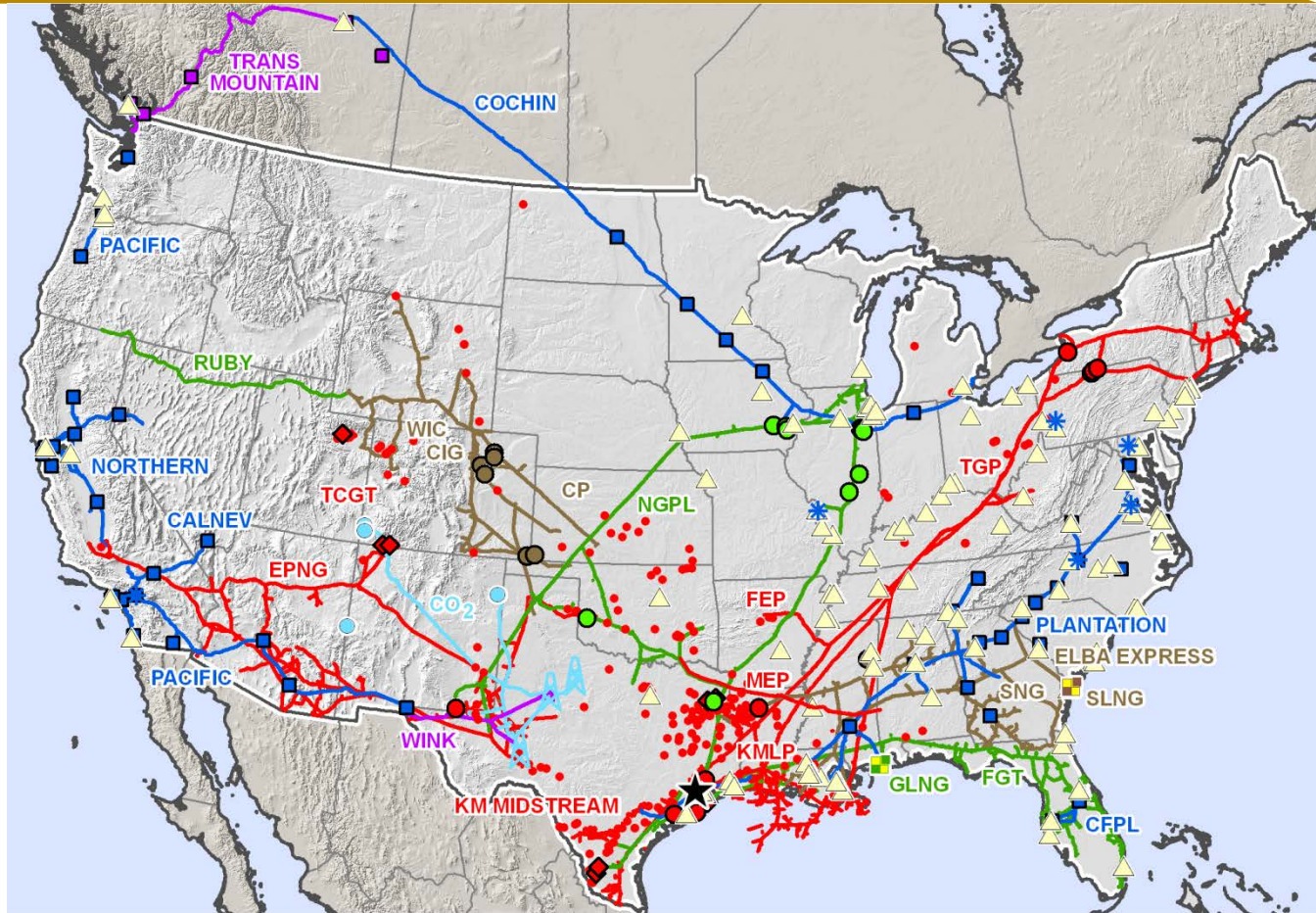# KINDER MORGAN

KM – Operations Management System

Ron McClain – Products Pipelines

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Unparalleled Asset Footprint

- **3rd largest energy company in North America with combined enterprise value of approximately $100 billion [a]**
- **Largest natural gas network in U.S.**
  - Own an interest in / operate approximately 62,000 miles of natural gas pipeline
  - Connected to every important U.S. natural gas resource play, including: Eagle Ford, Marcellus, Utica, Uinta, Haynesville, Fayetteville and Barnett
- **Largest independent transporter of petroleum products in U.S.**
  - Transport ~1.9 MMBbl/d [b]
- **Largest transporter of CO_2 in U.S.**
  - Transport ~1.3 Bcf/d of CO_2 [b]
- **2nd largest oil producer in Texas**
  - Produce ~55 MBbl/d of crude oil gross (~37 MBbl/d net) [b]
- **Largest independent terminal operator in U.S.**
  - Own an interest in or operate ~180 liquids / dry bulk terminals
  - ~112 MMBbls domestic liquids capacity
  - Handle ~106 MMtons of dry bulk products [b]
- **Only Oilsands pipe serving West Coast**
  - TMPL transports ~300 MBbl/d to Vancouver / Washington State; expansion under way increasing capacity to 890 MBbl/d

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(a) Combined enterprise of KMI, KMP & EPB as of 1/18/2013; see footnotes on slide 9 for further information.

(b) 2013 budgeted volumes.

Legend	
—— KMP GAS PIPELINES	—— EPB GAS PIPELINES
● KMP GAS STORAGE	● EPB GAS STORAGE
◆ KMP GAS PROCESSING	▪ EPB LNG TERMINALS
• KMP GAS TREATERS	—— KMI GAS PIPELINES
● KMI GAS STORAGE	▪ KMI LNG TERMINALS
△ KMP TERMINALS	—— KMP PRODUCTS PIPELINES
▪ KMP PRODUCTS PIPELINES TERMINALS	✳ KMP TRANSMIX FACILITIES
—— KMP PETROLEUM PIPELINES	▪ KMP PETROLEUM PIPELINES TERMINALS
—— KMP CO2 PIPELINES	● KMP CO2 SOURCE FIELDS
▲ KMP CO2 OIL FIELDS	★ KM HEADQUARTERS

2

KM's Efforts Toward Pipeline Safety Management – Operations Management System

KINDER MORGAN

The Kinder Morgan OMS Document isn't necessarily flashy.

It gets right to the point with Objectives followed with Operations Goals.

Within the goals, external stakeholders are explicitly identified.

OPERATIONS MANAGEMENT SYSTEM

1.0   OBJECTIVES, POLICIES, AND APPROACH

1.1   Objectives of the OMS The objectives of the OMS are to:

    1.1.1   Integrate Operations, Engineering, Maintenance, EHS, asset integrity, efficiency, quality and expansion objectives into a single management system.

    1.1.2   Achieve an appropriate level of consistency across Kinder Morgan business units.

    1.1.3   Consolidate, clarify, simplify and communicate the required actions and behaviors of each employee and organization.

    1.1.4   Increase confidence that each of Kinder Morgan's operations are consistent with Kinder Morgan standards and in compliance with applicable laws, regulations and permit requirements.

    1.1.5   Foster a culture of excellence and continuous improvement in operations performance through a regular process of goal setting, action, assessment, and management review.

1.2   Kinder Morgan Operations Goals The goals of Kinder Morgan's operations are:

    1.2.1   Risk Reduction Kinder Morgan strives for

        (a) safe, reliable, secure, and environmentally sound operations

        (b) comprehensive and effective risk management programs for high consequence assets and operations

        (c) effective handling of emergencies and other disruptions to operations

        (d) open and productive relationships with regulators and the public.

3

KM's Efforts Toward Pipeline Safety Management – Operations Management System

Roles and Responsibilities are defined . . .

Acting with intentionality means scheduling reviews at all levels to do what is important, not what seems to be urgent.

Responsibilities for all employees and departments are defined including the expectation that any employee will shut down operations if not safe or compliant.

2.0   ROLES AND RESPONSIBILITIES

2.1   Office of the Chairman The responsibilities of the office of the Chairman of Kinder Morgan shall be as follows:

2.1.1   Evaluate recommended changes to this OMS

2.1.2   Incorporate Operations Goal setting and review of operations performance into the annual, quarterly, monthly and weekly reviews of each business unit

2.1.3   Allocate resources in the annual budget process (or on an interim basis as presented) sufficient for safe, environmentally sound, reliable and efficient operations

2.1.4   Incorporate operations performance into the performance review and incentive compensation process.

2.2   Business Unit Management The responsibilities of Business Unit Management for each Kinder Morgan business unit shall be as follows:

2.2.1   Develop and implement the policies, procedures, systems, training and assessments to achieve the Kinder Morgan operations goals for the Business Unit's assets and operations

2.2.2   Incorporate Operations Goal setting and review of operations performance into the management processes of the Business Unit.

2.2.3   Identify, seek and allocate resources sufficient for safe, environmentally sound, reliable and efficient operations.

KM's Efforts Toward Pipeline Safety Management – Operations Management System

Acting with intentionality is central to making the most important aspects of safety and continuous improvement routine.

For Kinder Morgan, that means we schedule activities like budgeting, risk mitigation, interactive integrity meetings (IMP Team to Top Management), and other processes
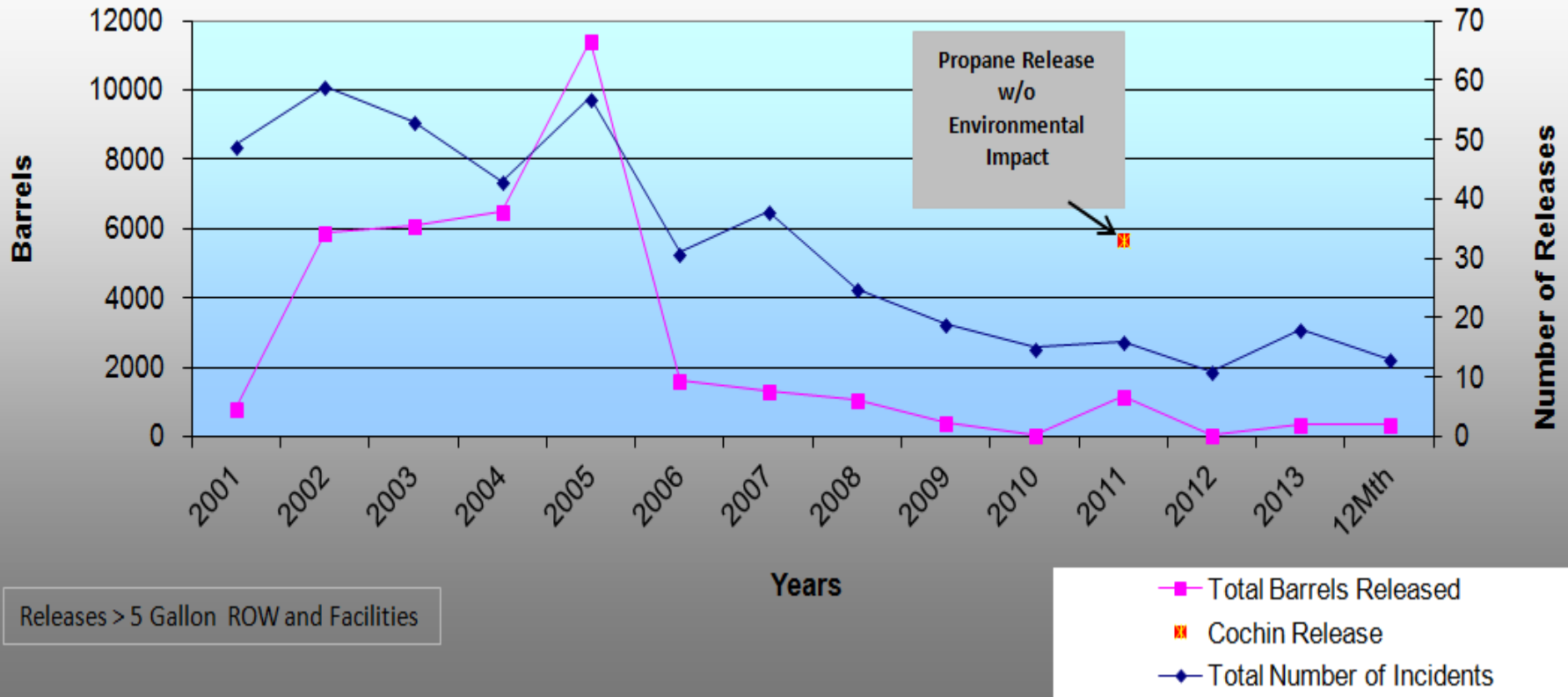
- Annually
- Quarterly
- Monthly
- Weekly

Scheduling systems remind responsible parties that a review is due.   If not completed by the due date, alerts are provided to escalating management levels until the task is done.   Results are documented.

An Audit and Assessment Team reports to the Office of the Chairman.

Products Pipelines Business Segment 12 Year Trend

In Conclusion . . .

API RP 1173 is practical and scalable for users of all size.   The principles will work to reveal risk and allow for mitigation.   For large operators with evolved management systems, it will provide a reference for gap analysis.   Using a recent draft, Products Pipeline segment within Kinder Morgan did a preliminary analysis and found 5 areas for immediate improvement to its OMS.

1.   Learning from external events; need to formalize current program
2.   Leading Indicator(s); need to be identified and mentioned in KM-OMS
3.   Input requirements in to KM-OMS review, the following are not part of the current review:
    a) the effectiveness and status of corrective actions resulting from previous management reviews
    b) the status of previously identified corrective and preventive actions
    c) the evaluation of pipeline safety management system maturity