



***Huntington Beach Production Unit
Prevention First Symposium
September 10, 2008***

Huntington Beach in the early days





HUNTINGTON BEACH, CALIF.

HITCHCOCK PHOTO—69

Huntington Beach Field History

- Discovered by Standard Oil Co. of California in 1920
- Production extended to offshore oil zones in 1930's
- Waterflood projects commenced in early 1960's
- Platform Emmy set in 1962
- Production and Injection peaked at 50,000 BOPD and 450,000 BWPD in 1972
- Most recent Waterflood initiated (Upper Main Zone) in 1993

Huntington Beach Unit



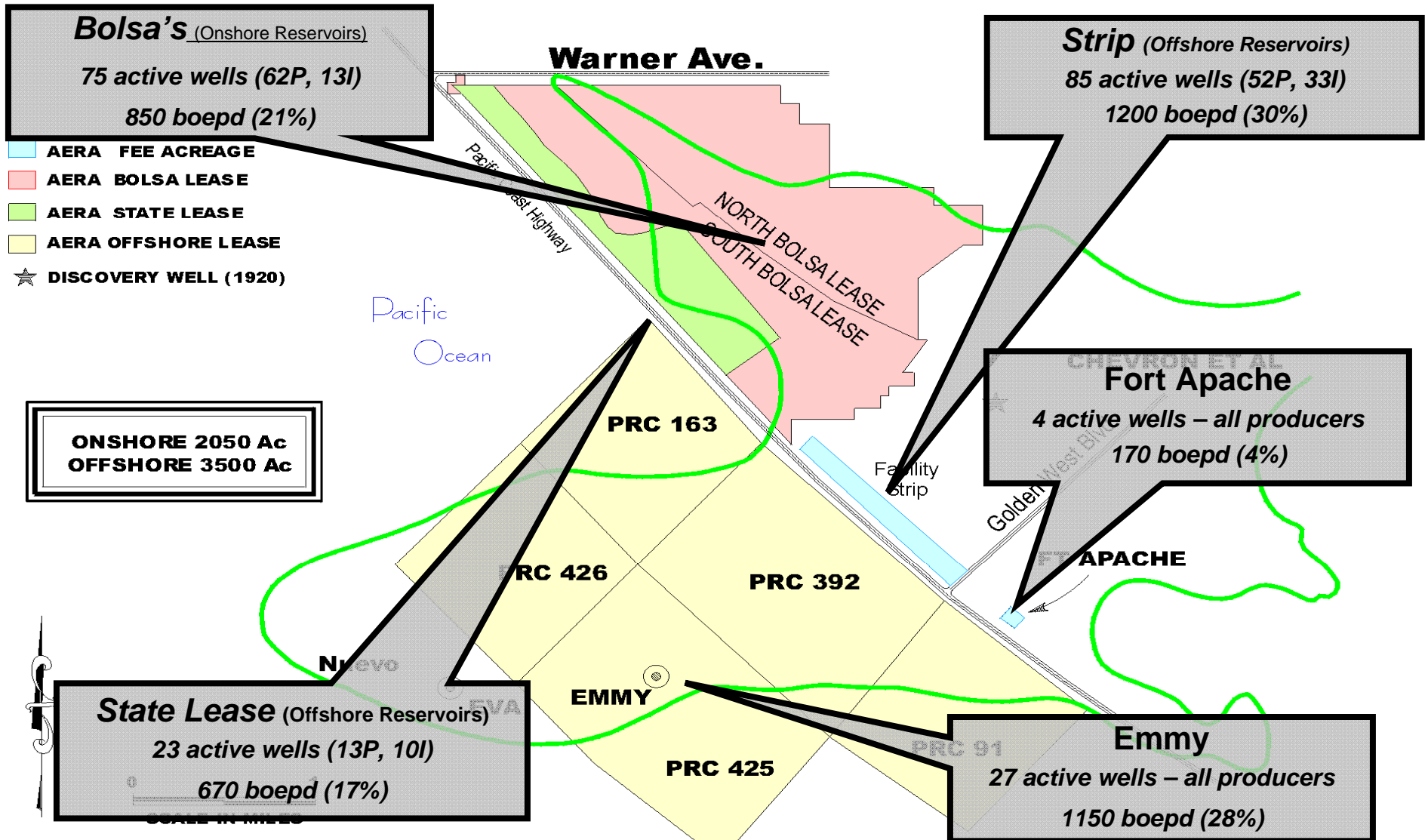
Field Statistics

- Oil production: 4,100 BOEQ per day
- Natural gas production: 2,500 mcf per day
- Producers wells: 158 onshore
27 offshore (Platform Emmy)
- Injection wells 56
- Field extent: 2050 Onshore lease acres
3500 Offshore lease acres
92 fee acres "Facility Strip"
~1 fee acre "Fort Apache"

Aera Personnel: 45

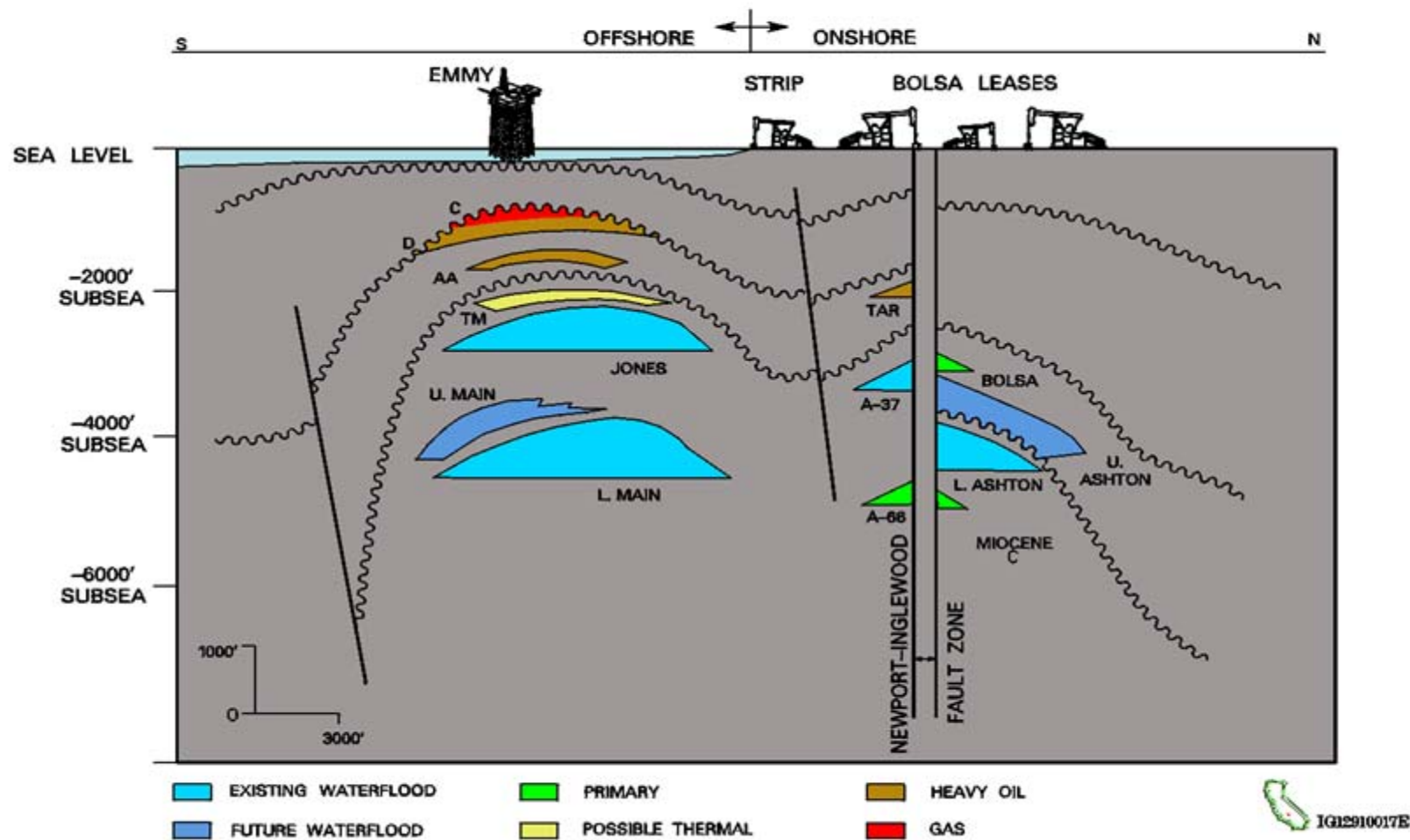


Aera Energy LLC HUNTINGTON BEACH FIELD

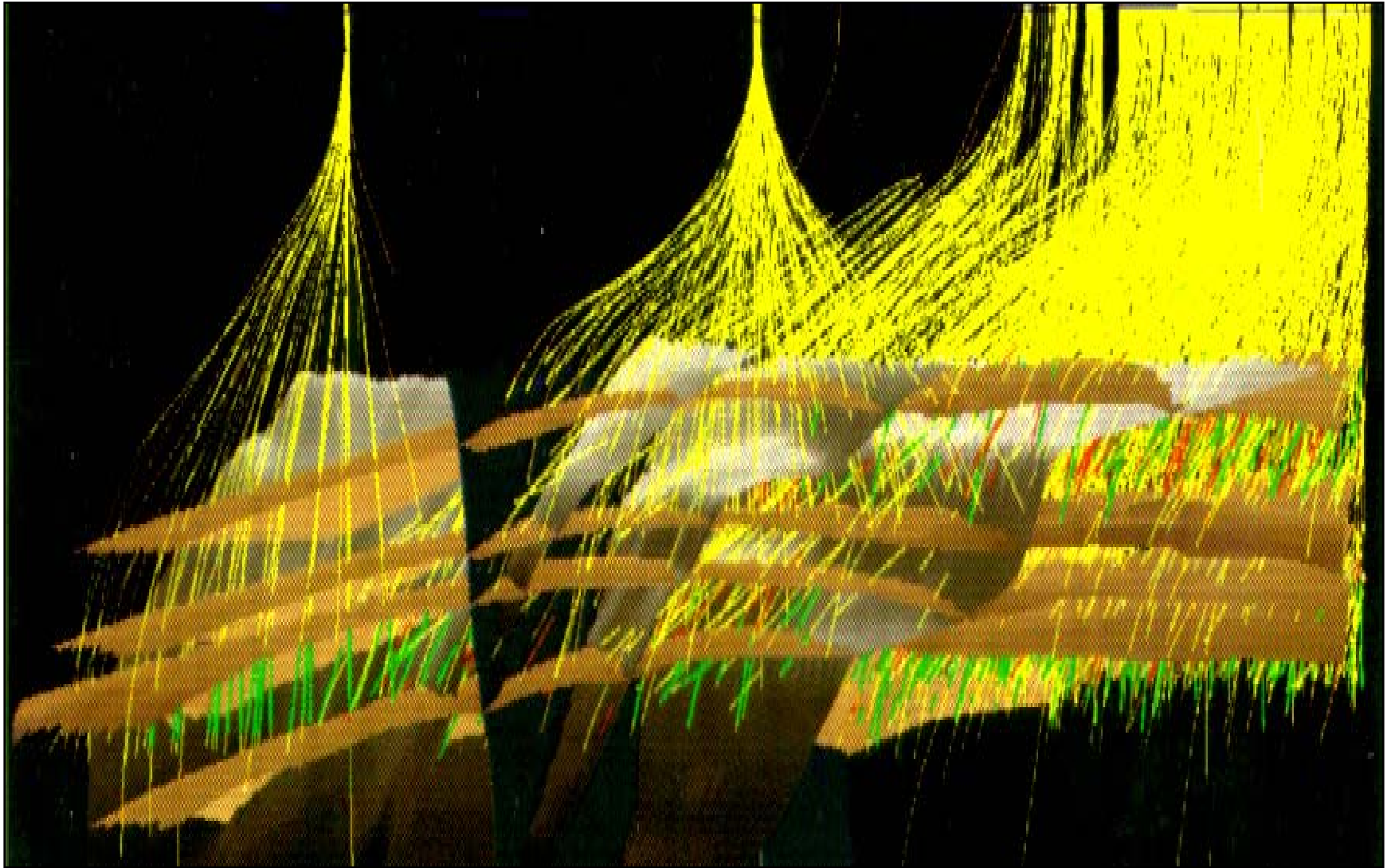


Production: 2008 Annual Average

SCHEMATIC CROSS SECTION



Huntington Beach Sub-Surface

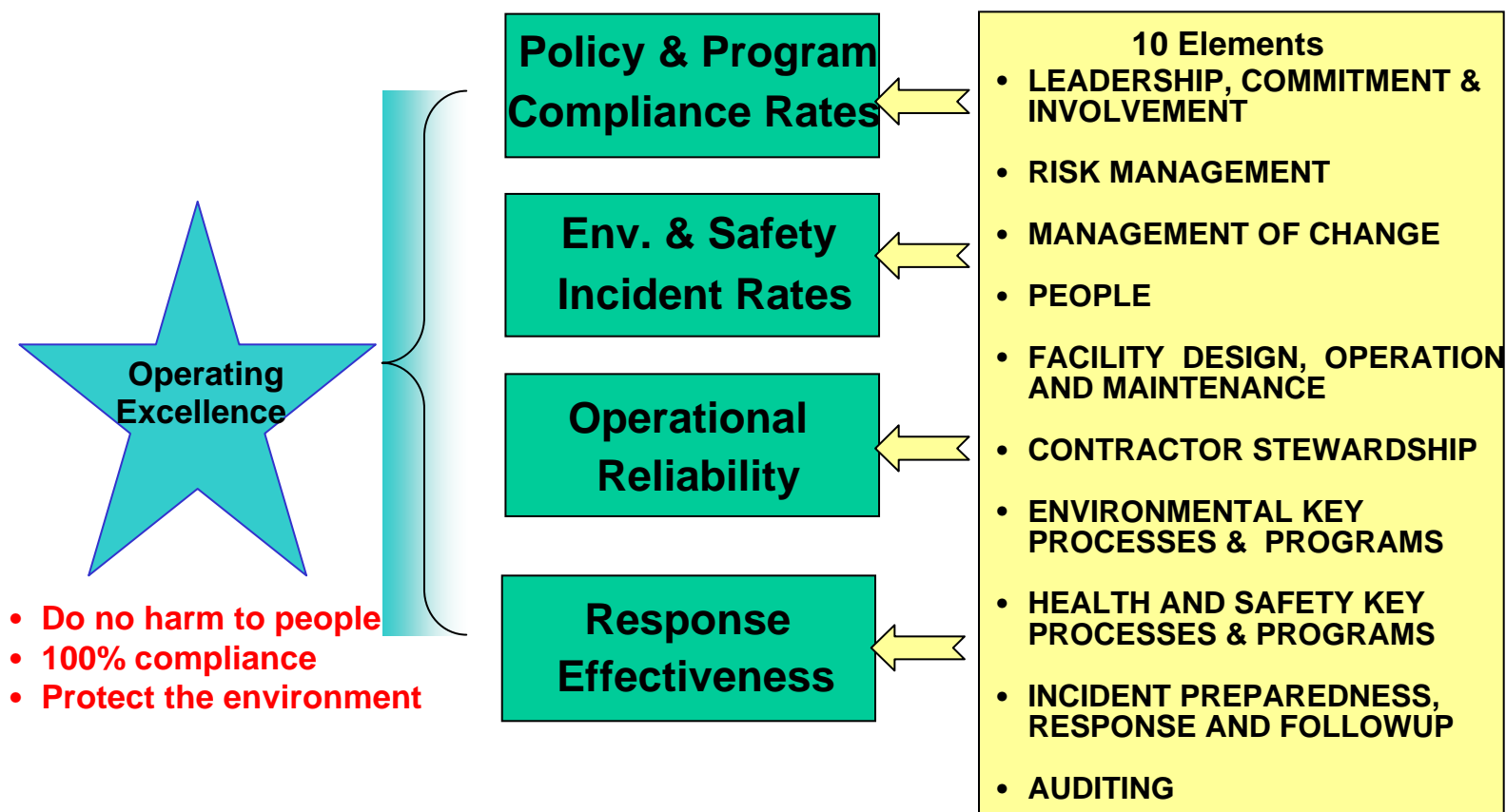






Aera Energy LLC

Aera's System of Operating Excellence (SOE)



The EHS vision

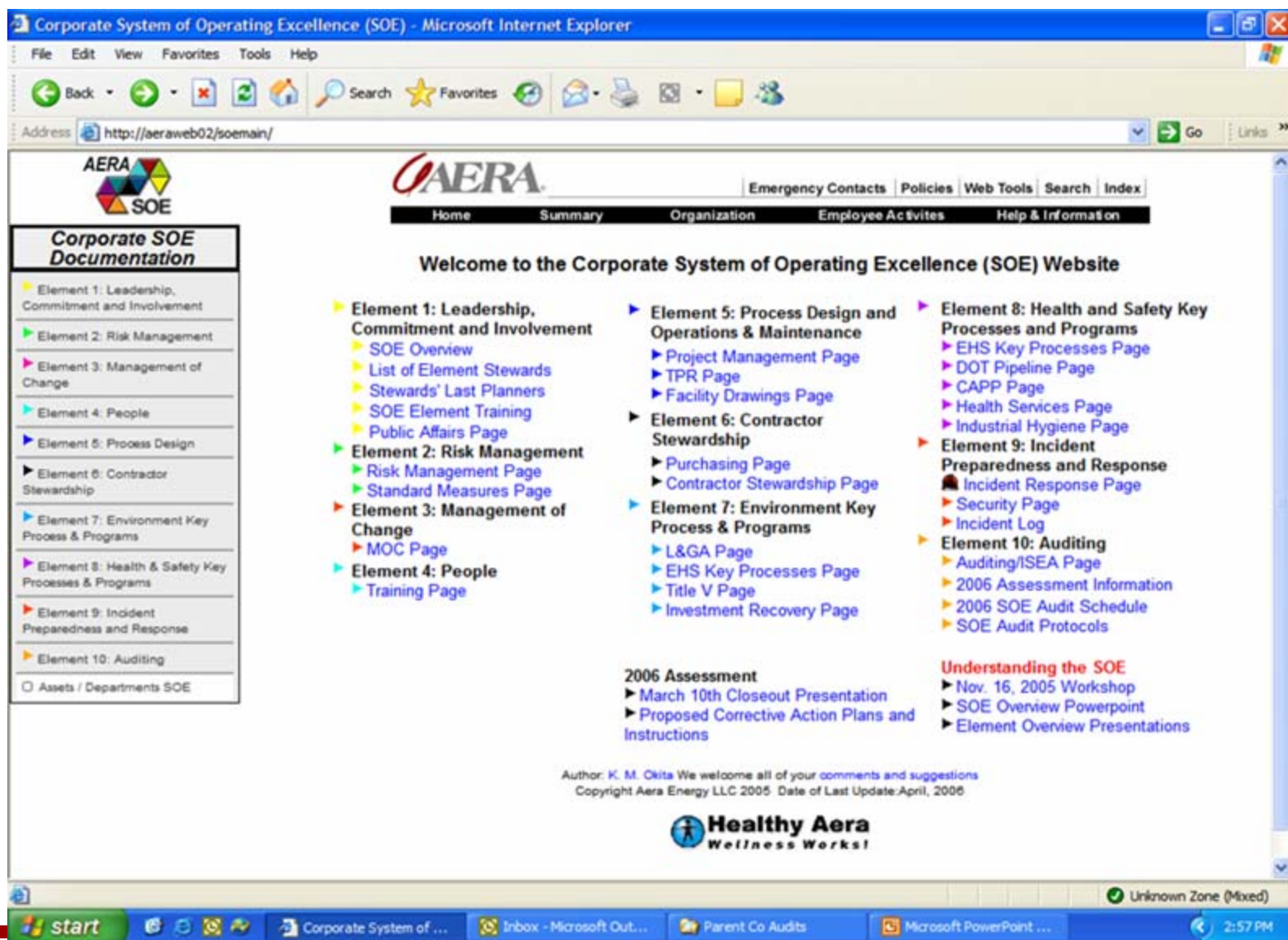
The rear view mirror

*Look here for leading indicators
& process measures*

The System of Operating Excellence (SOE) framework documents the expectations for Aera's operations.

- The framework identifies the key elements needed to achieve safe and reliable operations
 - There are ten elements (covering 34 expectations) that must be mastered to achieve excellence
 - Each expectation calls for “A process is in place to ...”
- The framework provides a benchmark against which to measure current performance

SOE documentation can be accessed by Aera employees via the intranet.



Corporate System of Operating Excellence (SOE) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://aeraweb02/soemain/

AERA SOE

Emergency Contacts Policies Web Tools Search Index

Home Summary Organization Employee Activities Help & Information

Welcome to the Corporate System of Operating Excellence (SOE) Website

Corporate SOE Documentation

- Element 1: Leadership, Commitment and Involvement
- Element 2: Risk Management
- Element 3: Management of Change
- Element 4: People
- Element 5: Process Design
- Element 6: Contractor Stewardship
- Element 7: Environment Key Process & Programs
- Element 8: Health & Safety Key Processes & Programs
- Element 9: Incident Preparedness and Response
- Element 10: Auditing
- Assets / Departments SOE

Element 1: Leadership, Commitment and Involvement

- SOE Overview
- List of Element Stewards
- Stewards' Last Planners
- SOE Element Training
- Public Affairs Page

Element 2: Risk Management

- Risk Management Page
- Standard Measures Page

Element 3: Management of Change

- MOC Page

Element 4: People

- Training Page

Element 5: Process Design and Operations & Maintenance

- Project Management Page
- TPR Page
- Facility Drawings Page

Element 6: Contractor Stewardship

- Purchasing Page
- Contractor Stewardship Page

Element 7: Environment Key Process & Programs

- L&GA Page
- EHS Key Processes Page
- Title V Page
- Investment Recovery Page

Element 8: Health and Safety Key Processes and Programs

- EHS Key Processes Page
- DOT Pipeline Page
- CAPP Page
- Health Services Page
- Industrial Hygiene Page

Element 9: Incident Preparedness and Response

- Incident Response Page
- Security Page
- Incident Log

Element 10: Auditing

- Auditing/ISEA Page
- 2006 Assessment Information
- 2006 SOE Audit Schedule
- SOE Audit Protocols

2006 Assessment

- March 10th Closeout Presentation
- Proposed Corrective Action Plans and Instructions

Understanding the SOE

- Nov. 16, 2005 Workshop
- SOE Overview Powerpoint
- Element Overview Presentations

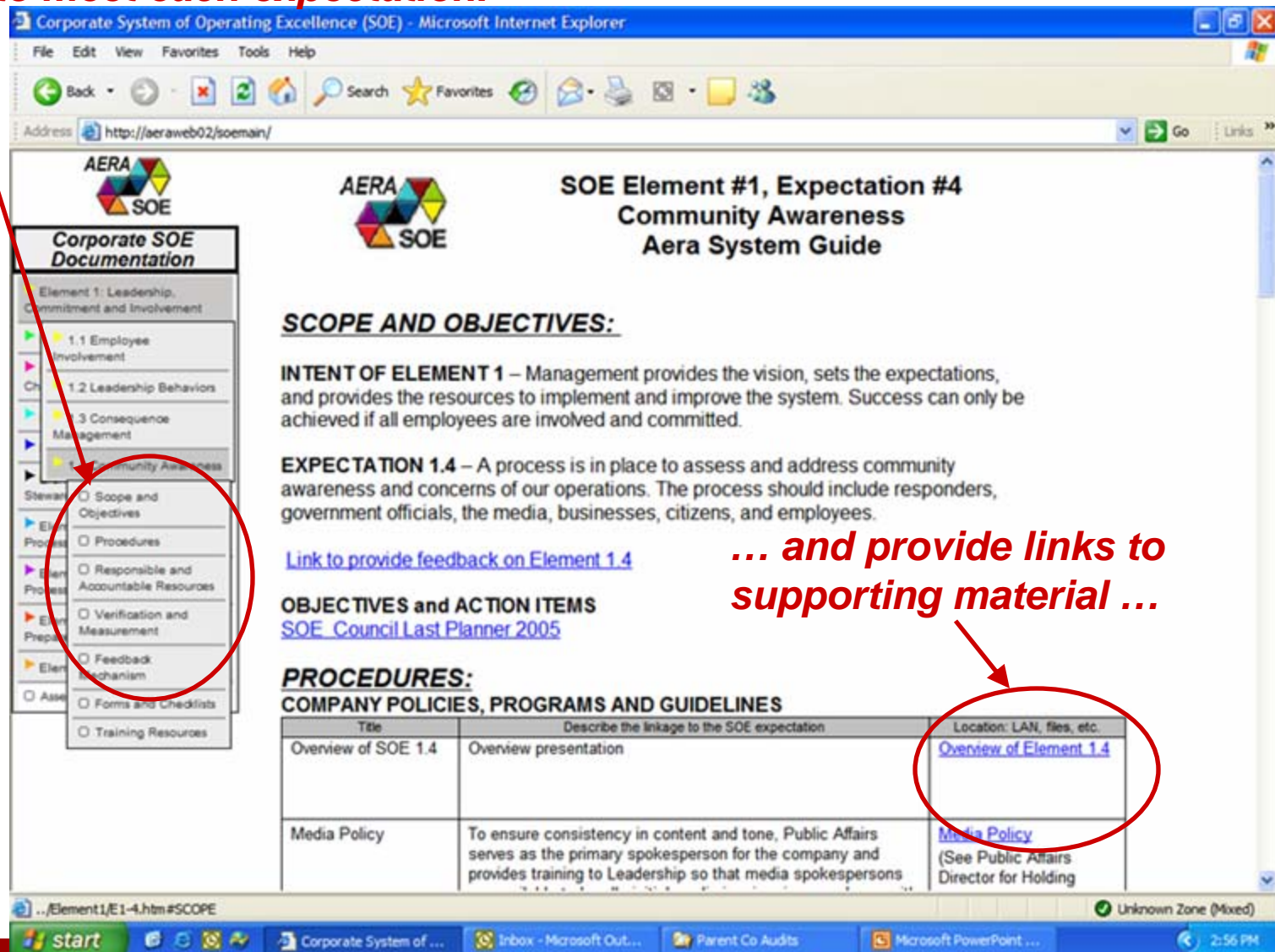
Author: K. M. Okita We welcome all of your comments and suggestions
Copyright Aera Energy LLC 2005 Date of Last Update: April, 2006

Healthy Aera
Wellness Works!

Unknown Zone (Mixed)

start Corporate System of ... Inbox - Microsoft Out... Parent Co Audits Microsoft PowerPoint ... 2:57 PM

The web pages document the five characteristics of the processes in place to meet each expectation.



Corporate SOE Documentation

- Element 1: Leadership, Commitment and Involvement
 - 1.1 Employee Involvement
 - 1.2 Leadership Behaviors
 - 1.3 Consequence Management
 - 1.4 Community Awareness**
 - Scope and Objectives
 - Procedures
 - Responsible and Accountable Resources
 - Verification and Measurement
 - Feedback Mechanism
 - Forms and Checklists
 - Training Resources

**SOE Element #1, Expectation #4
Community Awareness
Aera System Guide**

SCOPE AND OBJECTIVES:

INTENT OF ELEMENT 1 – Management provides the vision, sets the expectations, and provides the resources to implement and improve the system. Success can only be achieved if all employees are involved and committed.

EXPECTATION 1.4 – A process is in place to assess and address community awareness and concerns of our operations. The process should include responders, government officials, the media, businesses, citizens, and employees.

[Link to provide feedback on Element 1.4](#)

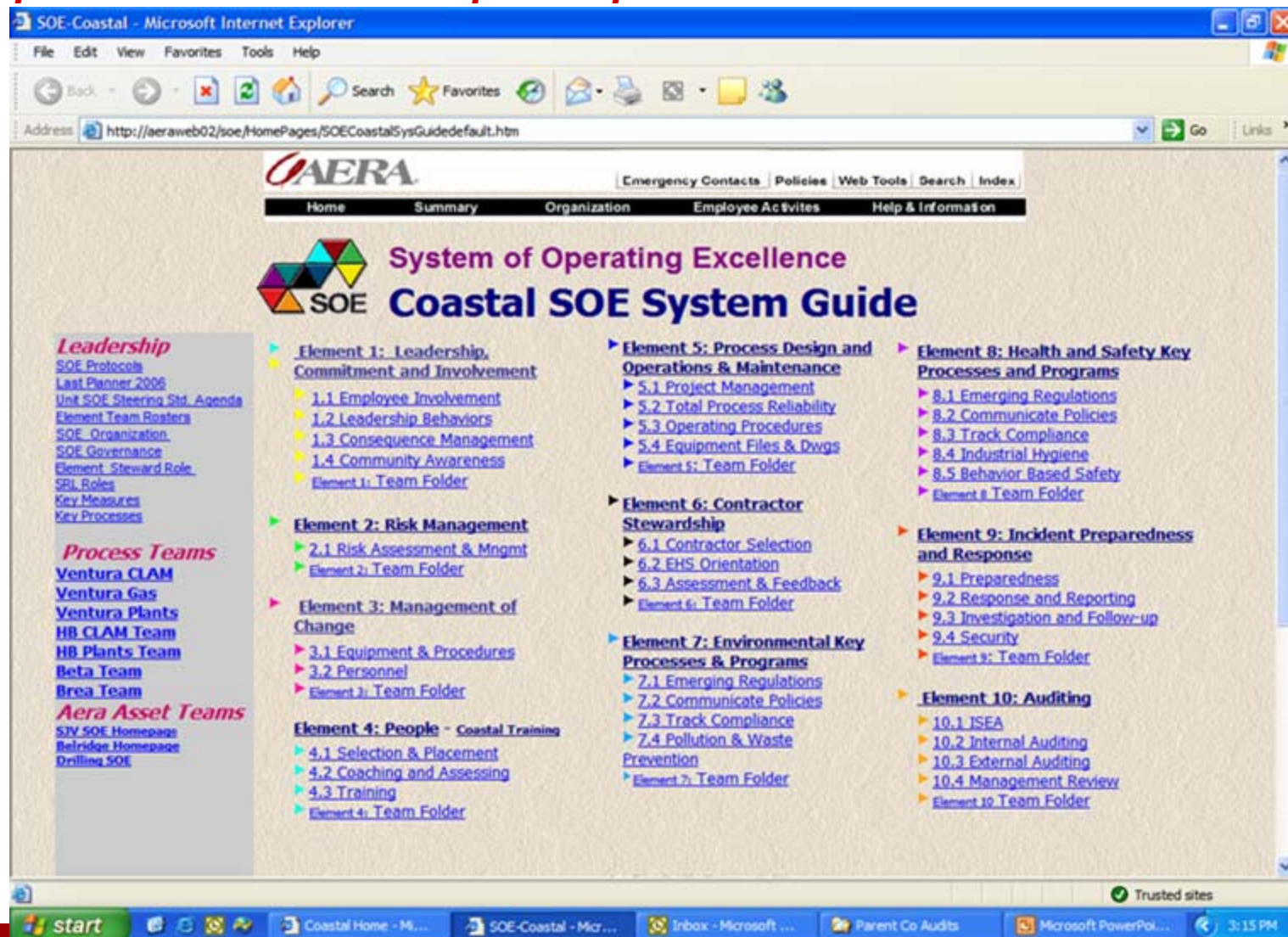
OBJECTIVES and ACTION ITEMS
[SOE Council Last Planner 2005](#)

PROCEDURES:
COMPANY POLICIES, PROGRAMS AND GUIDELINES

| Title | Describe the linkage to the SOE expectation | Location: LAN, files, etc. |
|---------------------|--|--|
| Overview of SOE 1.4 | Overview presentation | Overview of Element 1.4 |
| Media Policy | To ensure consistency in content and tone, Public Affairs serves as the primary spokesperson for the company and provides training to Leadership so that media spokespersons | Media Policy (See Public Affairs Director for Holding |

... and provide links to supporting material ...

Each Asset within Aera also has an SOE web page to document and provide links to Asset specific processes.



The screenshot shows a Microsoft Internet Explorer browser window titled "SOE-Coastal - Microsoft Internet Explorer". The address bar displays the URL: <http://aeraweb02/soe/HomePages/SOECostalSysGuidedefault.htm>. The website content includes the AERA logo, a navigation menu with links like "Home", "Summary", "Organization", "Employee Activities", and "Help & Information". The main heading is "System of Operating Excellence Coastal SOE System Guide". The page is organized into several sections:

- Leadership**
 - [SOE Protocols](#)
 - [Last Planner 2006](#)
 - [Unit SOE Steering Std. Agenda](#)
 - [Element Team Rosters](#)
 - [SOE Organization](#)
 - [SOE Governance](#)
 - [Element Steward Role](#)
 - [SRI Roles](#)
 - [Key Measures](#)
 - [Key Processes](#)
- Process Teams**
 - [Ventura CLAM](#)
 - [Ventura Gas](#)
 - [Ventura Plants](#)
 - [HB CLAM Team](#)
 - [HB Plants Team](#)
 - [Beta Team](#)
 - [Brea Team](#)
- Aera Asset Teams**
 - [SVI SOE Homepage](#)
 - [Belridge Homepage](#)
 - [Drilling SOE](#)
- Element 1: Leadership, Commitment and Involvement**
 - [1.1 Employee Involvement](#)
 - [1.2 Leadership Behaviors](#)
 - [1.3 Consequence Management](#)
 - [1.4 Community Awareness](#)
 - [Element 1: Team Folder](#)
- Element 2: Risk Management**
 - [2.1 Risk Assessment & Mngmt](#)
 - [Element 2: Team Folder](#)
- Element 3: Management of Change**
 - [3.1 Equipment & Procedures](#)
 - [3.2 Personnel](#)
 - [Element 3: Team Folder](#)
- Element 4: People - Coastal Training**
 - [4.1 Selection & Placement](#)
 - [4.2 Coaching and Assessing](#)
 - [4.3 Training](#)
 - [Element 4: Team Folder](#)
- Element 5: Process Design and Operations & Maintenance**
 - [5.1 Project Management](#)
 - [5.2 Total Process Reliability](#)
 - [5.3 Operating Procedures](#)
 - [5.4 Equipment Files & Dwgs](#)
 - [Element 5: Team Folder](#)
- Element 6: Contractor Stewardship**
 - [6.1 Contractor Selection](#)
 - [6.2 EHS Orientation](#)
 - [6.3 Assessment & Feedback](#)
 - [Element 6: Team Folder](#)
- Element 7: Environmental Key Processes & Programs**
 - [7.1 Emerging Regulations](#)
 - [7.2 Communicate Policies](#)
 - [7.3 Track Compliance](#)
 - [7.4 Pollution & Waste Prevention](#)
 - [Element 7: Team Folder](#)
- Element 8: Health and Safety Key Processes and Programs**
 - [8.1 Emerging Regulations](#)
 - [8.2 Communicate Policies](#)
 - [8.3 Track Compliance](#)
 - [8.4 Industrial Hygiene](#)
 - [8.5 Behavior Based Safety](#)
 - [Element 8: Team Folder](#)
- Element 9: Incident Preparedness and Response**
 - [9.1 Preparedness](#)
 - [9.2 Response and Reporting](#)
 - [9.3 Investigation and Follow-up](#)
 - [9.4 Security](#)
 - [Element 9: Team Folder](#)
- Element 10: Auditing**
 - [10.1 ISEA](#)
 - [10.2 Internal Auditing](#)
 - [10.3 External Auditing](#)
 - [10.4 Management Review](#)
 - [Element 10: Team Folder](#)

SOE Governance

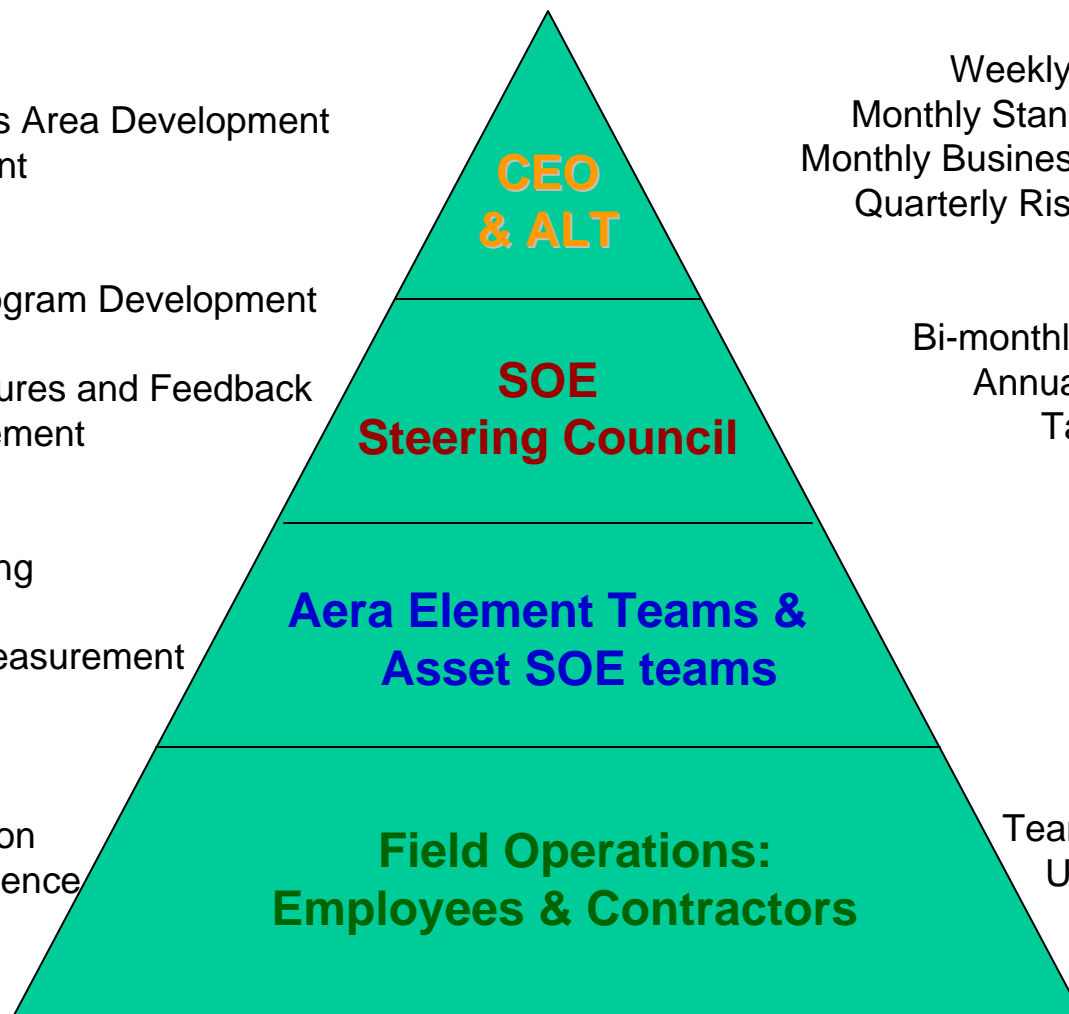
Roles and Responsibilities

Policy and Focus Area Development
Risk Management

Process and Program Development
Standardization
Corporate Measures and Feedback
Change Management

Business Planning
Implementation
Verification & Measurement
Feedback

Process Execution
Operating Excellence
Data Quality
Feedback



Feedback Mechanisms

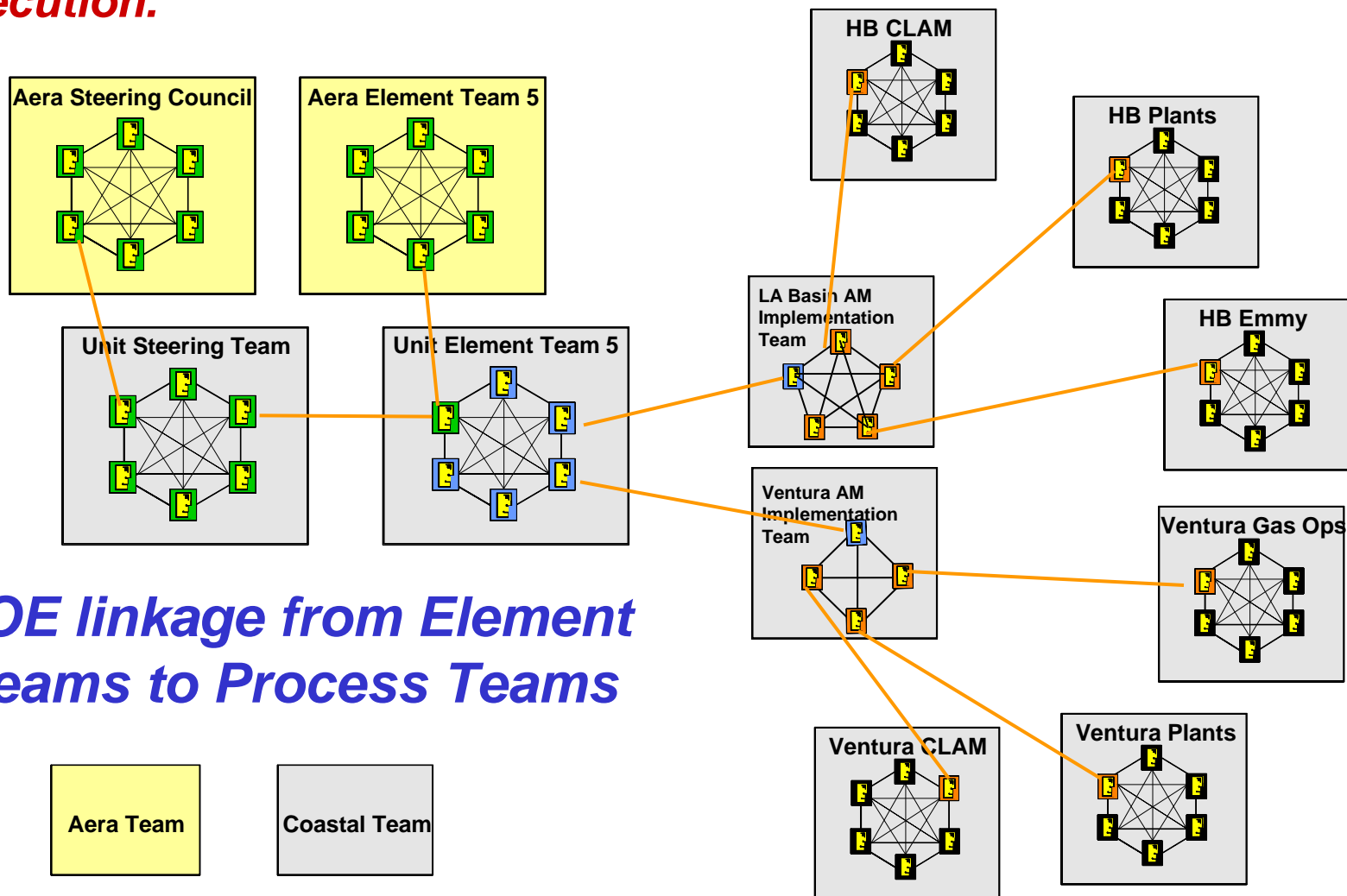
Weekly Incident Reporting
Monthly Standardized Measures
Monthly Business Plan Compliance
Quarterly Risk Mgmt Discussion

Bi-monthly Council Meetings
Annual Focus Area effort
Tactical Team status

SOE Last Planner
Monthly Reviews
Annual Plan Effort

Team Morning Meeting
Unit Steering Teams
Training

The SOE teams form a network that drives standardization and execution.





Morning Meeting Agenda - SOE Processes

Key SOE process review built into the Morning Meeting Agenda .

sch4

Safety Discussion/ Safety Manual Review

 Element 8

- Discuss pertinent safety subjects or review sections of the Aera safety manual.
- Pre-Job Work Plans? Energy Control?

Hazards/Near Hits/Incidents

 Element 8

- Review any new incidents, Near Hits or reported Hazards, including housekeeping issues, that the group needs to be aware of ?

MOC Review – Permanent or Temporary

 Element 3

- Review any new MOC that impacts the work team, including reviewing any temporary defeated safety devices.

Title V & Other Environmental Issues

 Element 7

- Review any planned activities that may have a conflict with the PTO or need regulatory clarification.

SOE Review

 Element 1

- Review an expectation from the SOE framework. Discuss how team members impact, influence, participate or are affected by a particular expectation. Identify gaps and plans to fill gaps.

Today's Work Schedule

 Element 5

- Review work planned for today (Aera employees and contractors). Discuss potential hazards associated with work.

Restricted Access

 Element 6

- Site Orientations needed? Transient Workers?

CAPP/Planned Observations

 Element 8

- Discuss CAPP metrics and planned activities that should be observed.

RCFA Review of Root Cause & Follow-up

 Element 9

- Following incident investigations, review the approved Executive Summary including CAP's

ISEA

 Element 10

- Discuss ISEA metrics and planned activities that could be audited.

Training (weekly)

 Element 4

- Worker Qualification, Adaptability Matrix progress?
- Training this week? Upcoming backfill requirements?

Risk Management

 Element 2

- Are there any new or unresolved operational risks that need to be elevated?

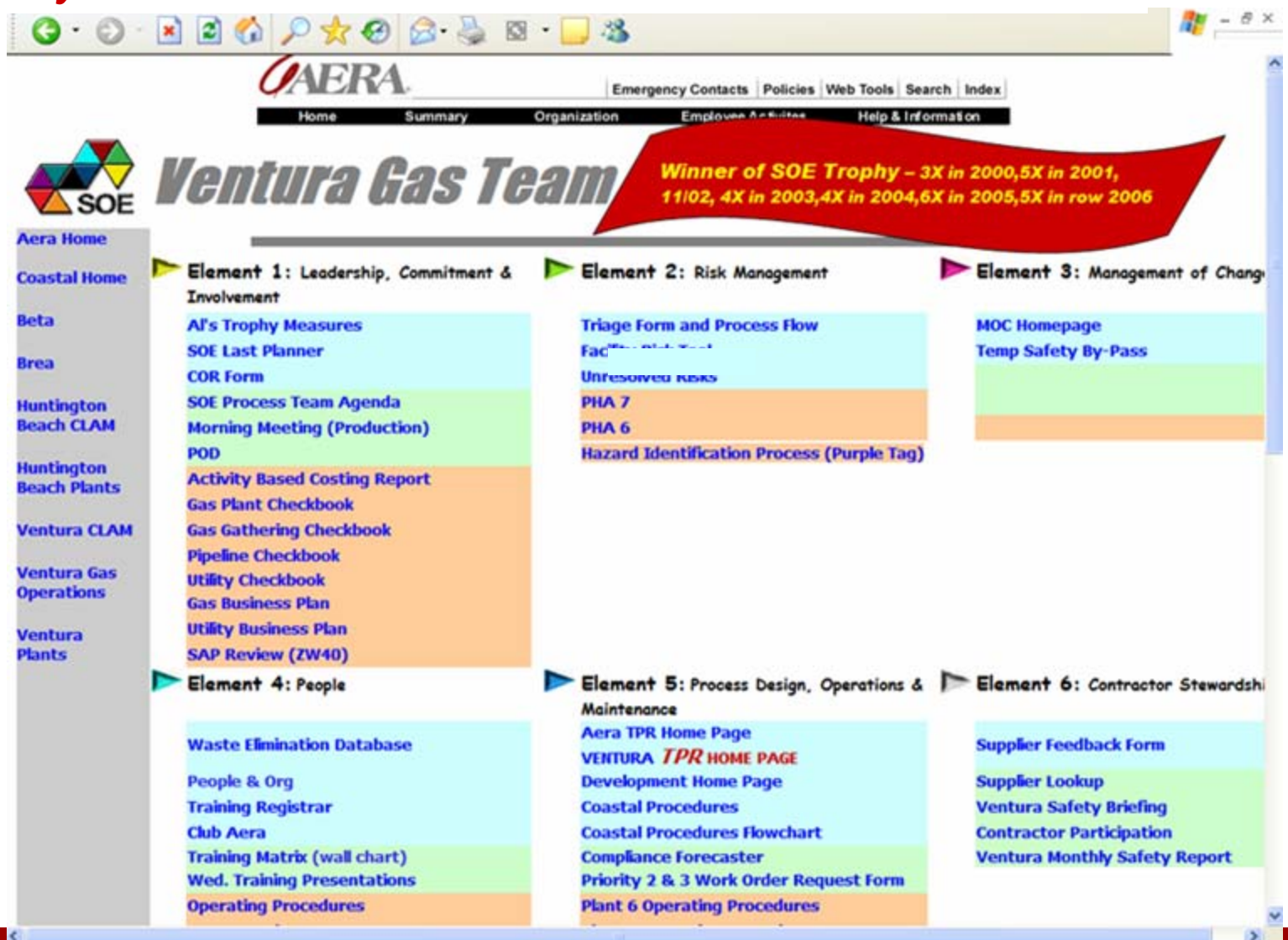
Slide 19

sch4

Insert "is" to be consistent with syntax of other lead sentences: Key SOE processes review is built..."

sh841992, 07/17/2008

Each team has its own SOE web page for easy access to commonly used information.



The screenshot shows a web browser window displaying the Ventura Gas Team SOE web page. The page features a navigation bar with links: Home, Summary, Organization, Employee & Families, and Help & Information. A red banner at the top right reads: "Winner of SOE Trophy - 3X in 2000, 5X in 2001, 11/02, 4X in 2003, 4X in 2004, 6X in 2005, 5X in row 2006". The main content area is organized into six elements:

- Element 1: Leadership, Commitment & Involvement**
 - AI's Trophy Measures
 - SOE Last Planner
 - COR Form
 - SOE Process Team Agenda
 - Morning Meeting (Production)
 - POD
 - Activity Based Costing Report
 - Gas Plant Checkbook
 - Gas Gathering Checkbook
 - Pipeline Checkbook
 - Utility Checkbook
 - Gas Business Plan
 - Utility Business Plan
 - SAP Review (ZW40)
- Element 2: Risk Management**
 - Triage Form and Process Flow
 - Facility Risk Assessment
 - Unresolved risks
 - PHA 7
 - PHA 6
 - Hazard Identification Process (Purple Tag)
- Element 3: Management of Change**
 - MOC Homepage
 - Temp Safety By-Pass
- Element 4: People**
 - Waste Elimination Database
 - People & Org
 - Training Registrar
 - Club Aera
 - Training Matrix (wall chart)
 - Wed. Training Presentations
 - Operating Procedures
- Element 5: Process Design, Operations & Maintenance**
 - Aera TPR Home Page
 - VENTURA TPR HOME PAGE
 - Development Home Page
 - Coastal Procedures
 - Coastal Procedures Flowchart
 - Compliance Forecaster
 - Priority 2 & 3 Work Order Request Form
 - Plant 6 Operating Procedures
- Element 6: Contractor Stewardship**
 - Supplier Feedback Form
 - Supplier Lookup
 - Ventura Safety Briefing
 - Contractor Participation
 - Ventura Monthly Safety Report

A sidebar on the left lists navigation links: Aera Home, Coastal Home, Beta, Brea, Huntington Beach CLAM, Huntington Beach Plants, Ventura CLAM, Ventura Gas Operations, and Ventura Plants.

SOE Business Plans developed to ID and prioritize gaps and focus resources.

Milestones/Month

Instructions: Code those Actions completed in **Green**, Leave incomplete Actions in **Red** but do not change due date.

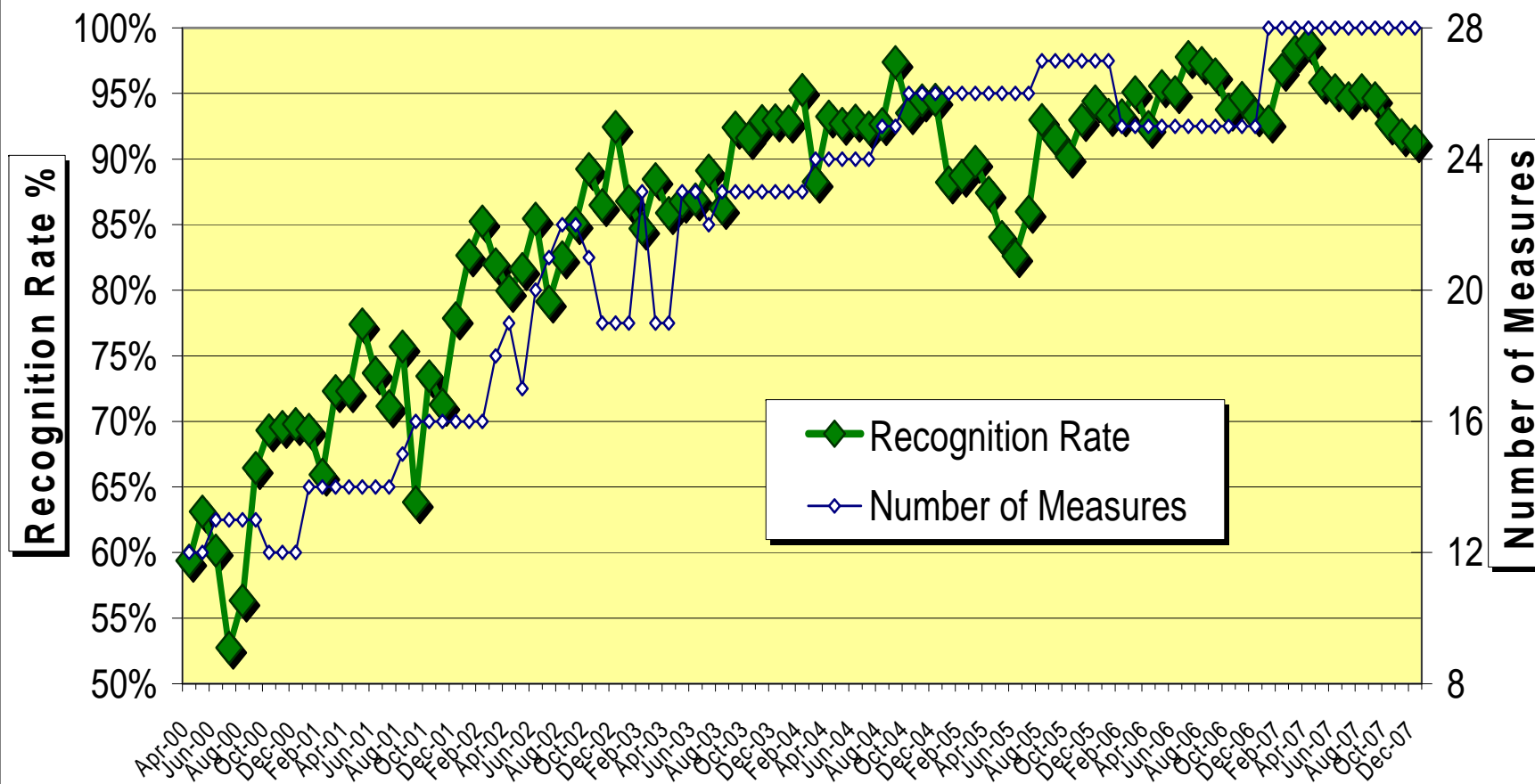
Element JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Legend: **Green** = Done, **Red** = Not Done, **Black** = Due Date TBD

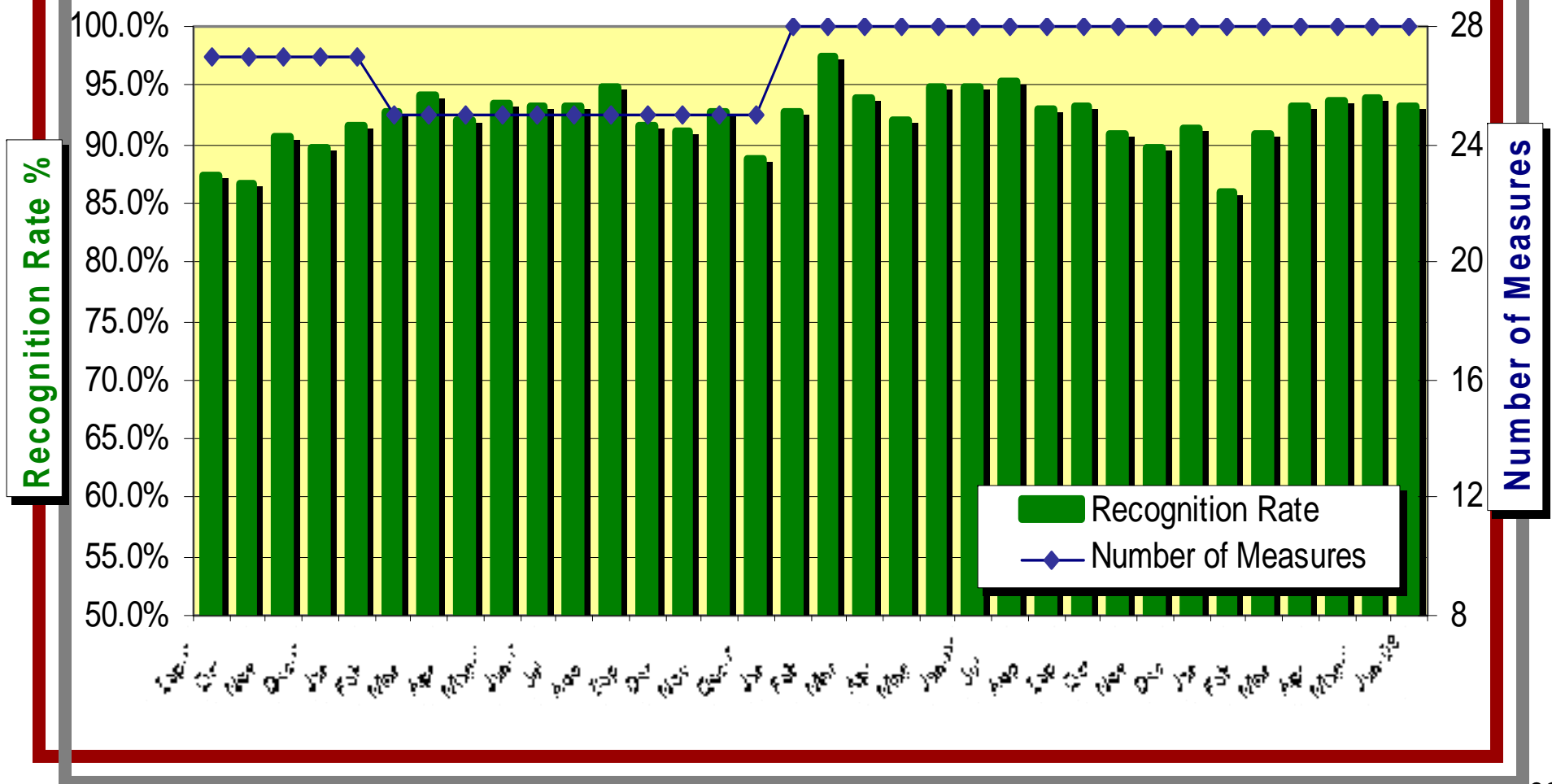
| | | | | | | | | | | | |
|---|--|--|--|--|--|---|--|--|---|---|--|
| 1 | Increase the amount of time Supervisors and Specialists spend in the field | | | | | | | | | | |
| | | | | Work with Lean Group to "load level" Ventura CLAM Supervisor and Specialist time | | | Begin tracking Supervisor and Specialist time in the field | | | | |
| | Load Level HB CLAM and/or Ventura Plants Team | | | | | | | | | | |
| | | | | | | | | Conduct "load leveling" effort for Process Team | | | |
| | | | | | | | Provide refresher training for Process Teams on Elements 1&2 | Provide refresher training for Process Teams on Elements 3&4 | Provide refresher training for Process Teams on Elements 5&6 | Provide refresher training for Process Teams on Elements 7&8 | Provide refresher training for Process Teams on Elements 9&10 |
| 2 | | | | Complete HB Tank Farm PHA | | | | Complete Emmy PHA | Plan PHA expansion at SOE2 team meeting | | Provide training for PHA facilitation (move to 1Q2006) |
| | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 4 | 4.1 | | | Complete merging of 3 Asset 4.1 System Guides | | | | | Ensure completion of MEDIUM audit action item on 100% MEST attendance | Ensure completion of MEDIUM audit action item on 4.1 WorkerQual expansion | Close gap on 4.3 MEDIUM audit item for local training |
| | 4.2 | | | | | Complete merging of 3 Asset 4.2 System Guides | | | | | |
| | 4.3 | | | | | Complete merging of 3 Asset 4.3 System Guides | | Identify SAP WQ clean-up needed by process teams | | | "Mature" on SAP WQ data clean-up items |
| | Misc | | | | | | | | | Standardize ET4 WQ metric for inclusion in Aera wide SG | Decide/assign "essential" requirements to SAP WQ (Aera effort sched for 2006?) |
| | | | | | | | | | | | |

Key metrics are tracked for each SOE Element and Process Teams are recognized for meeting goals.

Monthly Operating Excellence Recognition Process Team Average Recognition Rate



Monthly Operating Excellence Recognition Process Team Average Recognition Rate



2000 Recognition Metrics

Element 5

1. PM Compliance Total Equipment – over 90%
2. PM Compliance Critical Equipment – over 95%
3. PM/(PM+CM) ratio Total Equipment – over 35%
4. PM/(PM+CM) ratio Critical Equipment – over 35%
5. Front Line Maintenance over 20%

Element 7

6. PM Compliance Environmental – over 95%

Element 8

7. CAPP Coverage 1X observation - 90% coverage
8. CAPP Coverage 2X observation - 60% coverage
9. CAPP PIP's vs. Target 100%
10. PM Compliance Safety – over 95%

Element 10

11. ISEA Observations 100% of goal
12. ISEA YTD % Follow Ups completed over 50%

SOE processes have grown and matured over time.

2008 Recognition Metrics

Element 1 - Leadership, Involvement and Commitment

1. # of Certificates of Recognition awarded - goal is at least 2* proactive COR's awarded by each process team to one of the team members

Element 2 - Risk Management

2. Process Hazard Analysis Corrective Action Compliance - goal 100% by the due date

Element 3 - Management of Change

3. Business closed orders requiring MOC with a user status of MOCC - at least 90% (YTD beginning 11/02)

Element 4 - People Process

4. Work Improvement Team actions implemented - goal is that action(s) are taken each month to positively impact Safety or Environmental Performance and Production or Expenses
5. Worker Qualification Progress

Element 5 - Facility Design and Operation

6. PM Compliance - Total Equipment - over 90%
7. PM Compliance - Critical Equipment - goal is 100%
8. PM/(PM+CM) ratio - Total Equipment over 30%
9. Proactive to Reactive Maintenance over 65%
10. CBM CAP's completed on time

Element 6 - Contractor Stewardship

11. Feedback submitted on Contractor Performance - goal is one feedback form a month
12. Contractor Recordable Injury – goal is 0

Element 7 - Environmental Key Processes and Programs

13. PM Compliance - Environmental – 100%
14. Reportable Spills – goal is 0
15. Deviation without Breakdown Relief

Element 8 - Health and Safety Key Processes and Programs

16. CAPP 1X Coverage - > 90% coverage
17. CAPP 2X Coverage - > 70% coverage
18. CAPP PIP's vs. Target 100%
19. CAPP Coaching Contacts - 2X coverage at least 90%
20. PM Compliance - Safety - 100%
21. Employee Recordable Injury – goal is 0

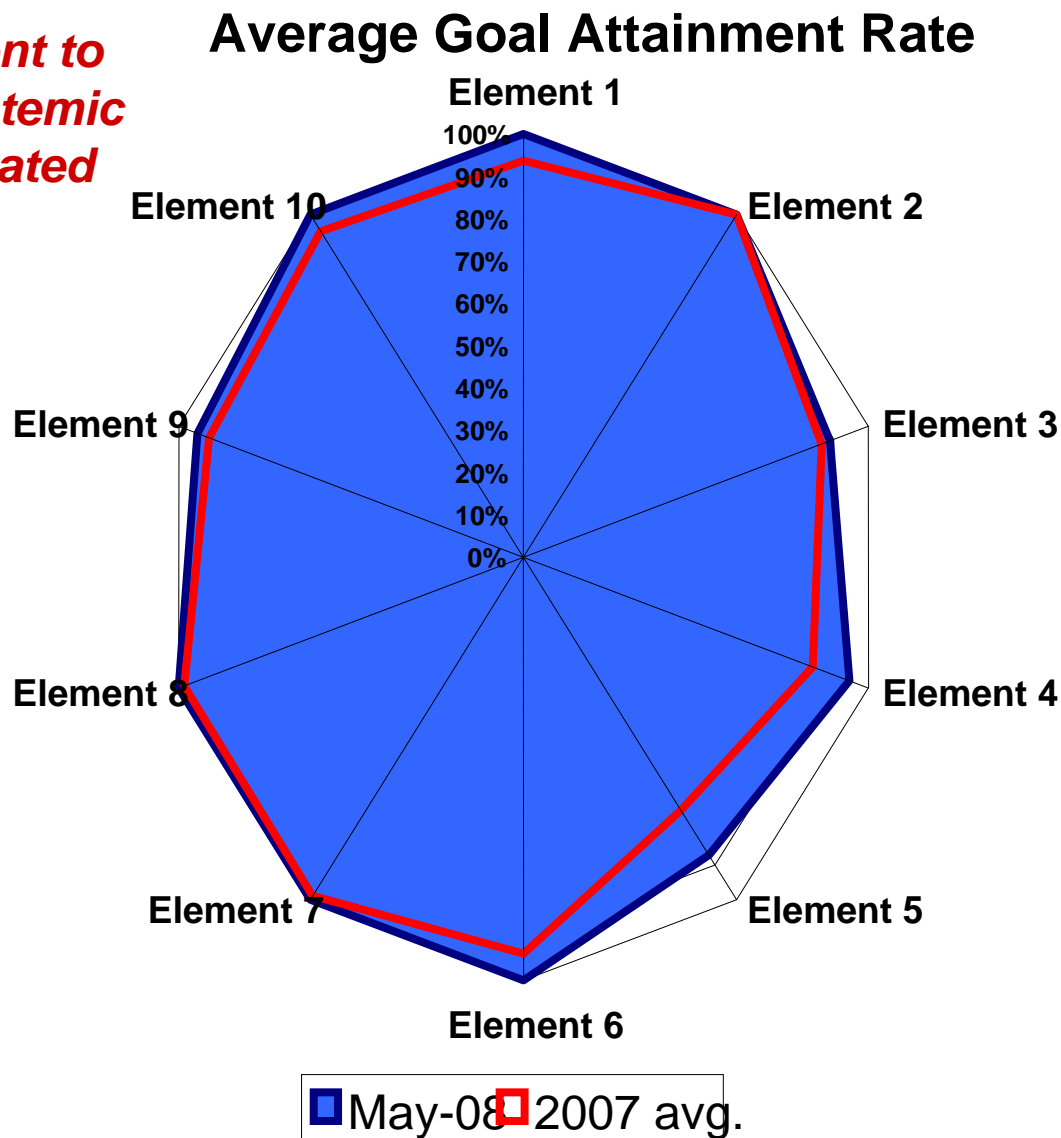
Element 9 - Incident Preparedness, Response and Follow-up

22. EHS RCFA Compliance - Goal is 100% completed within 30 days
23. Equipment Reliability RCFA compliance – must make progress towards annual goal
24. RCFA Corrective Action Plan Completion - Goal is to complete all by due date
25. PIPER Reviews and ER Drills – one per month

Element 10 - Audits

26. ISEA Audits 100% of goal
27. ISEA Follow Ups completed over 70% (12 month rolling average)
28. Level III Audit CAP's completed on time

Results are also shown by Element to help identify systemic gaps and associated improvement opportunities.



Each SOE expectation is periodically audited.

PROCESS STATUS

- ☐ The process is mature, having undergone at least one feedback, review, and improvement cycle.
- ☐ Revisions to process documentation have been made, if required

- ☐ The process is deployed in the organization
- ☐ Procedures for key process tasks, based on risk, are documented.
- ☐ Ongoing verification and measurement occurs

- ☐ The five characteristics of the management system processes are documented, approved, and resourced
- ☐ Procedures for key process tasks, based on risk, have been identified and are under development.
- ☐ Deployment is underway

- ☐ A documented process is being developed to address the potential hazards of the operation and to improve performance

Level 4

Level 3

Level 2

Level 1

PROCESS EFFECTIVENESS

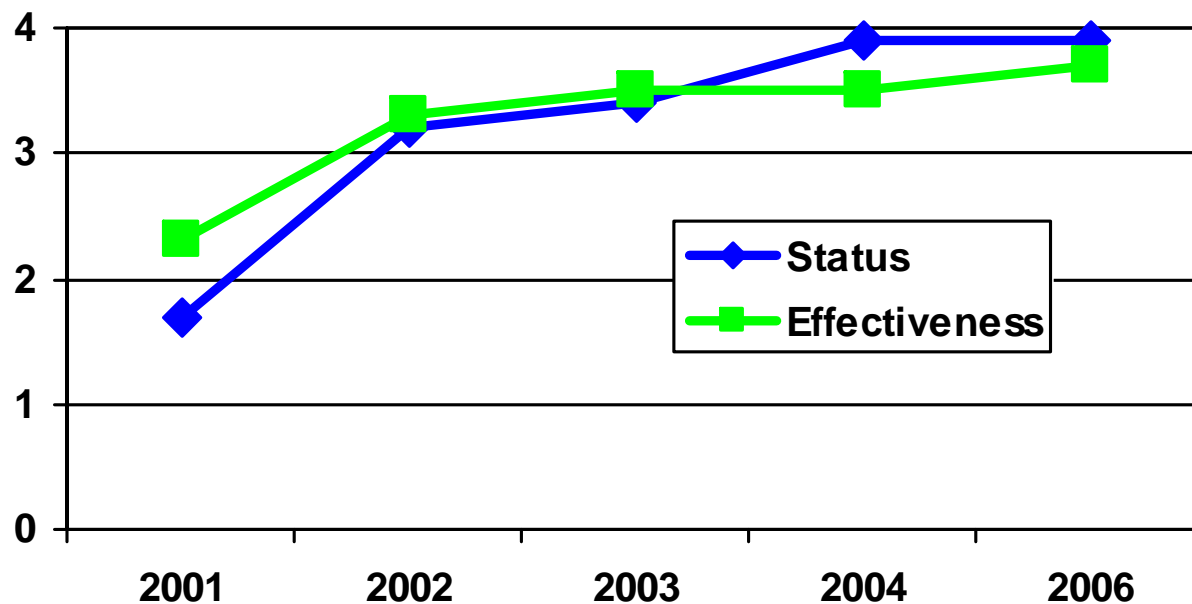
- ☐ The quality of process execution is excellent
- ☐ Execution of the process conforms to essentially all process requirements
- ☐ Essentially all process objectives are being achieved

- ☐ Execution of the process conforms to the important requirements and most other requirements
- ☐ The quality of process execution is good
- ☐ Most process objectives are being achieved

- ☐ Execution of the process conforms to the important process requirements.
- ☐ The quality of process execution is acceptable
- ☐ A majority of process objectives are being achieved

- ☐ Execution of the process does not always conform to the process requirements
- ☐ The quality of process execution needs improvement
- ☐ Some process objectives are achieved

Audit results have improved over time.



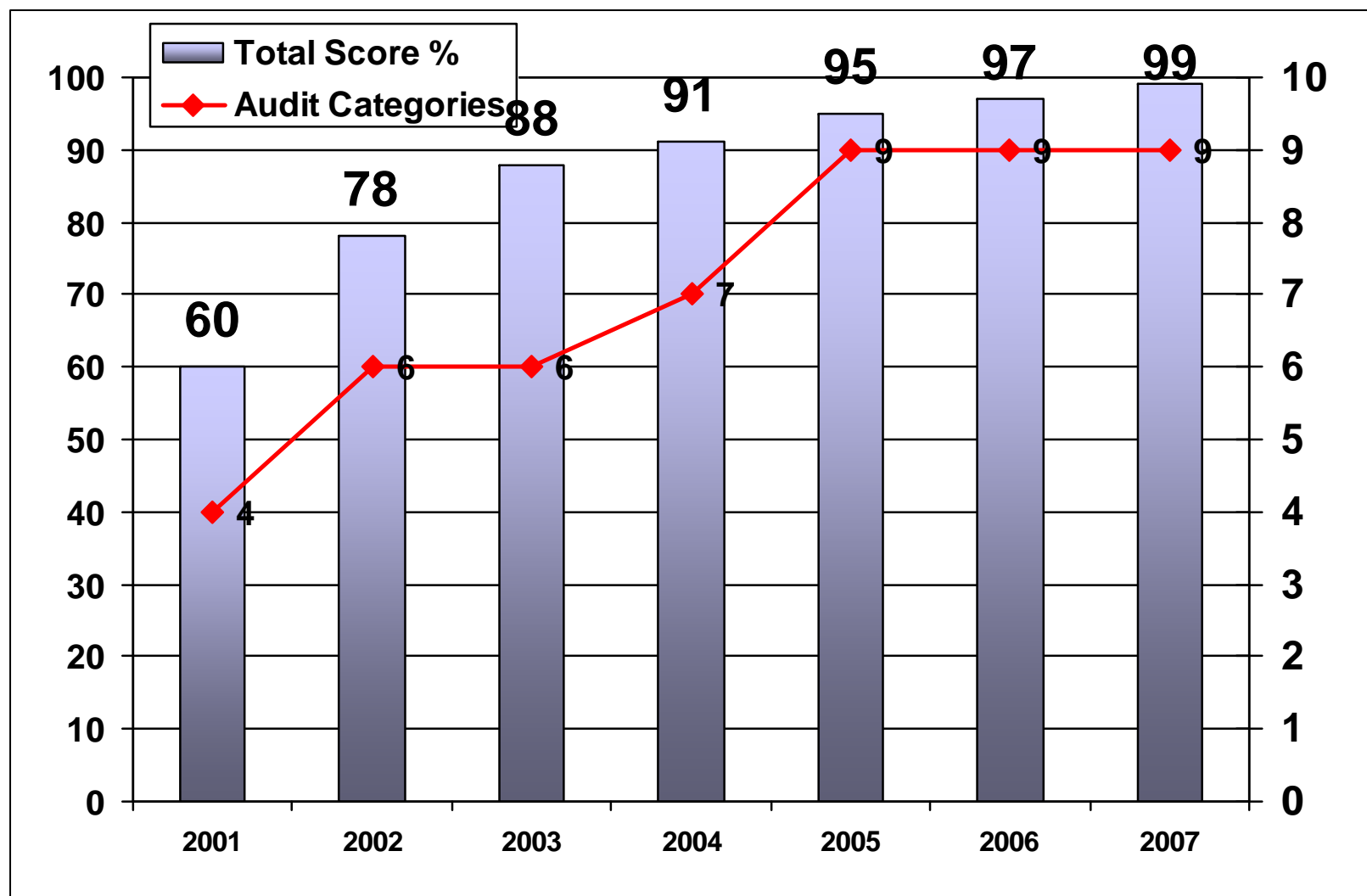
| <u>Location</u> | <u>Number of Deficiencies</u> | <u>Audit Scores</u> | |
|-----------------------------------|-------------------------------|---------------------|----------------------|
| | | <u>Status</u> | <u>Effectiveness</u> |
| 2001: Initial SOE Audit - Coastal | 0 | 1.7 | 2.3 |
| 2002: Midway Sunset | 0 | 3.3 | 3.2 |
| 2003: Belridge | 0 | 3.5 | 3.4 |
| 2004: Coastal | 0 | 3.5 | 3.9 |
| 2006: Aera-Wide | 0 | 3.7 | 3.9 |

SOE has contributed to a significant improvement in EHS performance.

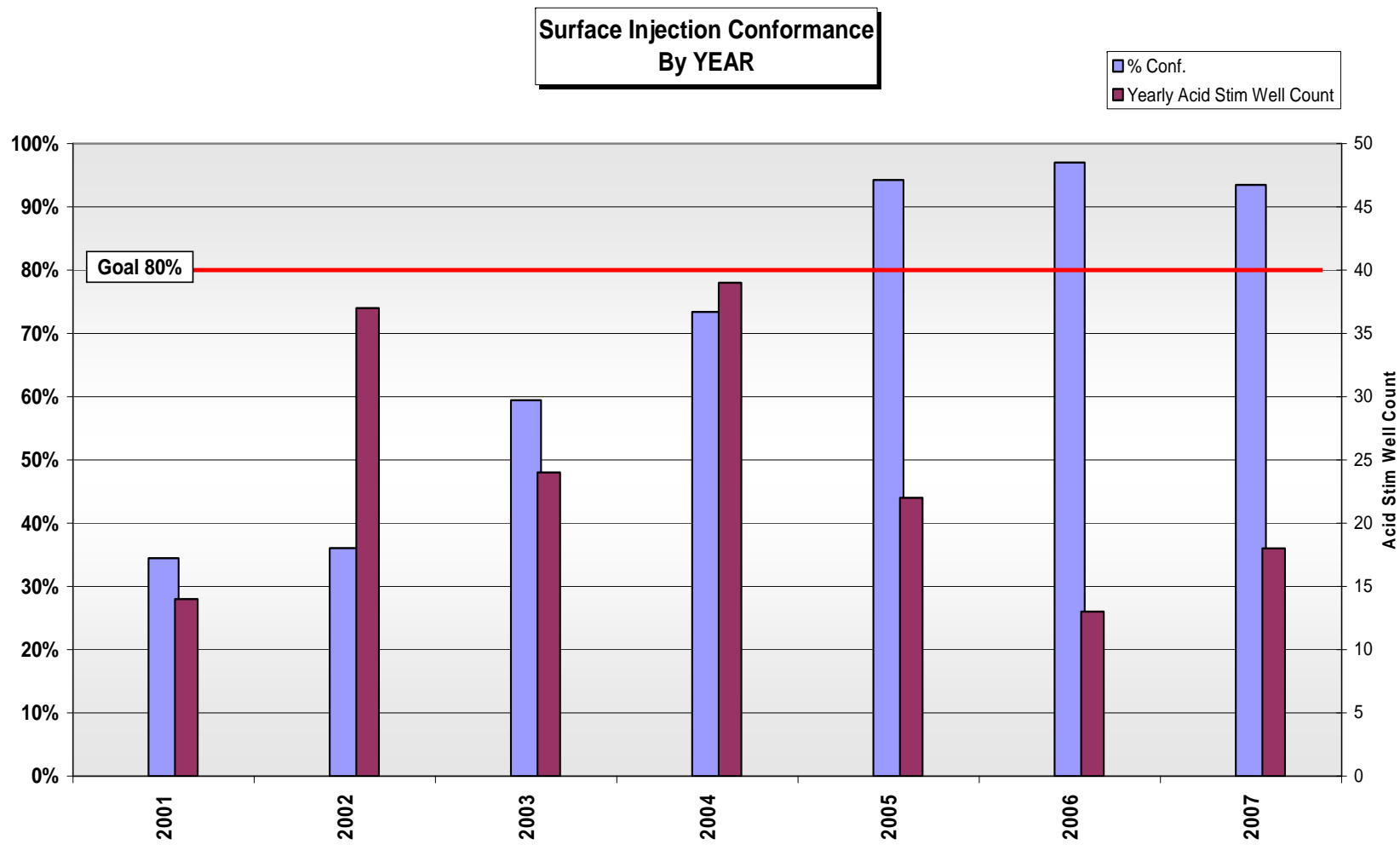
Huntington Beach Key EHS Performance Indicators

| | <u>2000</u> | <u>2008</u> |
|-----------------------|-------------|-------------|
| • Oil Spills | 12 | 2 |
| • Recordable Injuries | 5 | 0 |
| • Lost Time Injuries | 0 | 0 |
| • Nov's | 1 | 0 |
| • Breakdowns (AQMD) | 8 | 1 |
| • EHS PM Compliance | 60% | 100% |

TPR Audit – Combined Level I, II & III Scores



***Surface Injection Conformance maintaining high level of performance
(wells within 10% of target injection rate)***



**SOE expectations
support Aera's
Vision.**

Vision

Inspired People of Common Purpose

We all engage with excitement in Aera's purpose, vision and values.
We are an inclusive organization.
We encourage individuals to pursue their desired balance between work and personal life.
We are fulfilled through Aera's success, team results, and individual development.
We value learning and leverage it through diversity and education.
We all have a strong sense of ownership in Aera's results.

Protecting People and Environment

We pursue an accident free environment through leadership in safety process innovation and performance.
We all behave in a manner that clearly demonstrates commitment to safety.
We promote and practice environmental responsibility.
Environmental requirements are not viewed as obstacles but cause innovations in process management.
We participate in shaping public policy.

Unsurpassed Value Creation

Value Creation is validated as unbeatable.
We increase Aera's value.
Aera people create value through increased skills and capacity to act.

World Class Process Performance

Innovative ideas and technology are promoted, tracked and implemented with breakthrough speed.
We value and use data and information management as a competitive advantage.
Core processes are identified, broadly understood, implemented, measured, improved and renewed.
Systems thinking is learned and practiced.
We are driven by internal and external customer focus.

Renowned and Respected for Excellence

Aera is admired and respected for business results, employee satisfaction and support to the community.
We are the company of choice for employees, customers, suppliers and investors.
Aera earns significant external awards and recognition.
Other companies visit Aera for best practices.

Respected Community Member

Communities welcome Aera's presence.
Aera and the community are partners in solving problems.
Aera and its employees are known for their community involvement.
Employee participation in the community is encouraged, supported and recognized.