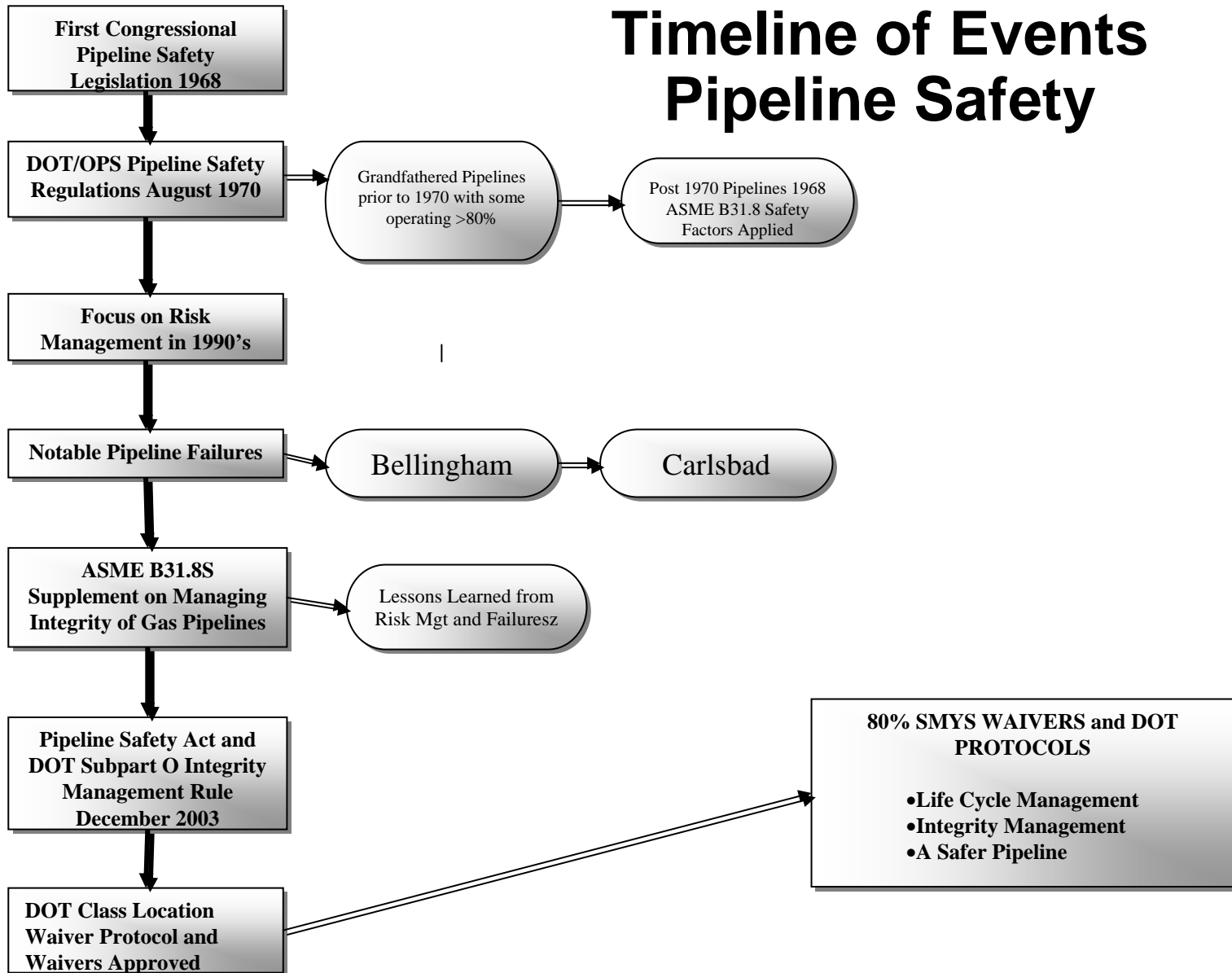


***Going Forward with
Integrity Management
Regulatory Compliance Audits &
Opportunities***

Timeline of Events Pipeline Safety



Integrity Management Process

- **Identify Threats**
- **Gather and Review Data**
- **Assess Risk**
- **Define and Prioritize Assessments**
- **Repair**
- **Define Additional Preventive Measures**

Status of Audits

- **2005 - PHMSA Completed 9 Audits**
- **2006 - 23 Planned**
 - **11 Completed to Date**
 - **12 More by Year End**
- **PHMSA's Work Thru 2006**
 - **~70% of Mileage**
 - **~10% of Operators**

“Intro” is Essential

- **Remember - The auditors have in their minds:**
 - **The Last Audit - Another Company, Not Yours**
 - **Their Own Impressions of What Needs to Be in a Plan**
 - **Their Own Impressions of Your Company**
- **The Introduction is Where You Frame The Entire Audit**

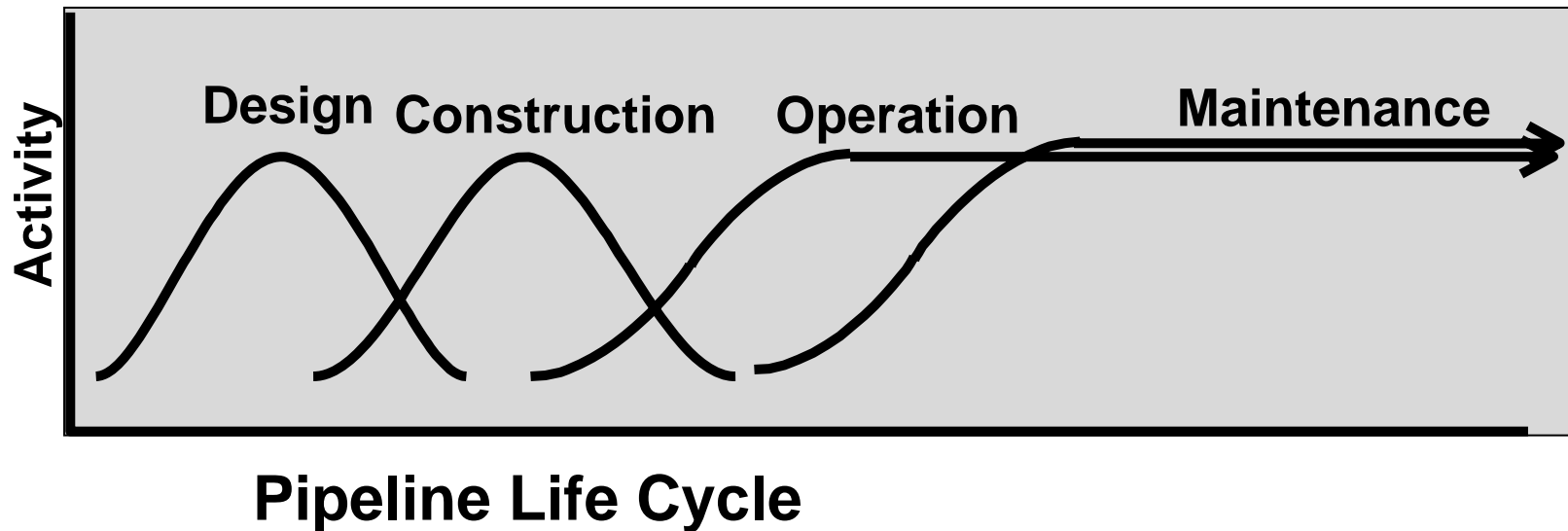
Vertical Slices

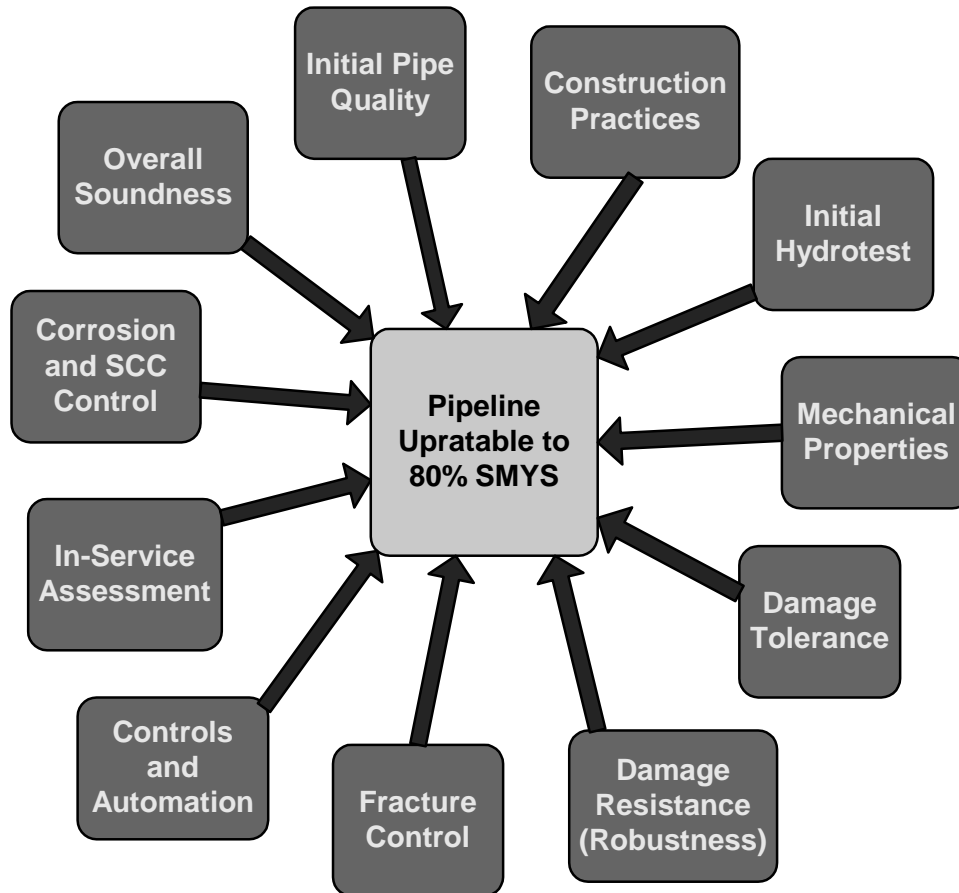
- **Auditors will want to review HCAs from:**
 - **HCA Identification**
 - **Through Assessment and Remediation**
 - **Expect Questions on ‘Preventive and Mitigative Measure’ - while reviewing alignment sheets**
- **Define how you will manage vertical slice process**
- **Conduct “dry-runs”**

“Leader”

- **Lead - the auditors to places in plan, procedures that address specific protocol question.**
- **Engage - show enthusiasm not resistance; be open to criticism.**
- **Address - specific portions of your plan and procedures; do not go astray.**
- **Demonstrate - Knowledge, by pointing to specifics in your plan**
- **Educate - With examples**
- **Respond with Respect**

- Pipeline integrity accrues from sound choices made in each phase of a pipeline's life cycle
- Choices made in Design or Construction affect the limits of Operation, or dictate the intensity of activities in Maintenance phases.






Elements of pipeline integrity to consider in uprate evaluation:

- **Are pipeline's liabilities adequately accounted for?**
- **Is there increased commitment to maintaining integrity through life cycle, commensurate with increased stress?**
- **Is overall risk reduced and managed over time?**
- **Is it business as usual but at higher stresses?**

Alliance Pipeline L.P. Comments 6-19-06

GUIDELINES FOR EVALUATING OPERATIONS UP TO 80 % SMYS

	NEW PIPELINES	EXISTING PIPELINES TIER 1	EXISTING PIPELINES TIER 2	COMMENTS- TECHICAL BASES FOR PROPOSED REVISIONS
	OPERATION AT 80% SMYS POSSIBLE	OPERATION AT 80% SMYS POSSIBLE	OPERATION AT 80% REQUIRES JUSTIFICATION	
General requirements for all Tiers. The following information shall be submitted in a resource report format.	1) Assumptions will not be allowed, only verifiable documented evidence of materials, procedures, and actions (both past and present) will be allowed. 2) Operator to have a fully compliant Gas IM program (IMP) with no outstanding issues.	3) All segments will be piggable. 4) All segments will have run at least one (1) series of ILI pigs, both MFL and geometry, for those lines which have not been assessed in the last 7 years.	5) No segments utilizing DA as a primary assessment method under Gas IMP will be considered except for headers, cross-overs and station piping. 6. Operator to Utilize a Threat Matrix to delineate and determine the design and extent of their waiver application	Item #2 should be revised to clarify the intent based on the discussion at the May 23 meeting. A waiver should not be rejected because an operator has NOAs on their IMP.
CLASS LOCATION				
Allowable stress levels at MAOP	1: 80 %, 2: 67%, 3: 56%	1: 80 %, 2: 67%, 3: 56%	1: 80 %, 2: 67%, 3: 56%.	
PIPE DESIGN				
 tag	New construction	Post 1990 Construction	Post 1980 Construction.	
Pipe - plate/coil	High quality skelp/plate, micro alloyed, fine grain, fully killed steel with calcium treatment, continuous casting	High quality skelp/plate, micro alloyed, fine grain, fully killed steel with calcium treatment, continuous casting	Steel pipe manufactured post 1980.	
Pipe - plate/coil	Pipe shall be manufactured according to API 5L, PSL 2 requirements in place at the time of manufacturer. .	Pipe shall be manufactured according to API 5L, PSL 2 requirements in place at the time of manufacturer. .	Pipe shall be manufactured according to API 5L requirements in place at the time of manufacturer. .	Requirements stipulated by PHMSA are within API 5L. Changed to refer to standard.
Pipe - Fracture Control Plan - fracture initiation	Pipe must have a minimum absorbed energy at the minimum design temperature such that the through wall critical flaw length is at least 90% of the flow stress dependent critical flaw length for pipe with a design factor of 0.80 multiplied by the ratio of 0.80 to the actual design factor.	Pipe must have a minimum absorbed energy at the minimum design temperature such that the through wall critical flaw length is at least 85% of the flow stress dependent critical flaw length for pipe with a design factor of 0.80 multiplied by the ratio of 0.80 to the actual design factor.	Pipe must have a minimum absorbed energy at the minimum design temperature such that the through wall critical flaw length is at least 80% of the flow stress dependent critical flaw length for pipe with a design factor of 0.80 multiplied by the ratio of 0.80 to the actual design factor.	Not changed from PHMSA proposal

80% Considerations

- **Operating safely at 80% SMYS is certainly feasible for:**
 - **New pipelines so designed**
 - **Existing modern pipelines having appropriate attributes**
 - **Existing older pipelines where inherent vulnerabilities are addressed through rigorous assessment and mitigation practices**
- **Not all pipelines, new or old are suitable for elevated stress service**
- **Distinguishing criteria can be developed**