

Joint Industry/Government Pipeline R&D Forum

**Office of Pipeline Safety
Research and Development
Projects Review**

December 11, 2003



The Office of Pipeline Safety research and development program

- OPS is sponsoring research and development projects focused on providing near-term solutions that will increase the safety, cleanliness, and reliability of the Nation's pipeline system



Three Major Project Areas

- Developing new technologies for leak detection and damage prevention
- Improving technologies for pipeline operation, monitoring, and control
- Improving pipeline materials.



Research & Development



■ Goals:

- ◆ Accelerate Delivery to Market of Technological Solutions to Pipeline Safety Problems
- ◆ Expand Stakeholder Involvement in R&D Planning
- ◆ Improve Availability of Research Results
- ◆ Better Serve Regulatory Needs – Near-term Focus
 - ◆ Damage Prevention and Leak Detection
 - ◆ Enhanced Pipeline Operations, Controls, and Monitoring
 - ◆ Improved Pipeline Material Performance
- ◆ R&D Web Site: <http://primis.rspa.dot.gov/rd>



Program Results Reported to Congress

- OPS will use a systematic process for evaluating the program's outcomes, using recognized best practices



Mitigation and Repair

Alternate Welding Processes for In-service Welding

Contract #: DTRS56-03-T-0010 BMT Fleet Technology Limited
COTR –James Merritt

- Project is to support efforts towards the development and application of procedures for welding on in-service pipelines using alternate welding processes.



Mitigation and Repair

Validation of Sleeve Weld Integrity and Workmanship Limit Development

Contract #: DTRS56-03-T-0011 BMT Fleet Technology Limited
COTR – Freeman-Kelly

- The object of this project is to support current efforts towards the development of a Guidance Note for Fillet Welded Connections to pipelines.



Mitigation and Repair

Improvements to the External Corrosion Direct Assessment Methodology by Incorporating Soils Data

Contract #: DTRS56-03-T-0003

Battelle Institute

COTR – James Merritt

- This contract covers two separate projects.
- Develop a quantitative basis for evaluating the significance of specific time-dependent threats, as the basis to determine the effectiveness of mitigative measures proposed in a given IMP.
- The second project will add soils data to previously developed external corrosion direct assessment datasets and methodology.



Mitigation and Repair

First Major Improvements to the Two-curve Fracture Arrest Model

Contract #: DTRS56-03-T-0007 Engineering Mechanics Corporation
COTR – Gopala Vinjamuri

- The proposed program is to make the first major improvements to the most commonly used ductile fracture arrest criterion.



Mitigation and Repair

A Comprehensive Update in the Evaluation of Pipelines Weld Defects

Contract #: DTRS56-03-T-0008 Engineering Mechanics Corporation
COTR – Gery Bauman

- Update Appendix A of API Standard 1104 for girth weld defect acceptance criteria as specified in Federal regulations (49 CFR, Parts 192 and 195), to reflect the increased use of mechanized welding and automated ultrasonic testing in new pipeline construction.



Mitigation and Repair

Advanced Welding Repair and Remediation Methods for In-service Pipelines

Contract #: DTRS56-03-T-0009 Edison Welding Institute, Inc
COTR – Alex Dankanich

- Develop low-hydrogen gas-metal arc-welding (GMAW) & flux-core arc-welding (FCAW) processes.
- Mechanize multi-axis welding carriage & adaptive control/tracking for higher quality repair welds.



Mitigation and Repair

An Assessment of Safety, Risks & Costs Associated with Subsea Pipeline Removals

Contract #: DTRS56-03-X-044

Scandpower Corporation

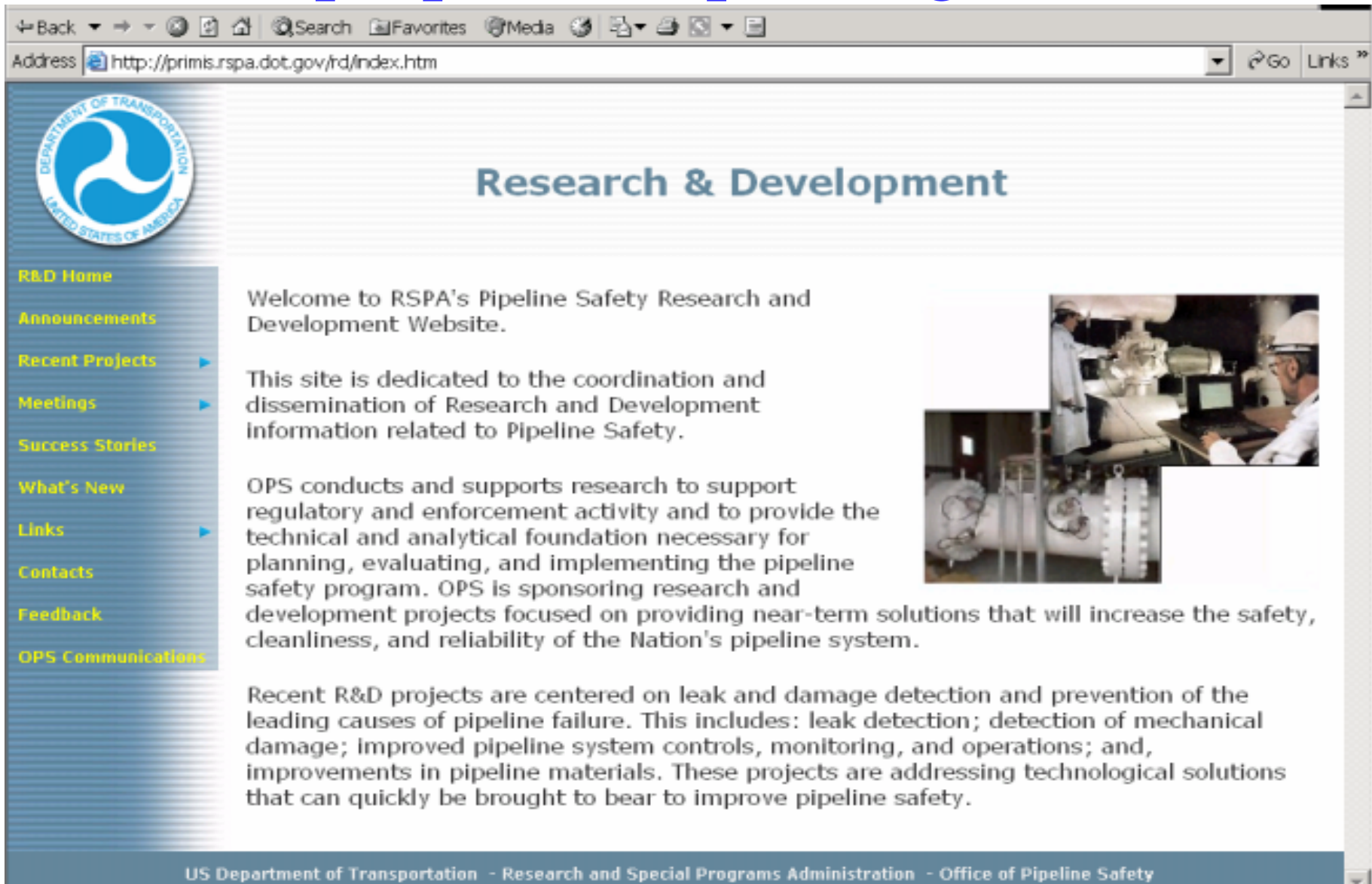
COTR – James Merritt

- Identify different disposal options
- Assess in regard to feasibility, safety & cost
- Validate with industry to make risk based decisions regarding proper disposal of subsea pipelines.



R&D Web Site


<http://primis.rspa.dot.gov/rd>



The image shows a screenshot of a web browser displaying the R&D Web Site. The browser's address bar shows the URL <http://primis.rspa.dot.gov/rd/index.htm>. The page features the Department of Transportation logo on the left and a navigation menu with items like R&D Home, Announcements, Recent Projects, Meetings, Success Stories, What's New, Links, Contacts, Feedback, and OPS Communications. The main content area is titled "Research & Development" and contains a welcome message, a description of the site's purpose, a detailed paragraph about OPS research, and a list of recent R&D projects. There are also two photographs: one showing a person in a lab coat working with equipment, and another showing a large industrial pipe.

← Back → Search Favorites Media

Address <http://primis.rspa.dot.gov/rd/index.htm> Go Links





Research & Development

Welcome to RSPA's Pipeline Safety Research and Development Website.

This site is dedicated to the coordination and dissemination of Research and Development information related to Pipeline Safety.

OPS conducts and supports research to support regulatory and enforcement activity and to provide the technical and analytical foundation necessary for planning, evaluating, and implementing the pipeline safety program. OPS is sponsoring research and development projects focused on providing near-term solutions that will increase the safety, cleanliness, and reliability of the Nation's pipeline system.

Recent R&D projects are centered on leak and damage detection and prevention of the leading causes of pipeline failure. This includes: leak detection; detection of mechanical damage; improved pipeline system controls, monitoring, and operations; and, improvements in pipeline materials. These projects are addressing technological solutions that can quickly be brought to bear to improve pipeline safety.



US Department of Transportation - Research and Special Programs Administration - Office of Pipeline Safety