



Safety Management Systems

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Overview

- **Kinder Morgan assets: diverse energy transportation and storage assets handling multiple commodities**
- **Kinder Morgan's precursor to the SMS: Operations Management System (OMS)**
- **Our approach to constructing a Management System – lessons learned**
- **Benefits of the Management System**
- **Next steps – closing gaps**

Natural Gas Pipelines

Segment Outlook

Well-positioned connecting key natural gas resource plays with major demand centers

Project Backlog:

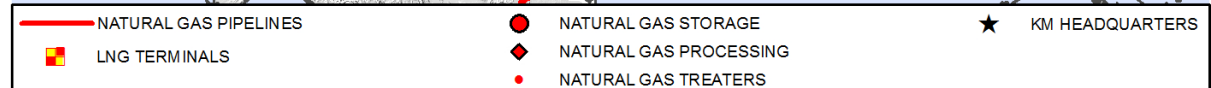
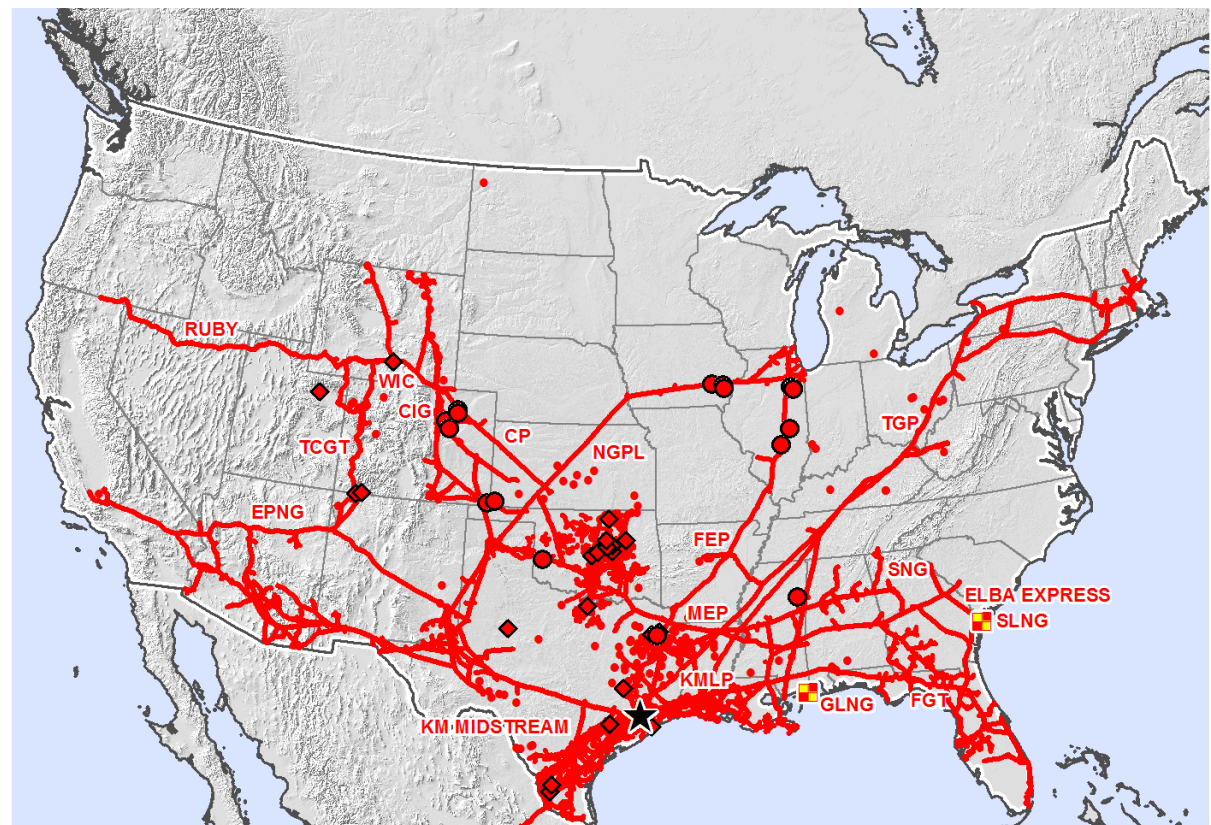
- **\$5.3 billion of identified growth projects over next seven years^(a), including:**
 - LNG liquefaction (FTA at Elba Island)
 - Pipe projects supporting LNG liquefaction projects
 - TGP north-to-south projects
 - Eagle Ford gathering & processing
 - SNG / Elba Express expansions
 - Expansion to Mexico border

Long-term Growth Drivers:

- **Natural gas the logical fuel of choice**
 - Cheap, abundant, domestic and clean
- **Unparalleled natural gas network**
 - Sources natural gas from every important natural gas resource play in the U.S.
 - Connected to every major demand center in the U.S.
- **Demand growth and shifting supply from multiple basins**
 - Power / gas-fired generation
 - Industrial and petchem demand
 - Growth in Mexican natural gas demand
 - Repurposing portions of existing footprint
 - Greenfield development
- **LNG exports**
- **Expand service offerings to customers**
- **Acquisitions**

Operations:

- **Very good project development performance: on a net basis within 1% of approved costs on major projects**
- **Better than industry average performance on release and safety measures**
- **On-time compliance with EHS requirements: 99+%**



(a) Excludes acquisitions and dropdowns, includes KM's share of non-wholly owned projects. Includes projects currently under construction.

Products Pipelines

Segment Outlook

Opportunities for growth from increased liquids production

Project Backlog:

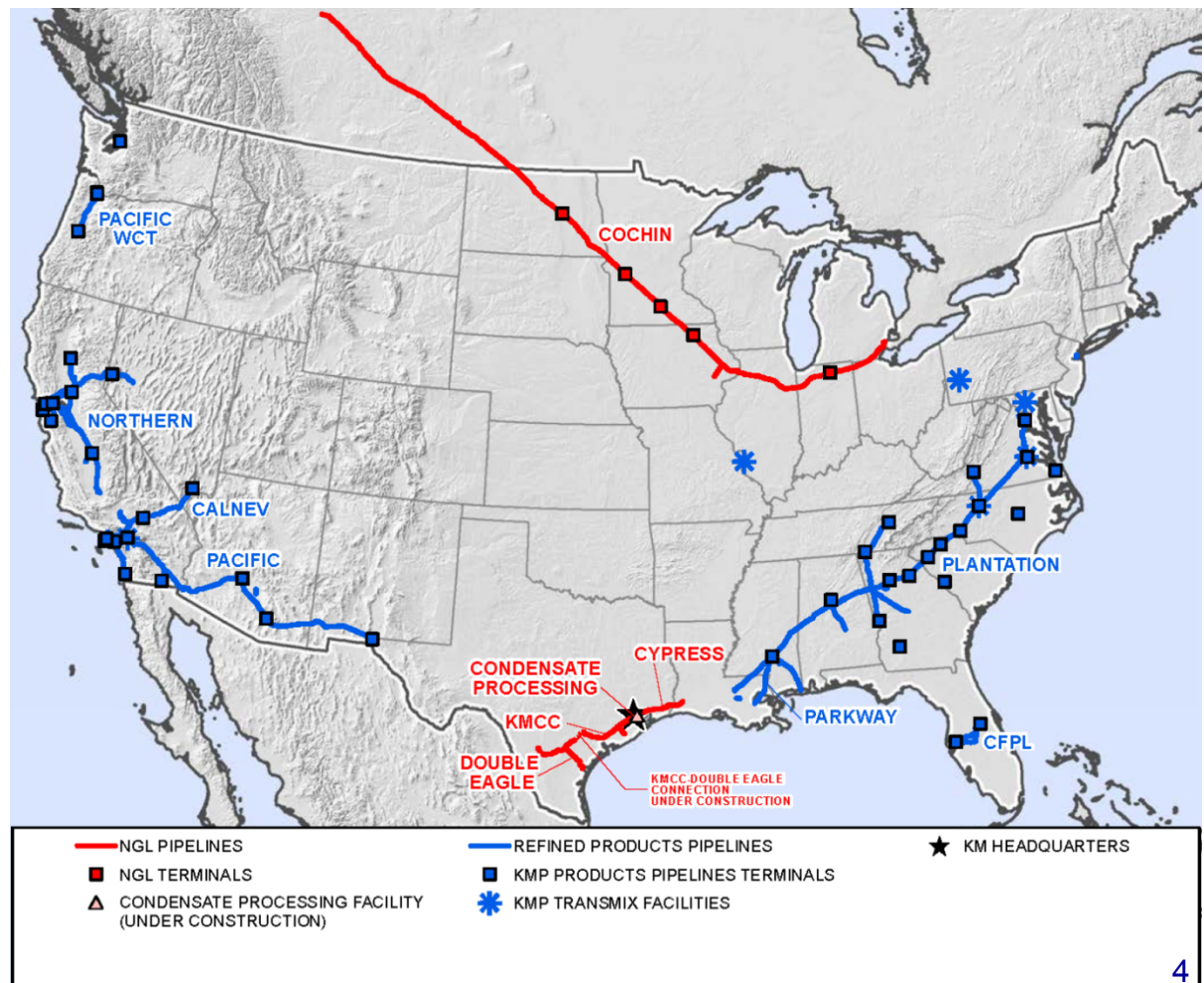
- \$1.9 billion of identified growth projects over next two years^(a), including:
 - Cochin reversal / conversion
 - Eagle Ford condensate processing
 - KMCC extensions
 - KMCC-Double Eagle interconnect

Long-term Growth Drivers:

- Development of shale play liquids transportation and processing (e.g. UTOPIA)
- Repurposing portions of existing footprint in different product uses (e.g. Y-grade)
- Extension of refined products pipeline system into Southeast U.S. (e.g. Palmetto Pipeline)
- Tariff index adjustments
- Tuck-in acquisitions
- Recovery in refined product volumes

Operations:

- Very good project development performance: on a net basis within 1% of approved costs on major projects
- Better than industry average performance on release rates on liquids pipelines (Products, CO₂, KMC)
- Better than industry average performance on safety measures
- On-time compliance with EHS requirements: 99.8%



(a) Excludes acquisitions, includes KM's share of non-wholly owned projects. Includes projects currently under construction.

Terminals

Segment Outlook

Well-located in refinery / port hubs and inland waterways

Project Backlog:

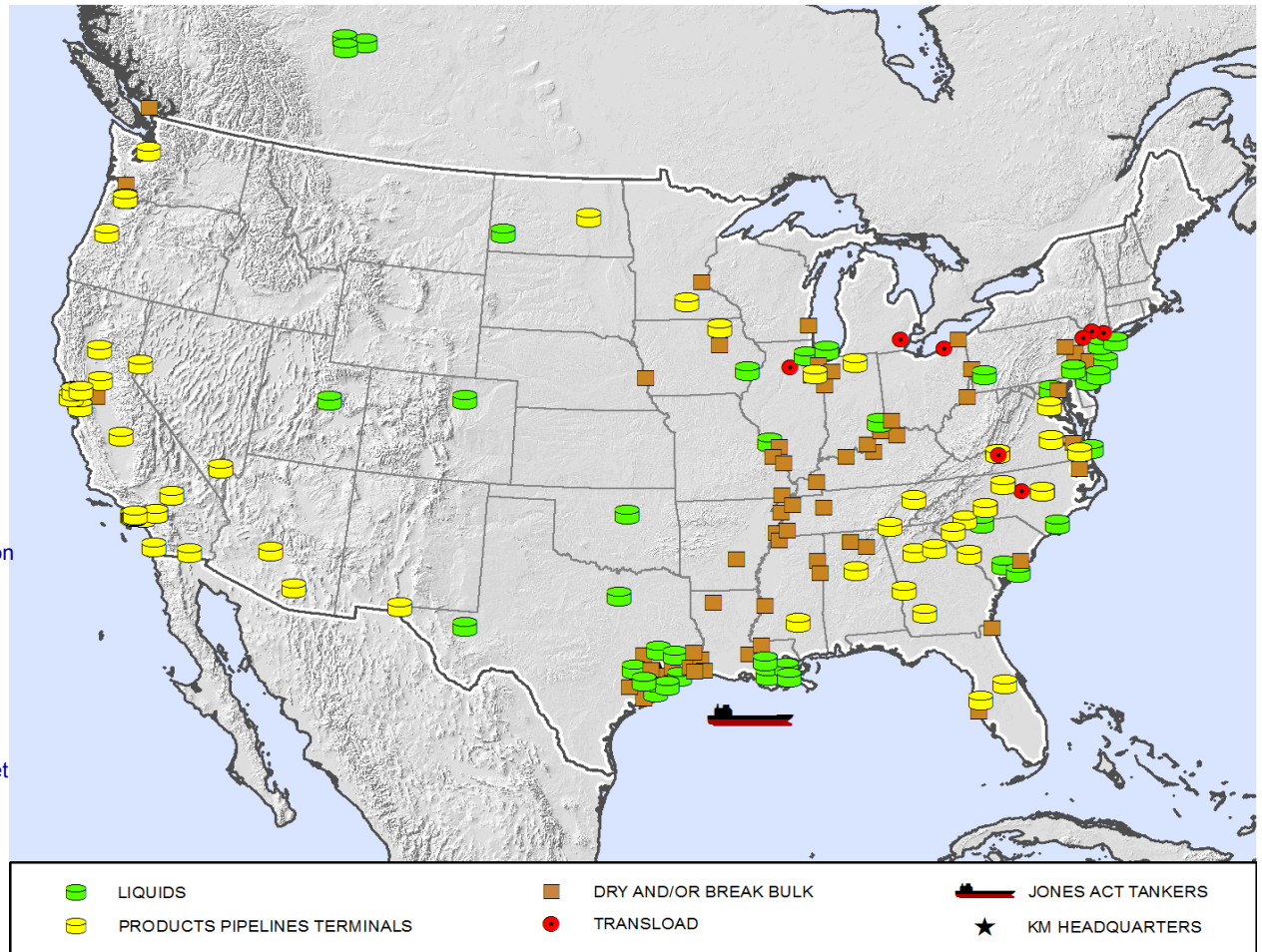
- \$2.3 billion of identified growth projects over next five years^(a), including:
 - BOSTCO Phase 3
 - Alberta crude by rail projects
 - Chemical terminal development
 - Jones Act tanker builds
 - Houston terminals network expansion
 - Edmonton Phase 2 expansion
 - Fairless Hills LPG

Long-term Growth Drivers:

- Gulf Coast liquids exports
- Crude oil merchant tankage (e.g. Edmonton)
- Crude by rail
- Chemical infrastructure and base business growth built on production increases
- Increased Jones Act tanker fleet
- Tuck-in acquisitions
- Potential investment in coal reserves and other natural resources

Operations:

- Project development performance: 6.8% overrun on a net basis across major projects
- Better than industry average performance on all safety measures – continuous improvement over several years
- On-time compliance with EHS requirements: 99.5%



(a) Excludes acquisitions, includes KM share of non-wholly owned projects. Includes projects currently under construction. Includes 31 terminals to be contributed to Watco.

CO₂ Segment Outlook

Own and operate best source of CO₂ for EOR^(a)

Project Backlog:

- Identified growth projects totaling \$1.4 billion and \$2.0 billion in S&T and EOR^(a), respectively, over next five years^(b), including:

— S&T

- Southwest Colorado CO₂ production
- St. Johns build-out
- Cortez and Lobos pipelines

— EOR

- SACROC / Yates / Katz / Goldsmith / Residual Oil Zone (ROZ)

Long-term Growth Drivers:

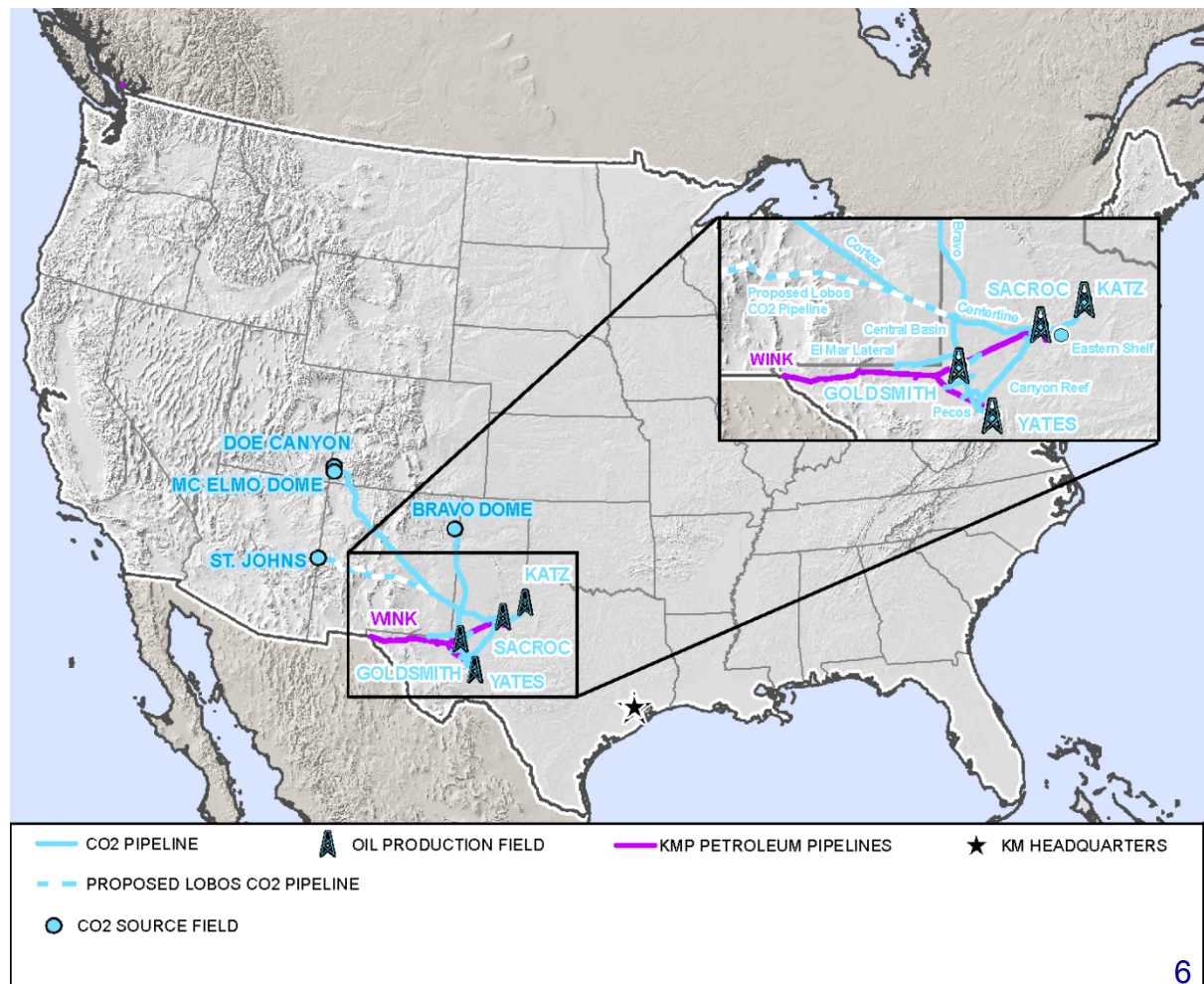
- Strong demand for CO₂ drives volume and price
- Billions of barrels of domestic oil still in place to be recovered at SACROC, Yates, Katz and Goldsmith, as well as Residual Oil Zone opportunities

Operations:

- Project development performance: within 6% on a net basis across major projects (overrun)
- Slightly better than industry average on three of five safety measures
- On-time compliance with EHS requirements: 99.9%

(a) EOR = Enhanced Oil Recovery.

(b) Excludes acquisitions, includes KM's share of non-wholly owned projects. Includes projects currently under construction.



Kinder Morgan Canada

Segment Outlook

Sole oil pipeline from Oilsands to West Coast / export markets

Project Backlog:

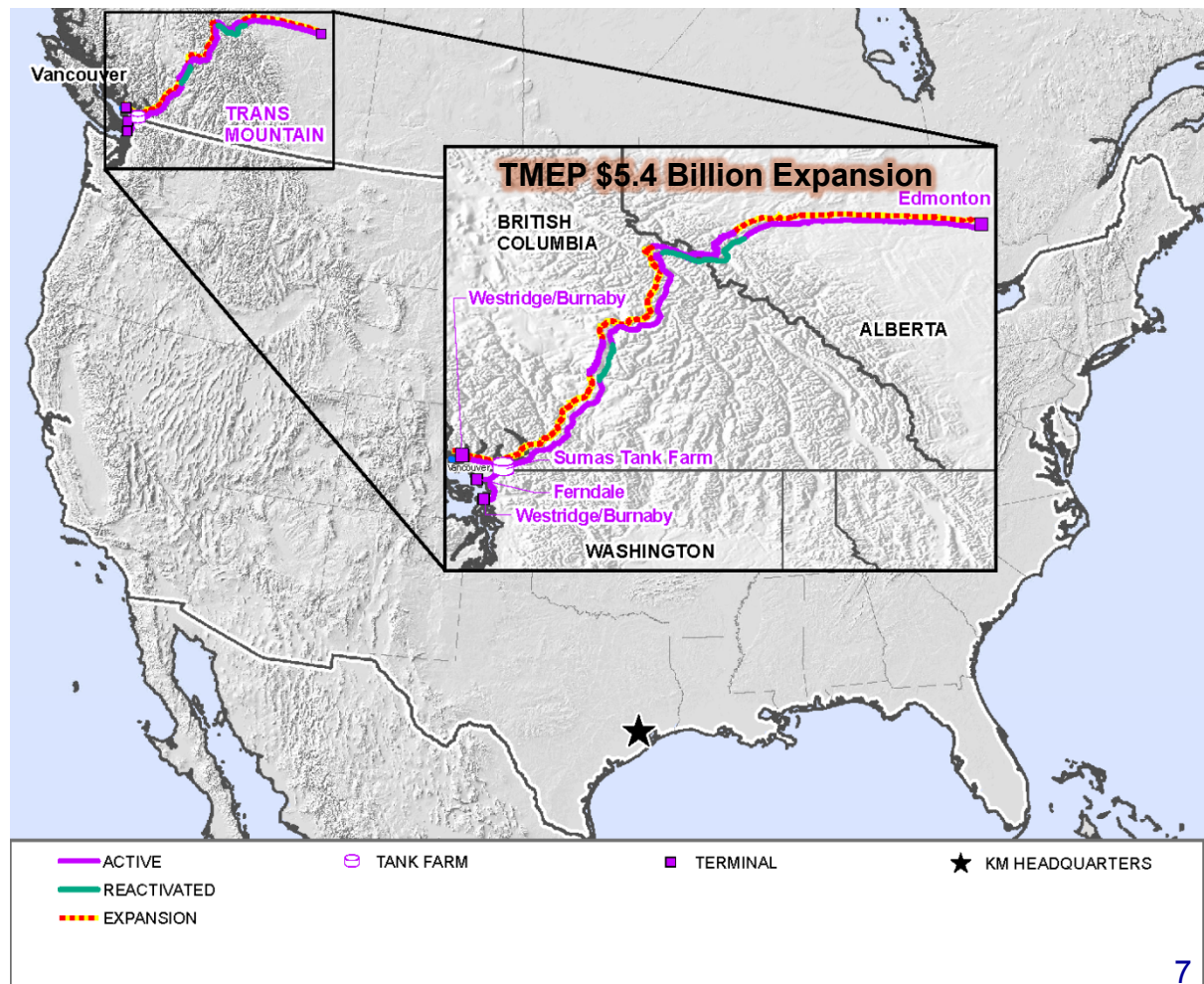
- \$5.4 billion expansion of Trans Mountain Pipeline

Long-term Growth Drivers:

- **Expand Oilsands export capacity to West Coast and Asia**
 - Following successful open season, major expansion plans under way
 - The Trans Mountain Pipeline Expansion Project (TMEP) more than doubles capacity, from 300 MBbl/d currently to approximately 890 MBbl/d
 - Strong commercial support from shippers with binding long-term contracts (~93% 20-yr, ~7% 15-yr) for 708 MBbl/d of firm transport capacity
 - Projected cost of \$5.4 billion
 - Proceeding with project design, planning and consultation
 - NEB facilities application filed in December 2013
 - Expected in-service 2018
- **Expanded dock capabilities (Vancouver)**
 - TMPL expansion will increase dock capacity to over 600 MBbl/d
 - Access to global markets

Operations:

- **Project development performance: in early stages on TMEP, but commercial terms include good cost protection on “uncontrollable” costs**
- **Better than industry average on safety measures**
- **On-time compliance with EHS requirements: 99.6%**



Kinder Morgan's OMS Components

- **Scope: Comprehensive – Covers safety (risk reduction), operations efficiency, quality assurance, project management and integration of acquired assets/companies**
- **Objectives**
- **Policies**
- **Roles and Responsibilities – all employees, business unit management (president, VP of Operations and EHS), Operations Group (collection of the business unit heads of operations), Office of the Chairman (CEO, President/COO, CFO)**
- **Processes (annual, quarterly, monthly, weekly, and event-driven – e.g. acquisitions)**
- **Audit and assessment**
- **Review and amend OMS (at least annually)**

Benefits of the Management System

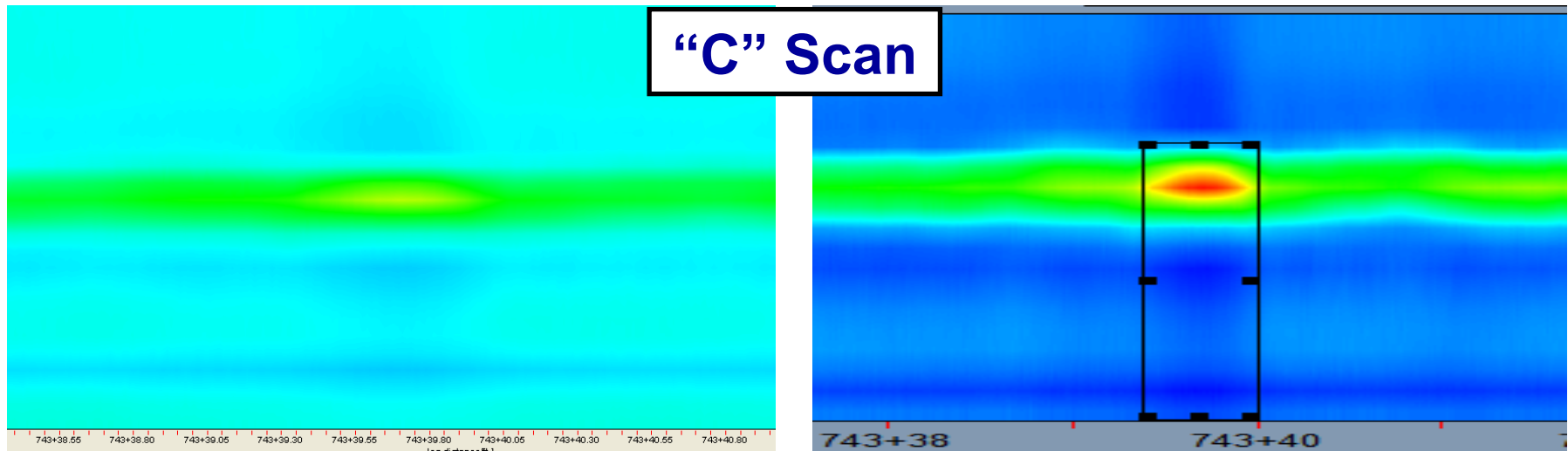
- **Management attention to operations issues**
 - All disciplines brought to bear, not only EHS; not compartmentalized
 - Better understanding of risks; improved resource allocation
- **Making safe, compliant operations routine – part of what we do every day**
- **Institutionalizing continuous improvement**
- **Improved safety and compliance performance**

Focusing on What Matters



Focusing on What Matters: KMAP Technology

Circumferential MFL Data Comparison



**Normal Presentation
for Metal Loss**

**KMAP Presentation
Optimizes Graphic for
Seam Weld Defects**

Next Steps – Closing Gaps to the SMS Standard

- **More detailed statement of certain requirements: e.g., MOC, QA/QC, incident investigation, ERP, review of others' incidents**
- **Additional documentation requirements**
- **Additional communication requirements, including external stakeholder engagement and employee survey**

Kinder Morgan's Approach to Constructing and Implementing a Management System – the Importance of Adapting it to the Company Culture

- **Added operations reporting to the most important Kinder Morgan processes**
 - Ask yourself: *What are the most important meetings/processes in the organization? Which ones are senior officers involved in?*

- **Aligned OMS responsibilities with organization**
 - KM has diverse operations
 - Consequently, KM has strong business unit focused (decentralized) organization
 - This required much of the execution of the OMS to be at the business unit level – where the information, expertise and resources reside.
 - Ask yourself: *Where are the resources, authority and accountability in your organization?*

- **We put the OMS actions into the compliance system used for EHS – this ensured actions were assigned, deadlines created, exceptions reported**
 - Use your compliance system to ensure follow through

The Management System

	Annual	Quarterly	Monthly	Weekly
Vision (Strategy)	<ul style="list-style-type: none"> Budget Process 	<ul style="list-style-type: none"> Quarterly Business Review 		<ul style="list-style-type: none"> Weekly asset meeting
Financial Excellence	<ul style="list-style-type: none"> Budget Process Investor Conference 	<ul style="list-style-type: none"> Quarterly Business Reviews Quarterly earnings updates 	<ul style="list-style-type: none"> Earnings meetings Accounts receivable meetings Major Projects updates 	<ul style="list-style-type: none"> Weekly asset meeting
Operational Excellence (Operations Management System)	<ul style="list-style-type: none"> Budget Process Audit and Assessment Plan OMS review and revision IMP Review 	<ul style="list-style-type: none"> Quarterly Business Review Quarterly Operations Meetings Quarterly Working Group Meetings (regulatory, incidents, asset integrity, disaster prep./resp./recovery, etc.) 	<ul style="list-style-type: none"> Reporting – compliance system, audit tracking, one calls, incidents, etc. Business unit operations meetings Major Projects updates 	<ul style="list-style-type: none"> Weekly asset meeting (operations performance and incidents)

Conclusions

- **Harness the power of your best current processes to implement the SMS**
- **Align roles/responsibilities and requirements with your organizational structure – don't create a separate organization**
- **Use your existing compliance system to ensure fulfillment of the SMS (including assigned tasks to upper management)**

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