

Chevron Pipe Line Co.

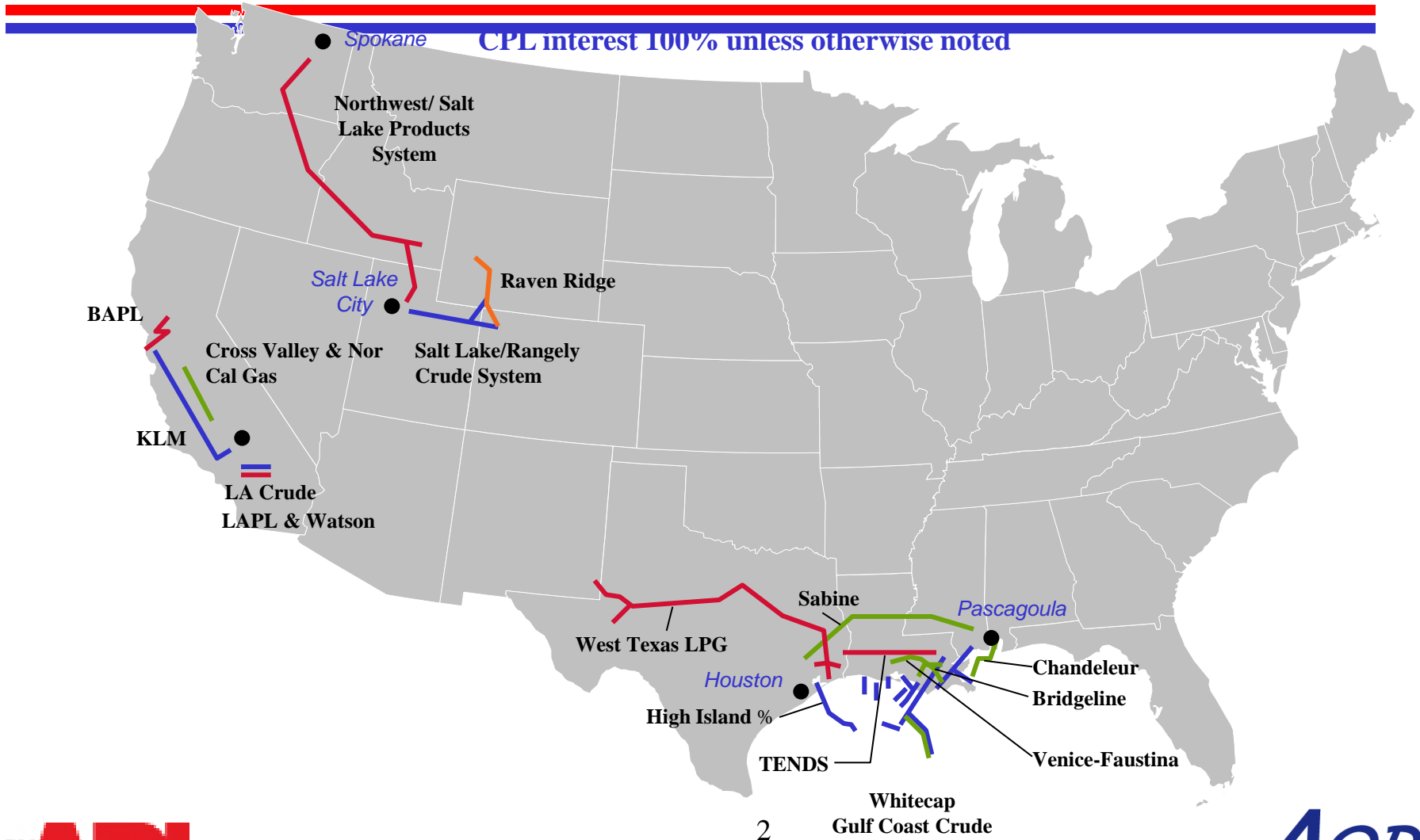
Disaster Recovery Lessons Learned

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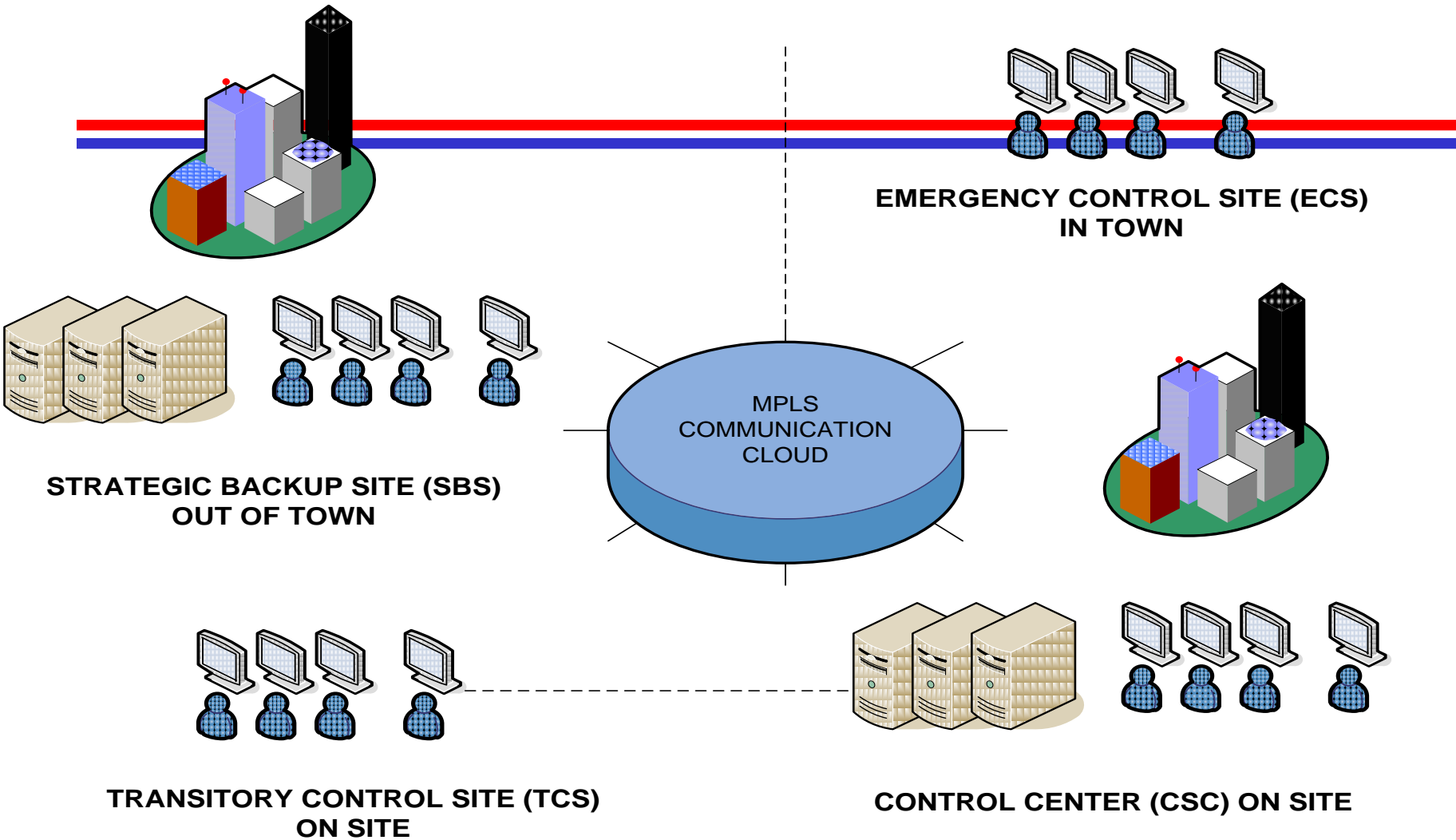
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CPL - Operated Systems

— Crude Oil
 — Natural Gas
 — Products (including LPG)
 — Carbon Dioxide



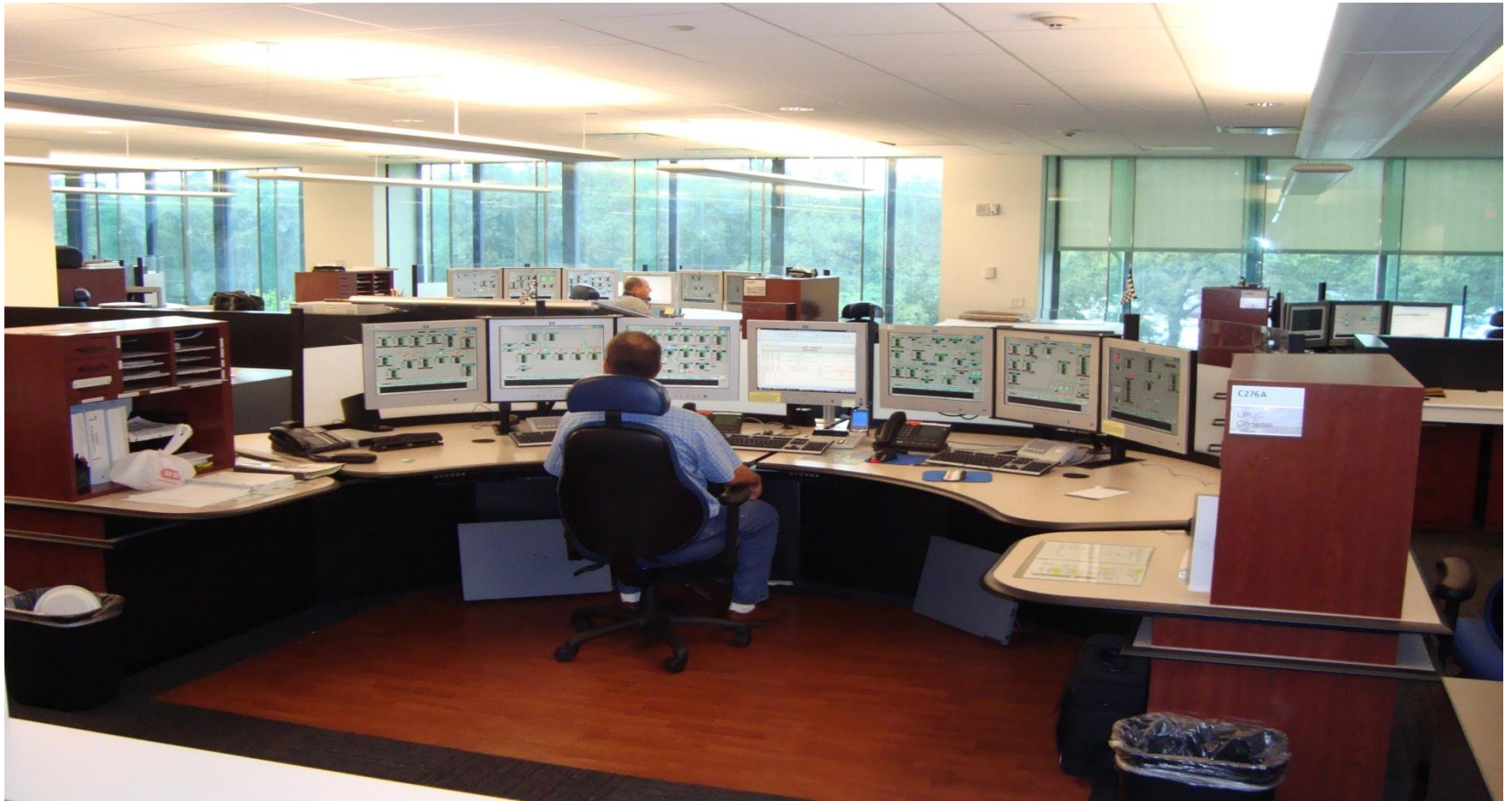
CHEVRON PIPE LINE COMPANY BUSINESS CONTINUITY PLANNING CONTROL CENTER STRATEGY



CHEVRON PIPE LINE CONTROL CENTER

- 9 consoles during day shift
- 8 consoles during night shift (reduced workload)
- 17 Controllers “on duty” day/night at all times
- Minimum of 17 “off duty” Controllers required for deployment
- 34 Controllers needed to staff primary and back up sites
- 54 Qualified Controllers on staff

PRIMARY CONTROL CENTER



STRATEGIC BACK UP SITE



Creating the Plan

- One person (choose your best bulldog!) was responsible to ensure detailed procedures were created by all work groups for entire company.
 - Each work group maintains a designated Business Continuity Plan link pin who revises plan as needed.
 - Procedures were revised with lessons learned after each test of the plan.
 - Annual meeting to review plan for accuracy
- Extra time well spent identifying threats and weaknesses of our control center and STAFF which greatly paid off on “D-Day”
 - Back up site in company building to ensure “like for like” support resources.
 - Plan for single parent issues, those providing elderly care, fear of flying, etc which greatly aided in efficient planning.
- Multiple layers of support staff....especially Controllers!
 - Strike Team A - for initial deployment to back up site
 - Strike Team B – back up for Strike Team A
 - Stand by teams C & D – Primary site staff and back up site relief as needed

Testing the Plan

“Everything should work?”

- Go ahead with deployment tests whenever a reason arises...it's money worth spending!
 - Building power issues, server upgrades, construction work etc.
- Hold to your testing schedules to truly identify weaknesses in your plan. “Were not ready” should raise a flag!
- Don't over plan the test as you will cover up deficiencies.

Deployments

Summer 2005 - Hurricane Rita - Identified how unprepared we were.

- Fall 2005 – Company initiated comprehensive Business Continuity Plan
- 2006 & 2007 - Deployment tests out of town
- 2007 – Humberto – Emergency deployment out of town 2 days in advance of storm
- 2008 – 3 deployments for hurricanes
 - EDOUARD - 36 hrs: Emergency deployment out of town, operating strategic site 12 hrs from decision to deploy, many logistical problems with people, PC problems.
 - GUSTAV 3.5 days: out of town deployment 3 days in advance of hurricane, no logistical issues, phone problems, no SCADA issues.
 - IKE 10 days: out of town deployment 3 days in advance of hurricane, complex logistical issues that were all managed well.
- 4 deployments to “in town” Emergency Control Site for Building and SCADA server maintenance.

Lessons Learned

- **It's a plan and it will change!**
 - One source communication to announce deployment plan and point contact and decision maker at each site.
 - Unmanaged communication will cause confusion and frustration
 - Nail down the deployment time ASAP and set a trigger date/time that deployment may be cancelled.
 - Strike Team A was not 100% available every time (currently working, vacations, health, special assignments etc.)
 - Let staff make their own travel itinerary.
 - People quickly become critical! Disaster's and family emergencies will occur frequent and surely divert employee's focus from business continuity success.
 - Many folks desire to "help" which can create confusion if not managed well.

Lessons learned cont....

- Use of one spreadsheet to keep track of work schedules, travel itineraries and action items.
- Expect the unexpected:
 - Organizational transitions forced inexperienced staff
 - Damage to employees properties created short term shortage of staff
 - Equipment and work processes that “worked last time” failed the next. Just because you did not need the resource last time don’t make the mistake of leaving it behind.
 - Have multiple layers of back up for human resources....especially Controllers.
 - Travel plans never happen per the plan – flight delays, weather, car problems.

Q u e s t i o n s ?