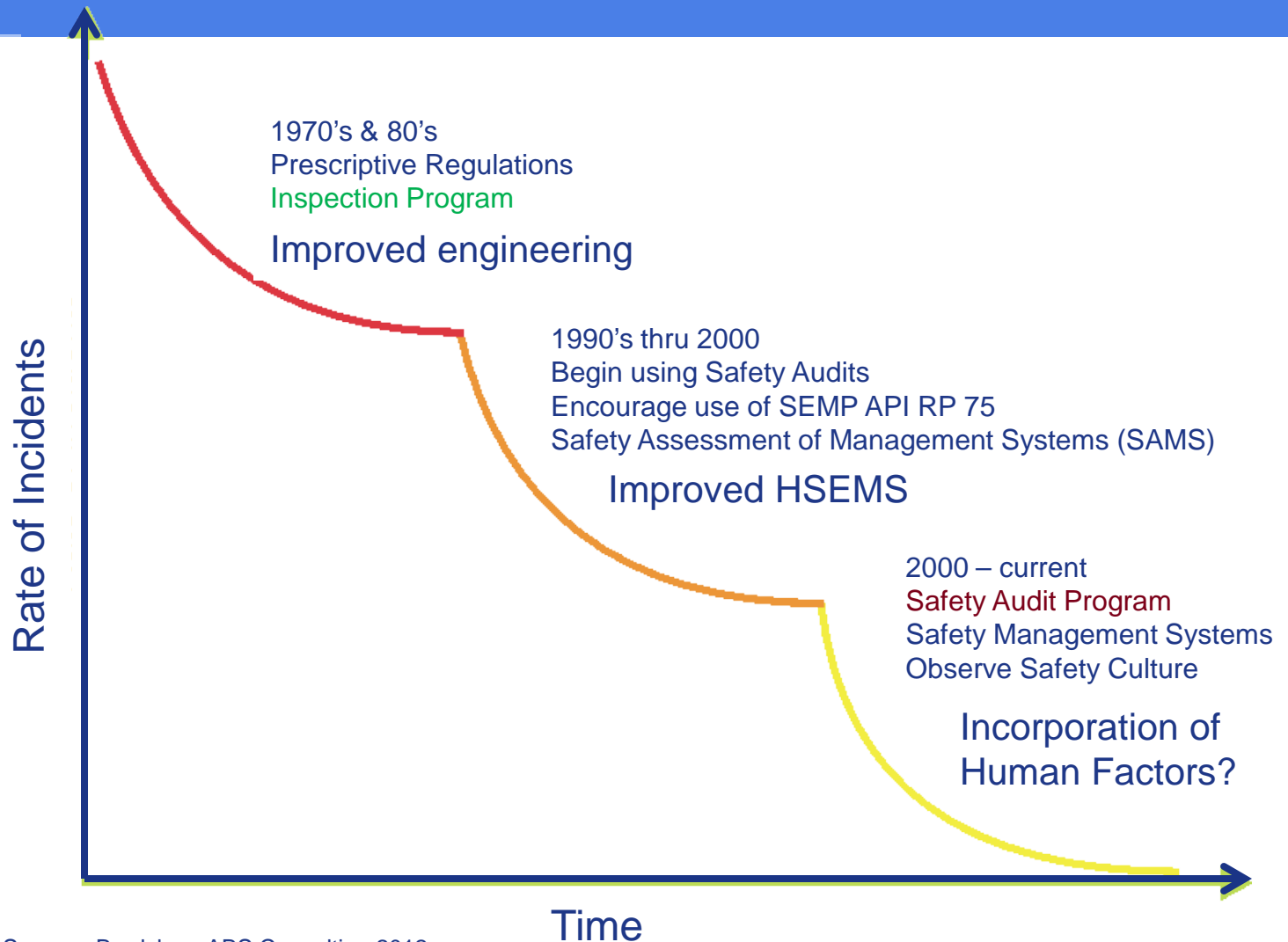


Safety & Spill Prevention Audit Teams

- ◆ **Facility condition assessment**
 - ◆ Functional condition / fit for purpose
 - ◆ Adequacy of maintenance / records
- ◆ **Facility safety system design review**
 - ◆ Federal, State, and local codes
 - ◆ Industry standards and best practices
- ◆ **Electrical**
 - ◆ System condition
 - ◆ Power distribution design
 - ◆ Hazardous area classification
- ◆ **Safety management programs**
 - ◆ Operating personnel training & qual.
 - ◆ Management of change verified

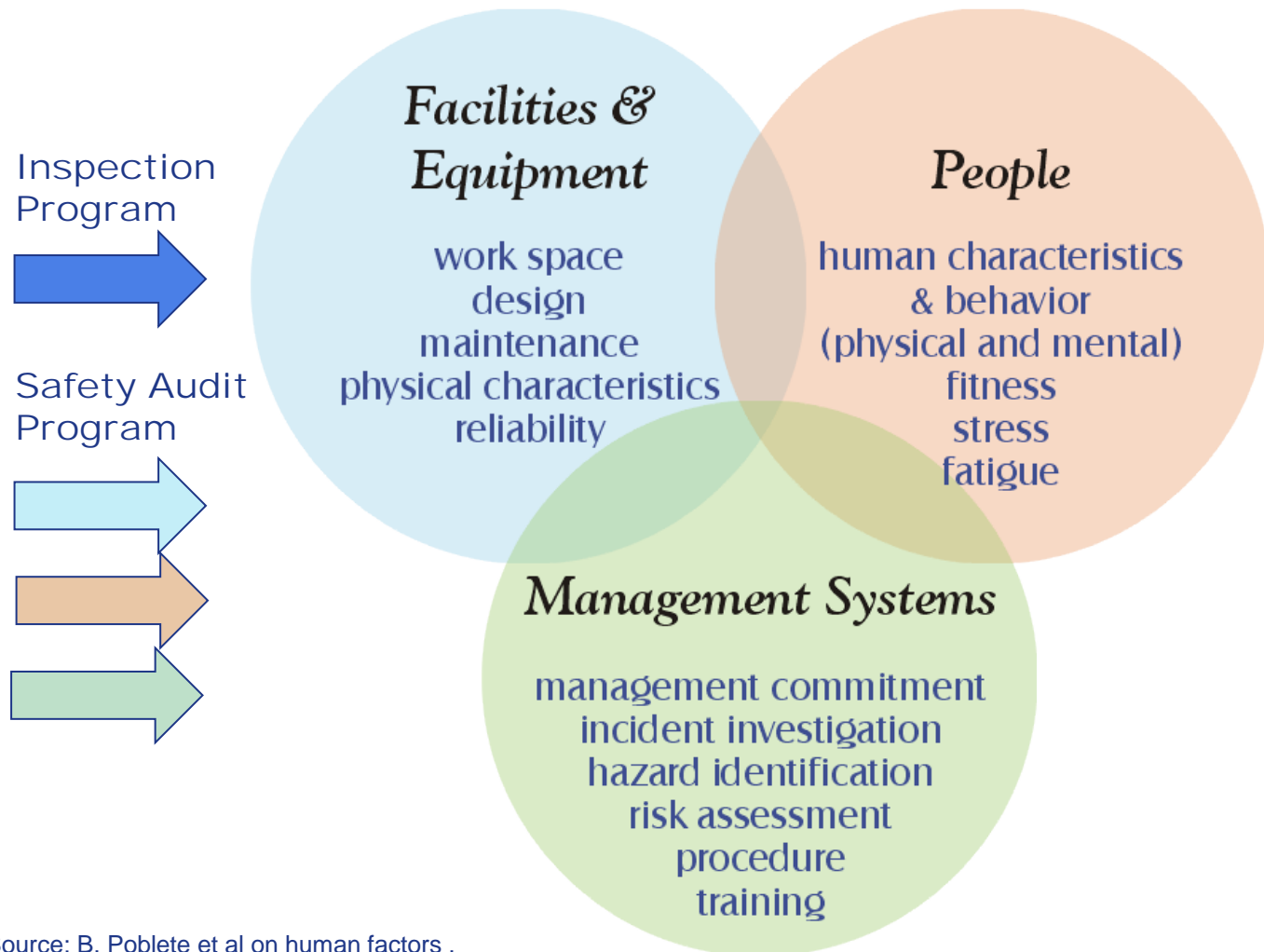


Evolution of Safety Management

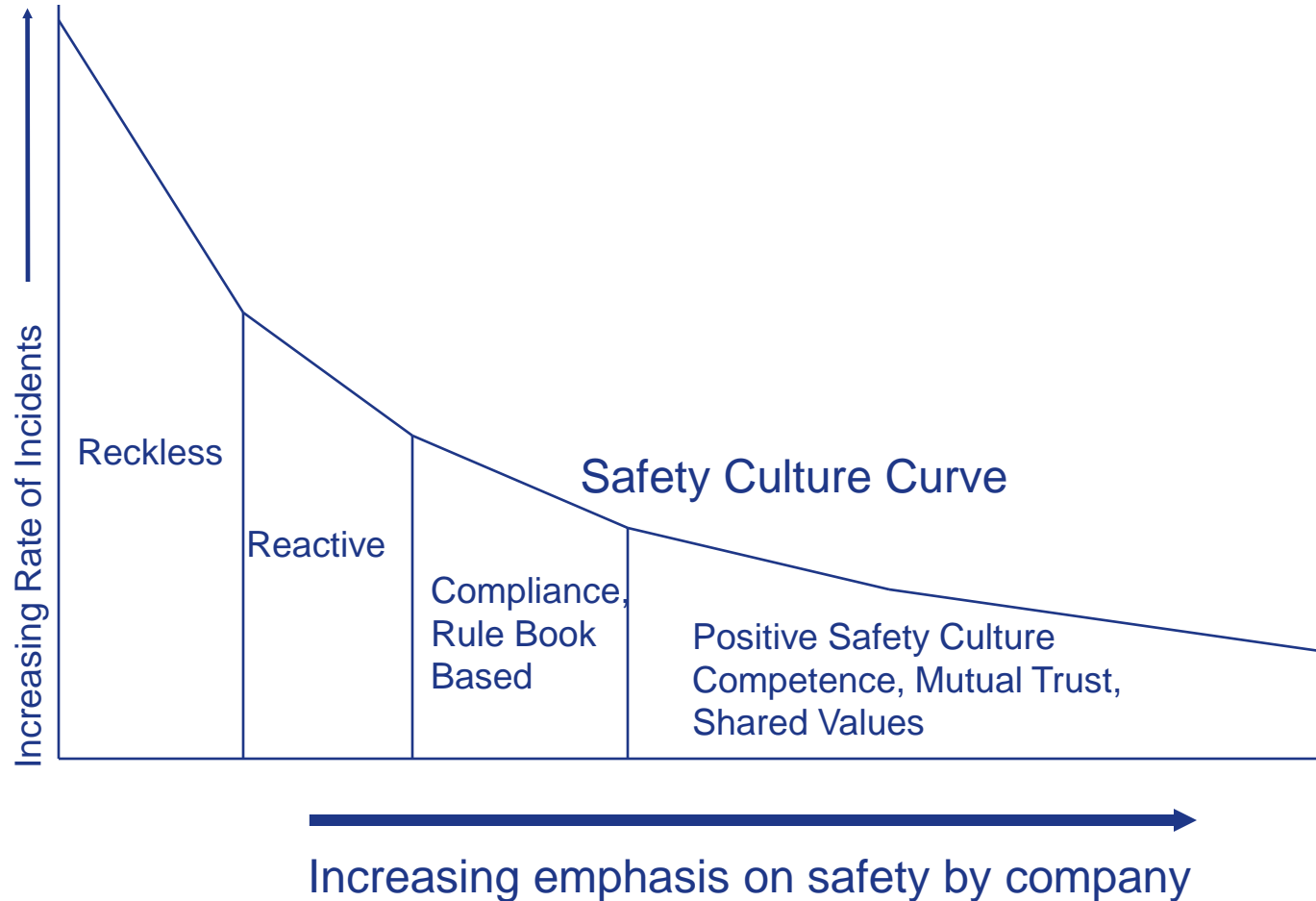


Source: Bradshaw ABS Consulting 2012

Complimentary Inspection & Safety Audit Programs



Characterizing Safety Culture



Results

- ◆ **8500 action items identified by Safety Audit Program have been resolved.**
- ◆ **Improved performance at monthly inspections**
- ◆ **Continued low incidence of spills**

Observed Qualitative Results

- Maintenance Improvements
 - Better planned preventive maintenance
 - Infrastructure shows continuing improvement
 - Human Factors improvements like labelling
 - Recapitalization & improved design to lower risk



Observed Qualitative Results

- Improved safety culture
 - By inspectors and auditors
 - By (SAMS) Assessments



Conclusions:

- ◆ **S&SP Audit has been a joint success between operators and CSLC.**
- ◆ **Since program start, significant expansion in number of wells and processing on platforms still ended in improved safety and spill rates.**
- ◆ **S&SP Audits verify that BAP is achieved on state offshore leases.**
- ◆ **California state offshore leases are operated by “world class” operators.**